Improving Social Inclusion of Female Migrants: a Randomised Controlled Intervention in Spain *

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Abstract

This study evaluates the impact of a randomised controlled intervention that provided psycho-social supports and digital skills training to socially excluded female migrants living in Murcia, Spain. The participants were also beneficiaries of the Minimum Basic Income Scheme. Our causal estimation shows that the programme significantly improves participants' knowledge of community resources, use of social support networks, digital skills, and mental well-being. However, we do not observe any effects on employment or labour market participation, based on both survey responses and administrative records. These findings suggest that non-financial interventions can enhance social inclusion and personal well-being, even if they do not directly improve labour market outcomes in the short run.

Keywords: Randomised Controlled Intervention; Social Inclusion, Migrants, Digital Skills; Psycho-Social Curriculum; Spain

JEL-classification: J6, I14, I3

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1 Introduction

Mitigating social exclusion is crucial not only for promoting equity and social justice but also for reducing the significant costs borne by both individuals and society. For excluded individuals, social exclusion often leads to poorer health, limited educational and employment opportunities, and weakened psychological well-being, trapping them in cycles of disadvantage. At the societal level, exclusion results in lost productivity, increased pressure on social services, and heightened social tensions that undermine community cohesion. These consequences generate substantial economic burdens, including greater public spending on healthcare, welfare, and criminal justice systems.

Spain, like most Western countries, faces persistent challenges related to social exclusion. These are characterised by high rates of poverty, unemployment, and inequality, which have been exacerbated, in recent years, by the Covid-19 pandemic (MISSM, 2021). Certain groups, including low-income households, women, and young people, remain particularly vulnerable to exclusion from social, economic, and political participation. Despite various social protection measures, gaps in access to education, healthcare, and labour market opportunities persist, limiting opportunities for many to fully engage in society (OECD, 2023; Eurostat, 2024).

Among the most affected are migrants, who often experience multiple and overlapping forms of exclusion. Migrants in Spain, particularly from non-Spanish speaking countries, face specific barriers such as language difficulties, limited recognition of qualifications, and restricted access to social networks and services (OECD, 2023; OECD, 2024). These challenges are further intensified for female migrants, who frequently contend with traditional gender roles and cultural expectations, reducing their ability to integrate and participate fully in their host communities. Understanding and addressing social exclusion among migrants is therefore critical to promoting social cohesion and equitable development in Spain.

Past works show that monetary assistance alone does not lead to sustained social inclusion or self-fulfilment among migrant populations (Zhou and Gao, 2008). In contrast, empowerment and autonomy of typically socially excluded individuals can benefit from psychosocial support and targeted digital literacy alongside facilitation of intercultural dialogue, fostering both practical competencies and emotional resilience, which, as a result, can be more crucial for long-term integration.

The provision of assistance and knowledge in these dimensions is particularly important in Spain—as the administration can have high paperwork requirements to provide educational, health, or social services. And in the last few years, the paperwork has become more digitalised, which creates special burdens for migrants who do not understand the language well, and have difficulties accessing digital infrastructures. For example, to obtain social services assistance one needs an electronic appointment. And to obtain

such appointments, one may need to have not only a good internet connection but also a digital signature. Partly as a consequence of this, over 56% of people eligible for the *Ingreso Mínimo Vital* (the Minimum Basic Income Scheme, a form of welfare assistance in Spain) do not apply for it.[1]

Moreover, addressing these challenges requires a holistic approach that goes beyond economic measures to include social and psychological dimensions. As mentioned before, improving digital literacy is key for migrants to access a wide range of resources, services, and communication channels, which in turn enhances their ability to navigate complex social systems. Psychosocial support helps mitigate feelings of isolation and strengthens self-confidence, enabling migrants—especially women—to participate more actively in their communities. Together, these elements create a foundation for greater social cohesion and pave the way for more effective and sustainable social inclusion policies. It may also be important for a better labour market participation in the long run.

Our study showcases the effectiveness of a non-monetary intervention that provided personalised and multi-faceted support to participants who are typically socially excluded. We evaluate a randomised controlled intervention among female migrants in the region of Murcia in Spain, who were also recipients of the nationwide Minimum Basic Income Scheme.

The programme was a highly intensive scheme whereby participants in the treatment group received personalised, multi-faceted support along various dimensions, including psycho-social support, digital competency training, and information regarding access to public and social services. In total, treated participants spent on average 48.5 hours in various activities of the programme. In contrast, the control group received only some financial incentives for their survey participation. The programme was carried out in 12 municipalities in the Region of Murcia—with the total of 856 participants (428 in the treatment group and 428 in the control group).[2]

Among the participant female migrants in the programme, 94% were of non-European nationality, and 11% had Spanish as their mother tongue. At baseline, 13% were employed, and the average age was 41.6 years. More than half of the participants (54%) had an education level below secondary school. Overall survey retention was high, with 88% of participants completing both the baseline and endline surveys. Participation rates were similarly high: in both the treatment and control groups, 98% of participants engaged with the programme, and attendance across the various sessions generally exceeded 90%. Each participant progressed through the study sequentially. Recruitment took place between December 2022 and March 2023. For each recruited individual, the baseline survey was subsequently administered between February and April 2023. Participants were

[1] As per the Independent Authority for Fiscal Responsibility (2024).

[2] The municipalities in the programme are Alhama de Murcia, Cartagena, Lorca, Totana, Torre Pacheco, Alguazas, Murcia, San Pedro del Pinatar, Fuente Álamo, Mazarrón, Los Alcázares, and Cieza.

then randomised and entered the intervention phase, which ran from March to November 2023. Immediately upon completion of the intervention, participants undertook the endline survey in November 2023.

The main results show significant effects across several dimensions. First, for the social inclusion dimension, we find positive effects of the intervention package, with an increase in the level of social resources (0.23 standard deviations). With regard to autonomy in access and usage of public services, the treatment increases autonomy in managing the Minimum Basic Income Scheme program by 0.12 standard deviations. The intervention package also improves knowledge of local resources by 0.31 standard deviations. Moreover, the intervention also improves digital skills (measured as an index of the ability to use digital tools for daily life) by 0.31 standard deviations. Lastly, the treatment increases psychological well-being by 0.15 standard deviations. However, we do not find statistically significant effects on labour-market participation or employment either during the intervention period or up to 12 months after its conclusion. There are several plausible explanations for these null results. First, detecting labour-market effects in this context may require a longer follow-up horizon, as improvements in social inclusion or psychosocial well-being may take time to translate into employment outcomes. Second, our ex-post Minimum Detectable Effect calculations suggest that the administrative-data-based design may be insufficiently powered to detect modest effects on labour-market outcomes. Finally, cultural and socio-economic constraints—including prevailing gender norms—faced by migrant women may act as substantial barriers to labour-market responsiveness, even in the presence of supportive interventions.

Overall, the contributions of our study are twofold. First, we provide causal evidence in support of the role of digital skills on digital inclusion as well as social inclusion. More importantly, our programme uniquely combines digital skills training with psychosocial interventions designed to enhance participants' self-perceptions and overall well-being, offering a more holistic approach to social inclusion than purely technical instruction. Second, participants in our programme—migrant women—-are at higher risk of social exclusion than either the general population or male migrants. In that, we are able to systematically document pathways through which our intervention can elevate social inclusion of such vulnerable population.

The remainder of the paper is organised as follows. Section 2 provides background on the Minimum Basic Income scheme in Spain, discusses situations of social exclusion in Spain, and reviews the related literature. Section 3 presents the Theory of Change underpinning the intervention and describes the programme design, sample, survey instruments, and key variables. Section 4 outlines the empirical strategies, while Section 5 presents the main empirical findings. Finally, Section 6 discusses the external validity of the programme and concludes.

2 Background

2.1 Minimum Basic Income Scheme in Spain

Minimum Basic Income Scheme (or Ingreso Mínimo Vital, IMV, in Spanish) is a non-contributory, means-tested minimum income scheme introduced in Spain in 2020 to address situations of severe economic vulnerability. It is one of the social inclusion measures designed by the central government, together with the support of autonomous communities. It constitutes a central policy of the welfare state with the aim of providing minimum financial resources to all individuals in Spain, regardless of where they reside. It has a dual purpose: to provide financial support to those who need it the most and to promote social inclusion and integration into the labour market.[3]

IMV follows a non-contributory principle. Its eligibility is defined relative to a legally established guaranteed income threshold that varies by household composition and size. Households qualify if their average monthly income in the previous year falls at least 10 euro below the guaranteed amount, and if they meet an asset (wealth) test, which excludes the primary residence from the calculation (MISSM, 2024b). The IMV benefit is paid monthly, and the amount received corresponds to the difference between the guaranteed income and the household's countable income. In recent years, guaranteed monthly amounts have ranged approximately from 730 euro for a single adult to over 1,600 euro for larger households, with higher thresholds for single-parent families (Seguridad Social, 2024a).

The IMV is not a migrant- or refugee-specific programme, but access depends on legal and continuous residence in Spain, typically requiring at least one year of prior residence, with some exceptions (e.g., households with minors) (MISSM, 2024c). As a result, migrants—particularly third-country nationals—face higher administrative barriers to entry. Available administrative statistics indicate that foreign nationals constitute a minority of IMV beneficiaries, representing roughly 17–20% of recipients, although this share varies across regions and over time (Seguridad Social, 2024b). This pattern reflects both eligibility constraints and lower take-up among migrant households, despite their higher exposure to income poverty and social exclusion.

The IMV is designed as an income floor and can be combined with other social inclusion measures, including employment income (under certain conditions), housing assistance, child benefits, regional minimum income schemes, and activation or training programmes managed by regional and local authorities (MISSM, 2024a).

IMV applications and management are available both digitally and in person. Indi-

[3]Within the framework of the Recovery, Transformation, and Resilience Plan (PRTR), the General Secretariat for Inclusion (SGI) of the Ministry of Inclusion, Social Security and Migration (MISSM) plays a significant role in Component 23 'New public policies for a dynamic, resilient, and inclusive labour market', which falls under political area VIII 'New economy of care and employment policies'.

viduals may apply online through the Social Security electronic office using digital identification systems, or via an online procedure without digital credentials that still requires document uploads and form completion (Seguridad Social, 2024c). Applications can also be submitted in person at Social Security offices or by post, which is particularly relevant for individuals with limited digital skills.

A highly related welfare scheme is Renta Básica de Inserción (RBI), which is a regional welfare benefit intended to provide economic support and promote inclusion for individuals and families with insufficient resources. Therefore, unlike the IMV, each autonomous community administers its own version with separate eligibility and amounts. Additional requirements can include mandatory participation in insertion plans and sometimes longer residency. Generally, the IMV and the RBI are not available simultaneously, though administrative rules about sequencing and complementarities can be complex and dependent on regional practice. [4]

However, while monetary welfare schemes provide essential income support, they may be insufficient on their own to promote social inclusion. While income support can alleviate immediate material constraints, non-monetary barriers—such as information frictions, limited access to services, and low levels of empowerment—often persist. Interventions that explicitly address these constraints by improving information, skills, and agency may therefore generate additional and more durable gains. Since programmes employing alternative policy tools can play an important complementary role in helping households exit poverty, in 2021 and 2022 the Ministry of Inclusion, Social Security and Migration allocated part of Spain's NextGenerationEU COVID-19 Recovery Plan funding to support the implementation of innovative pilot projects. A total of 32 projects were financed, with the explicit aim of complementing or extending the effects of the Minimum Basic Income scheme among its beneficiaries.[5]

2.2 Social Inclusion and Situations in Spain

Defining Social Inclusion: The notion of social inclusion concerns the extent to which individuals and groups are able to participate meaningfully in society, encompassing economic activity, access to social and public services, engagement in cultural life, and involvement in political and civic processes. There are various but closely related definitions of social inclusion. In the European Union context, social inclusion is framed as a pro-

[4]For more detail of the RBI, see https://www.dsca.gob.es/en/derechos-sociales/servicios-sociales/rentas-minimas.

[5]Royal Decree 938/2021 granted subsidies for the implementation of 16 projects in Phase I. For Phase II, an additional 18 projects were financed. These programmes were implemented by Spain's regional administrations, together with either local governments or NGOs. Broadly, they included measures such as providing beneficiaries with job search support and apprenticeship training, free childcare for parents, tailored tutoring for their children, or assistance for families who may be entitled to social benefits which they do not yet claim.

cess of ensuring that those at risk of poverty or social exclusion have the resources and opportunities necessary to live in dignity and engage actively as equal members of society (European Commission and Social Protection Committee, 2019) This approach emphasises access to employment, social protection, essential services and a decent standard of living. By contrast, the United Nations and the World Bank define social inclusion more explicitly in terms of ability, opportunity and dignity, with particular attention to identity-based disadvantage and discrimination (United Nations, 2016; World Bank, 2013). These definitions stress the removal of structural barriers, recognition of rights and enhancement of personal agency. Importantly, social inclusion is an end in itself, as participation, sense of belonging are integral dimensions of human wellbeing (Sen, 1999; Rawls, 1971). Nevertheless, improving social inclusion can also function as a pathway to better economic outcomes, for example through enhanced labour market participation, productivity and social cohesion (OECD, 2017). In summary, our work adopts a definition of social inclusion that aligns more closely with the EU perspective, emphasising meaningful participation and engagement as a member of society, and placing comparatively less focus on discrimination- or identity-based dimensions.

Situation of Social Exclusion in Spain: In practice, the European Union assesses social inclusion using the *At Risk of Poverty or Social Exclusion* (AROPE) indicator, derived from the EU Statistics on Income and Living Conditions (EU-SILC). In the case of Spain, it is derived from the Survey of Living Conditions (*Encuesta de Condiciones de Vida [ECV]*). AROPE identifies individuals experiencing at least one of three forms of disadvantage: income poverty (equivalised disposable income below 60% of the national median), severe material and social deprivation, or residence in a household with very low work intensity (Eurostat, 2024). While this measure captures central aspects of economic vulnerability, it does not fully reflect broader dimensions of social participation such as civic engagement, autonomy, discrimination, or sense of belonging (Levitas et al., 2007).

Recent data indicate that Spain's AROPE rate has remained persistently above the EU-27—average around 26-28% compared with approximately 21-22%—corresponding to over 12 million individuals in 2023 (INE, 2025; Canals Botas and Sanz Angulo, 2025; Eurostat, 2024). Disaggregation reveals pronounced inequalities: women face higher risks than men (27.5% versus 25.5%), and disparities by nationality are particularly stark. While the AROPE rate among individuals born in Spain lies in the mid-20% range, it rises to around 30% for EU-born migrants and to approximately 50–55% for those born outside the EU; similarly, non-EU nationals face substantially higher at-risk-of-poverty rates (around 30.8 pp. higher than natives; 34.7 pp. higher than EU migrants) and lower levels of digital inclusion, being 5.5 percentage points more likely to have low digital skills (Eurostat, 2024; INE, 2023). Specifically, in recent years, Spanish nationals consistently record the better labour market situations than migrants—with unemployment

rates among non-EU migrants are typically 6–8 percentage points higher than among EU migrants and around 10–13 percentage points higher than among natives (INE, 2024).

These patterns point to persistent and multidimensional forms of social exclusion, especially among non-EU migrants, underscoring the need for targeted interventions that extend beyond income support to include access to secure employment, adequate and affordable housing, recognition of qualifications, social rights, and opportunities for participation and belonging.

Specifically in the Region of Murcia, vulnerability is even more pronounced. The region's social exclusion rate stands at 30.5% (4 pp. above the national average) whilst its monetary poverty rate is equally elevated. Moreover, 39.1% of Murcia's residents possess low or very low digital skills, compared to the overall national rates (INE, 2023).

2.3 Related Literature

In this section, we review the existing literature on policy interventions aimed at promoting social inclusion among disadvantaged populations, with a particular focus on migrants and migrant women. We organise the discussion around three related strands of research: social inclusion programmes, digital inclusion interventions, and psychosocial policies designed to alleviate non-economic barriers to participation. While this literature provides valuable insights into the multidimensional challenges faced by migrants, much of the existing evidence remains qualitative or descriptive. Rigorous causal evaluations, particularly randomised controlled trials of social and digital inclusion programmes targeting adult migrants, are relatively scarce. This gap motivates the present study, which contributes new causal evidence on the effects of a comprehensive, non-monetary intervention combining psychosocial support and digital skills training.

The existing literature on the social inclusion of migrants is predominantly qualitative or descriptive, with relatively limited causal evidence. Early work emphasises the multidimensional nature of social inclusion, encompassing autonomy in personal decision-making, participation in social and economic life, and access to institutions. For example, Kirk and Suvarierol (2014) analyse social inclusion through the lens of emancipation, highlighting both agency in personal life choices and engagement in the labour market. More recently, Silva and Pereira (2023) review non-experimental evidence suggesting that interventions centred on health, psychological education, and counselling can enhance psychosocial well-being and empowerment among migrants. While these studies document improvements in outcomes such as depression, anxiety, self-esteem, and social interactions, they do not rely on randomised experimental designs and therefore cannot establish causal effects. Related qualitative and descriptive work examines social inclusion programmes for at-risk young migrants (Heyeres et al., 2021) and migrant populations more broadly (Dierckx and Van Dam, 2014).

A parallel strand of research focuses on the social inclusion of migrant children. These studies typically stress the importance of family involvement and community engagement, particularly in early childhood. For instance, the Parent–Child Together programme shows that incorporating parents, local communities, and home language and cultural values can foster acceptance of diversity and improve children's social behaviours (Bracco and Eisenberg, 2017). Similarly, school-based, community-level interventions that adopt a multicultural—rather than colour-blind—approach have been shown to support intergroup attitudes among immigrant and ethnic minority children (see Gönültaş and Mulvey, 2019 for a review). While informative, this literature largely focuses on children and adolescents and remains removed from the evaluation of adult-focused interventions.

Causal evidence from quasi-experimental settings suggests that institutional reforms affecting migrants' legal status and labour-market access can generate gains in economic integration. For example, Hainmueller et al. (2016) exploit variation in waiting times for asylum decisions in Switzerland and show improvements in refugees' labour-market participation. Related evaluations of active labour-market programmes document sizeable employment gains and improvements in job quality (Sarvimäki and Hämäläinen, 2016; Dahlberg et al., 2024; Abbiati et al., 2025). Language acquisition has also been identified as a key mechanism, with recent work exploiting policy variation in language training provision to study impacts on refugees' economic integration (Marbach et al., 2025). However, these studies primarily focus on labour-market outcomes and provide limited insight into broader dimensions of social inclusion.

In contrast, randomised experimental evidence on social inclusion programmes, particularly those targeting adult migrants and women, is scarce. To our knowledge, there are very few randomised controlled trials that directly evaluate the causal impact of structured social inclusion interventions on psychosocial, social, or digital outcomes among migrant women. Against this background, our study contributes novel evidence by providing a causal evaluation, based on a randomised controlled design, of a comprehensive programme aimed at enhancing the social inclusion of female migrants in Spain.

With respect to digital inclusion, prior research shows that digital literacy programmes can improve employment prospects and mental well-being (Audhoe et al., 2010; Briscese et al., 2022; Roessler et al., 2021; Lee et al., 2022). Digital skills also enable marginalised groups to better navigate public services and access essential resources (Suh et al., 2022). At the same time, the effectiveness of digital interventions depends critically on context and implementation, as emphasised by Choudhary and Bansal (2022). Related experimental work studies digital job-search and matching interventions, demonstrating that training job seekers to use online professional networking tools can improve employment outcomes (Wheeler et al., 2022), and that access to digital matching platforms can affect beliefs and search behaviour with implications for labour-market outcomes (Kelley et al., 2024). Evidence on digital access alone is mixed: while providing hardware may increase

measured digital skills, it does not always translate into earnings gains (Fairlie and Bahr, 2018). In contrast, combining access with targeted training appears more effective in improving job-search ability among disadvantaged adults (Almunia et al., 2025).

Digital learning initiatives have also been studied among migrant and refugee populations. For example, Satar et al. (2025) and Faye and Ravneberg (2024) use mixed qualitative and quantitative approaches to document improvements in skills and perceived empowerment. Fung et al. (2025) provide a systematic review highlighting the potential benefits of digital training programmes for female migrants. However, these studies generally do not adopt causal evaluation frameworks, limiting their ability to identify programme impacts.

Finally, a complementary causal literature in economics evaluates psychosocial and socio-cognitive interventions among vulnerable populations. Randomised studies of cognitive behavioural therapy and related soft-skills interventions document substantial effects on behaviour and downstream socioeconomic outcomes (Blattman et al., 2017; Heller et al., 2017). More broadly, economists have examined how social programmes affect psychological well-being, showing that unconditional cash transfers can improve mental health (Haushofer and Shapiro, 2016, 2018), and that combining economic support with psychological interventions can generate distinct patterns of impacts across economic and mental-health dimensions (Haushofer et al., 2020). Together, these strands of evidence motivate our focus on a comprehensive inclusion pathway that integrates personalised support, psychosocial components, and digital training.

Overall, this literature underscores both the importance of social and digital inclusion for migrant well-being and the limited availability of causal evidence evaluating such interventions—particularly for adult migrant women. Our findings of improvements in psychosocial well-being and digital inclusion directly contribute to this gap and provide rigorous causal evidence on the mechanisms through which comprehensive inclusion programmes can operate.

3 Intervention Design

3.1 Theory of Change and Main Hypotheses

To design an evaluation that captures the causal relationship between the intervention and its ultimate objectives, we develop a conceptual framework grounded in a Theory of Change (ToC) approach. The ToC enables us to systematically trace how specific activities are expected to produce measurable intermediate outcomes, which in turn contribute to the final goals of social inclusion and digital inclusion. This framework provides a coherent pathway illustrating how individual capacities and environmental resources are jointly leveraged to promote inclusion.

The intervention pursues two overarching goals: *social inclusion* and *digital inclusion*. Social inclusion refers to the integration of participants into social networks, community life, and institutional structures, thereby reducing social isolation and enhancing participation in collective and civic spheres. Digital inclusion, in turn, denotes effective engagement with digital technologies, platforms, and online services, enabling participants to access information, opportunities, and social connections in an increasingly digitalised environment. The design of the intervention acknowledges that these two forms of inclusion are interrelated and mutually reinforcing. Consequently, the activities implemented under the programme aim to address multiple barriers—personal, social, and structural—that hinder participation in both social and digital domains.

Activities: The intervention comprises four interrelated modules: (i) an initial diagnostic assessment, (ii) psycho-social support, (iii) knowledge and awareness of community resources, and (iv) digital competency training. Together, these activities are designed to target both individual-level factors, such as skills, motivation, and self-efficacy, and contextual factors, such as access to networks and institutional resources, that shape inclusion outcomes. Detailed descriptions of these activities are provided in Section 3.3.

Intermediate outcomes: Through these activities, the programme aims to generate five measurable intermediate outcomes that serve as mechanisms linking the activities to the final goals. These intermediate outcomes are (i) social resources, (ii) psychosocial well-being, (iii) community participation, (iv) digital skills, and (v) economic resources. *Social resources* refer to strengthened networks and support systems that foster connection and collaboration. *Psychosocial well-being* encompasses improvements in mental and emotional health, resilience, and self-efficacy. *Community participation* captures the knowledge of community resources as well as extent of engagement in local civic, and social activities. *Digital skills* refer to the ability to navigate, access, and use digital platforms effectively, while *economic resources* denote improved access to employment opportunities and financial situations. These intermediate outcomes are expected to operate synergistically, reinforcing one another and creating the enabling conditions necessary for broader inclusion. The survey instruments are designed to capture changes in these dimensions, allowing for empirical assessment of the hypothesised pathways.

Mechanisms: The pathways from each activity, through selected intermediate outcomes, to the final objectives are illustrated in Figure 1. We can summarise them as follows:

i. The initial diagnostic assessment serves as a foundational tool to identify participants' needs, resource gaps, and potential psychological barriers to engagement.

By systematically mapping individual circumstances, this activity facilitates tailored access to social networks, community services, and learning opportunities. It thereby contributes to the enhancement of social resources, psychosocial well-being, community participation, and economic resources, laying the groundwork for subsequent improvements in both social and digital inclusion.

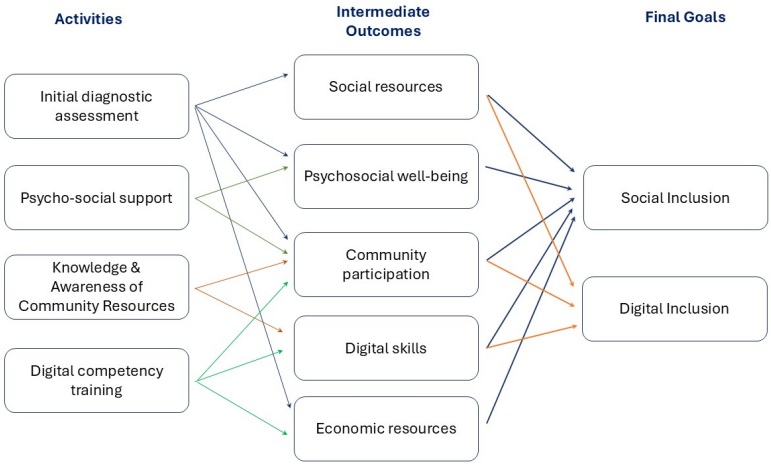
ii. The psycho-social support component directly addresses psychosocial well-being. By providing structured support, the intervention equips participants to manage emotional challenges, build self-confidence, and strengthen their sense of agency. Improvements in psychological resilience and social efficacy are expected to enhance social inclusion by fostering engagement in community life and interaction with others. Furthermore, enhanced well-being can indirectly facilitate digital inclusion, as individuals with greater confidence and motivation are more likely to access and utilise digital technologies for communication, learning, and participation.

iii. The activity centred on knowledge and awareness of community resources focuses on connecting participants with the services and opportunities available in their local environment. By improving awareness and understanding of community assets, this activity not only raise knowledge regarding community resources, but also enhances social resources and encourages greater community participation. Because many resources and opportunities are accessed through digital platforms, this process also reinforces digital engagement. Additionally, improved awareness of community and institutional resources can lead to better economic outcomes by linking participants to employment, training, or financial support opportunities.

iv. Digital competency training explicitly targets the acquisition of technological skills necessary for active participation in a digital society. By strengthening participants' ability to navigate and use digital tools effectively, this activity promotes digital inclusion directly, while also supporting social inclusion indirectly, as digital engagement facilitates communication, community involvement, and access to services.

Taken together, these four activities operate through interconnected mechanisms, generating intermediate outcomes that collectively advance the final objectives of social and digital inclusion. The intervention thus embodies a comprehensive Theory of Change that addresses both individual capacities and systemic barriers to promote sustained social and digital inclusion.

Figure 1: Theory of Change of the Intervention



Main Hypotheses: Building on this framework, we hypothesise that the intervention enhances social and digital inclusion through interconnected pathways that strengthen individual capacities and expand access to social, economic, and institutional resources. Improvements in psychosocial well-being and self-efficacy, fostered through psychosocial support, are expected to increase participants' engagement in social networks and community life, thereby advancing social inclusion. At the same time, greater awareness of community resources and the acquisition of digital competencies are anticipated to facilitate access to information, services, and opportunities mediated by technology, directly promoting digital inclusion. These two domains are expected to reinforce one another: enhanced social inclusion may encourage digital participation, while improved digital literacy can enable more active and sustained engagement in social and civic activities. Taken together, the intervention is hypothesised to generate cumulative and mutually reinforcing effects across psychosocial, social, and digital dimensions, ultimately contributing to more inclusive participation in both offline and online environments.

Importantly, the non-monetary component of the programme is explicitly designed to promote social inclusion as an outcome in its own right and as a central policy goal. Improvements in social inclusion—such as enhanced access to information, institutions, and social resources—can generate welfare gains even in the absence of immediate changes in economic or labour-market outcomes. Economic inclusion, therefore, is not the primary objective of the intervention, and any effects on labour-market outcomes should be interpreted as secondary or downstream consequences of improved social inclusion.

Overall, unlike programmes that rely solely on financial transfers, this intervention addresses multidimensional barriers to inclusion—psychological, informational, and technological—thereby fostering more durable behavioural and social change.

3.2 Main Stakeholders

The CEPAIM Foundation for Comprehensive Action with Migrants (hereinafter, CEPAIM) was the main entity responsible for the overall implementation and coordination of the project. CEPAIM is an independent organisation that responds to social dynamics related to migration and social exclusion processes from a community-based perspective.[6] The Ministry of Inclusion, Social Security and Migration (MISSM) was the project's funder whilst its General Secretariat for Inclusion (SGI) was the main responsible entity for the design and the evaluation of the randomised controlled trial programme.[7]

3.3 Intervention curriculum

For the treatment group, a sequence of activities was carried out as follows:[8]

Initial diagnostic assessment: It was conducted by a social worker, covering the following areas: material resources (economic resources and housing), social relationships and health (household unit, health, and social participation), psychosocial factors (perception of situation, self-esteem, habits, and culture), and capabilities and competencies (employment and social skills). Based on this assessment, a social inclusion pathway was developed with personalised monitoring and evaluation. Special emphasis was placed on guidance and advice regarding the Minimum Basic Income scheme. Additionally, referrals were made in cases of risk (e.g., at-risk minors, gender-based violence, utilities cut-off, or eviction). In addition, participants were offered non-Spanish language interpretation support throughout all activities, including the survey administration. Consequently, approximately 30% of participants in both the treatment and control groups made use of interpretation support.

Psycho-social supports: This was a combination of a group-based workshop—focussing predominantly on psycho-social supports. Broadly, the module aimed to create a comfortable, safe, and respectful space for the free expression of emotions and shared experiences. There are 12 sessions where each session lasted approximately 1.5 hours. In addition, participants were also offered personalised, individual support sessions (up to five sessions)

[6] CEPAIM's mission is to promote an inclusive, cohesive, egalitarian, and intercultural society that ensures full access to citizenship rights for the most vulnerable individuals, especially migrants.

[7] Accompanying CEPAIM in the project were several key partners: (i) the Federation of Municipalities of the Region of Murcia, which undertook support, management, and coordination tasks with the municipalities; (ii) the University of Murcia, which provided external advisory services and support in the development of data collection tools; (iii) the Directorate-General for Social Services and Relations with the Third Sector of the Region of Murcia, which supported the coordination of actions and the overall development of the project; (iv) the Provincial Delegation of the Region of Murcia of the National Institute of Social Security, which offered technical assistance in the project's governance model by conducting audit and budget execution tasks.

[8] In practice, all workshops were conducted during regular working hours on working days.

that varied according to personal characteristics and needs.[9]

Knowledge and awareness of community resources: This module aimed to enhance community knowledge, and community engagement, including language mediation services (translation and interpreting sessions). It consisted of a variety of group sessions—covering topics such as local knowledge and context, positive conflict resolution, and citizenship building. Specifically, the module aimed to raise awareness of available resources and encourage active community participation, particularly with regard to access to municipality-related public resources, including education, health, public administrative services. In addition, language mediation was offered to help facilitating the participation of female migrants in getting support in psychosocial care, social support, and training.[10]

Digital competency training: Together with a tutor, participants took a class on a set of digital skills to develop their digital competency in four aspects: using information in digital contexts; applying digital resources in daily life; fostering citizen-driven online engagement; and ensuring digital accessibility for excluded groups.[11] Primarily, the module intended to promote digital inclusion, but it also expected to help enhancing social inclusion as participants can better utilise social assistance.

3.4 Incentives

Financial incentives were utilised to ensure the participation of both groups (treatment and control) in the data collection surveys for the evaluation, and to encourage full engagement. Firstly, an *evaluation incentive* was offered to both the control and the treatment groups, as a payment of €50 after completing the initial assessment and subsequently €125 after completing the final evaluation.

Secondly, a *goal achievement incentive* of up to €300 was offered. For the treatment group, the payment scheme was based on attendance at specific sessions of *initial diagnostic assessment*; *psycho-social support*; and *knowledge-and-participation-in-the-community* (valued at €100 for each session). In contrast, for the control group, they were offered €100 for each of the follow-up meetings (3 meetings in total). Appendix Figure C.1 shows the distribution of the total value of financial incentives received by participants in the treatment and control groups. Most participants received the full compensation, with a slightly higher share in the control group (92.3%) than in the treatment group (84.1%). Compensation reflects both survey completion and programme participation, as detailed in Appendix Table C.4.

[9] See Appendix A.2 for more details.
[10] See Appendix A.2 for more details.
[11] See Appendix A.2 for more details.

3.5 Eligibility of participants and recruitment

Starting from a target population of female migrants legally residing in the Region of Murcia, who were recipients of either the IMV or the Basic Insertion Income Scheme (Renta Básica de Inserción, RBI), an initial contact was made via telephone call, followed by an in-person group session. When necessary, the initial contact was also reinforced through email, additional phone calls, or even individual meetings.[12]

Beneficiaries who were contacted through this procedure were then invited to attend group sessions held in each of the participating municipalities. During these sessions, participants were informed about an overarching idea of the programme, and subsequently, they were invited to sign the consent form, which was done individually during the same session.

3.6 Timeline

The organisation of the intervention programme in different stages was as listed below. Each participant progressed through the study sequentially.

I. Recruitment and baseline survey: The process in this stage included the initial contact, group information sessions, signing of informed consent, and the administration of the baseline questionnaire or diagnostic assessment.

II. Randomisation: This stage was carried out immediately after the baseline data collection.

III.A. Implementation of interventions: This stage was applicable to treated participants.

III.B. Monitoring during the intervention period: Participants in the control group were monitored, only for the evaluation purpose.

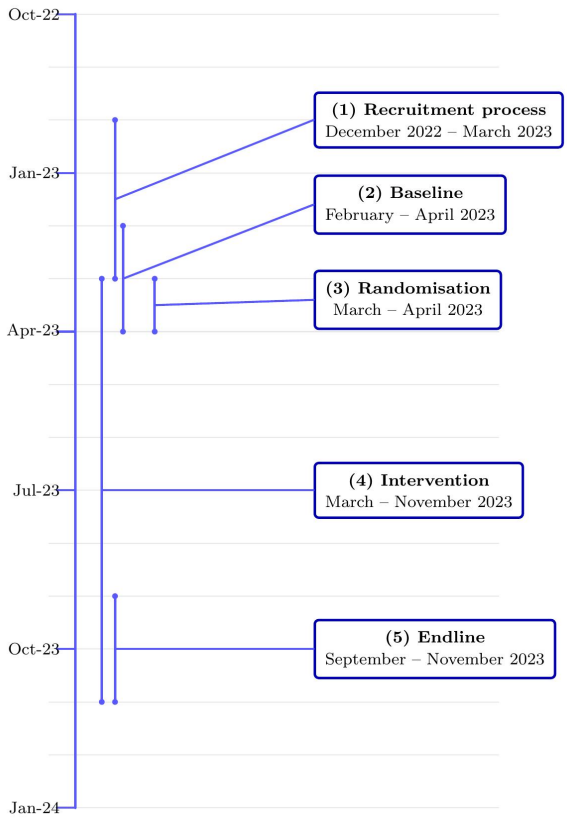
IV. Follow-up endline survey: Both groups were followed up over time to track changes in the key outcome indicators.

In summary, as shown in Figure 2, the design process began in October 2022. The recruitment process took place between December 2022 and March 2023, during which the baseline survey was also administered (February–April 2023). Randomisation of participants was carried out between March and April 2023. The intervention phase then ran from March to November 2023 (a total of eight months), followed by the endline survey in November 2023. While some of these phases overlap in the overall timeline, the sequence was strictly adhered to at the individual level: each participant completed the

[12]The initial contact was also further supported by additional phone calls, individual face-to-face meetings, or by attending a second group information session when needed. Throughout the entire recruitment process, professional staff involved in the project were available to provide language interpretation support when necessary.

baseline survey prior to randomisation, and no intervention was delivered before baseline data collection was finalised for that participant.

Figure 2: Timeline



3.7 Randomisation

Randomisation of the baseline sample: Among participants who gave their consent to participate in the programme, they were randomised to one of the two experimental groups: the treatment group, which received the full programme of interventions, or the control group, which did not receive the programme. A stratified randomisation was implemented at the individual level—using the town of residence level as the stratification unit.[13] The process ensured the balance between both groups in terms of observable characteristics (e.g., age, number of children, household composition, previous employment

[13]In cities with more than 100,000 inhabitants, stratification was based on neighbourhoods or districts. In total, there were 14 strata (the intervention took place in 12 municipalities, but the municipality of Murcia was subdivided into three zones).

Ideally, alternative stratification protocols could have been conducted based on individuals' characteristics. Due to the time and operational constraints, the full characteristics of the sample were only available after the random assignment was completed and the entire baseline survey was administered. Therefore, the stratification was limited to the municipality level.

status). Overall, the randomisation process was done through a computerised algorithm to ensure strict randomness and it guaranteed that the assignment was not influenced by any personal or institutional discretion.

In total, 856 non-EU female migrant women who were beneficiaries of the Minimum Basic Income scheme in the Region of Murcia at the time were recruited.[14] Among them, 428 were in the treatment group and 428 were assigned to the control group.[15]

Attrition: Recall that 856 participants who responded to the baseline survey were initially recruited into the study. By the end of the programme, we collected information from 755 participants at both the baseline and endline surveys, corresponding to 88.2 per cent of the initially recruited sample. We assess whether attrition followed a systematic pattern and find that, although treatment status on its own is significantly and positively correlated with the likelihood of remaining in the programme, this association disappears once additional observable characteristics are included.[16] Although attrition does not appear to be severe in our case, we conduct a robustness check in Section 5.3 by re-estimating our main specifications following Lee (2009) to account for potential attrition bias.

Analytical Sample: Of the 755 participants observed in both the baseline and endline surveys, we have complete information on all covariates for 703 individuals. This subsample constitutes our main analytical sample used in the regression analyses.

3.8 Main Variables: Survey and Administrative Data

The baseline and endline surveys constitute the primary sources of information on the main outcomes and key covariates. To complement the self-reported survey data, we also use administrative records—specifically, the anonymised social security records of the participants in the intervention—to evaluate their labour-market behaviour.[17]

[14] Initially, 858 individuals were recruited. However, due to the withdrawal of two individuals between the time of randomisation and baseline measurement, the final baseline sample consisted of 856 participants.

[15] According to the initial plan, a group of substitute participants was identified. However, thanks to the staffing and resources made available by CEPAIM, it was possible to incorporate all 856 participants within the planned timeline, thus allowing for a uniform treatment protocol. Therefore. there was no replacement of participants in the programme throughout its entire duration.

[16] More specifically, we ran a regression—with the probability of attrition defined as *not being observed in the endline survey* as the dependent variable. Appendix Tables C.2 and C.3 report further details of the attrition analyses. This exercise starts from the full baseline population of 856 observations and is subsequently reduced to 794 observations when restricting the sample to individuals with complete baseline covariate information. Moreover, as shown in Appendix Table C.3, we additionally conduct a joint significance test of all interaction terms to assess whether attrition is systematically related to treatment status. The resulting F-statistic is 0.89 (p-value = 0.64), and we therefore fail to reject the null hypothesis.

[17] For more information on the dataset, see https://www.seg-social.es

3.8.1 Variables in the surveys

As discussed in Section 3.6, both the baseline and endline surveys were administered to participants in the treatment and control groups. Below, we outline the main indicators used in the analysis, organised by thematic category.[18] In addition, to ensure that all indicators are scaled such that higher values correspond to more positive outcomes, we implement the following steps. First, for indicators in which higher values reflect negative outcomes, we apply reverse coding. Second, we normalise each item by rescaling it to lie between zero and one. Third, we construct an index using inverse covariance weighting following Anderson (2008). Finally, we standardise the resulting index so that it has a mean of zero and a standard deviation of one by construction.

Social resources: Several indicators that we exploit as proxies are: (i) social resources index, which measures participants' view of support they received in terms of administrative and social assistance; (ii) index on perception of trust in social workers; (iii) assessment on participants' autonomy in the management of the IMV; (iv) autonomy in accessing social resources that improve social inclusion as self-reported ability to independently complete certain procedures and access services that promote social inclusion. Note that we have the measure of the economic resources index at both the baseline and the endline. However, for the other indices in this theme, we only observe them at the endline.

Psychosocial well-being: It is measured based on four relevant indicators, namely self-esteem; satisfaction with family relationships; psychological well-being; and life satisfaction. All of them are self-evaluated.

Community participation: It consists of two indices, namely community engagement index; and knowledge of community resources index.

Digital skills: It is a composite indicator derived from questions measuring the use of digital tools in everyday life, especially in relation to administrative tasks.

Economic resources: The index of financial difficulty measures material deprivation, ability to make ends meet, and household economic status. We reverse the value so that the higher value signifies better financial situations.

Other key covariates: The covariate set includes indicators for place of residence (12 locations), labour market status, and educational attainment (no formal education; primary or lower secondary; compulsory secondary; post-secondary or vocational; tertiary). Additional controls comprise Spanish language proficiency (native, high, medium, minimal), nationality (Spanish, non-Spanish European, non-European), age group (19–28, 29–38, 39–48, 49–58, 59+), and household type (two-parent, single-parent, other)[19] All specifications additionally include month-of-interview fixed effects and indicators for re-

[18] More details of the variables and their sources can be found in the Appendix.

[19] The level of fluency in Spanish was self-assessed by the participants themselves.

ceipt of other social welfare benefits, including the Minimum Basic Income (IMV), Renta Mínima de Inserción (RBI), and child benefits.

3.8.2 Variables from Administrative Data

The administrative data used in this study consist of anonymised Social Security records for participants in our intervention programme. The dataset contains detailed records of all formal labour market entries for individuals included in the survey who participate in the formal economy. Each observation corresponds to a specific employment or contract spell held by each worker, in a formal job. The structure of the dataset is comparable to that of the Continuous Sample of Working Lives (Muestra Continua de Vidas Laborales, MCVL). Specifically, the anonymised administrative data covers employment relationship records from December 1991 to March 2024.[20]

Specifically for the purposes of this study, we restrict the analytical period and focus on employment spells that occurred (and/or ended) between July 2022 and March 2024—covering 8 months before the intervention was initiated until the last available month of the data that we can access.[21]

To gauge labour market situations and dynamic of workers who appeared in the administrative records, we constructed several outcomes. First, for the extensive margin (employed in the formal sector or not), we created an indicator variable, *employed*, which captures whether an individual was recorded as with a valid job contract in a given month. Second, to measure the intensive margin of labour market participation, we calculate two additional variables: (i) *days* reflects the proportion of days worked in a given month; and (ii) *parttime* represents the percentage of an employment contract that is considered as a part-time job.[22] Then, *days* and *parttime* are multiplied to create a proxy of work hours (in a given month), *hours*. We also exploit *maxdays*, which is the maximum number of days worked within a given month, as another measure of the intensive margin of labour market participation.[23]

[20]That is, at least there is one worker who we observed their employment in December 1991, and at least one worker who had their job termination date in March 2024.

[21]The variables in the anonymised social security records that we exploit in this study are: an anonymized individual identifier, the social security scheme code, the province code of the job, the sectoral activity code associated with the employment relationship, the contract type, the part-time work coefficient, and the start and end dates of the employment relationship.

[22]Specifically, this is an existing variable in the administrative record—titled *part-time coefficient*, which is a percentage ranging from 0 to 100. After some modifications, in our case, a value of 0 represents working part-time, while a value of 100 corresponds to working full-time. Since the measure of part-time work used in the administrative data is defined relative to the standard number of hours in a full-time workday, interpreting this measure as total hours worked implicitly assumes that the standard full-time working hours are uniform across firms.

[23]Since the dataset contains multiple employment records per individual, we initially categorised each observation into one of three periods: pre-treatment, intermediate, or post-treatment. The maximum number of days worked in a given month is then calculated for each individual within each period. For example, if an individual held two different jobs in December 2023 where they worked 12 days in one job

With regard to the composition of individuals observed in the administrative data, we acknowledge that these records only capture participants who, at some point, held a formal-sector job and therefore appear in the Social Security database. To assess potential selection into the administrative sample, we estimate a series of simple regressions in which the dependent variable is an indicator for whether a programme participant (in either the treatment or control group) appears in the administrative records, conditional on a full set of baseline characteristics, including treatment assignment. The results are reported in Appendix Table C.9. Importantly, treatment status is not statistically associated with the probability of appearing in the administrative data. By contrast, being employed at the time of the surveys is a strong predictor, increasing the probability of appearing in the records by approximately 40 percentage points. Spanish language fluency is also positively correlated with being observed in the administrative data, whereas welfare status is not. Finally, we observe regional variation in the likelihood of appearing in the Social Security records. Taken together, these results suggest that selection into the administrative data is driven primarily by pre-existing labour-market attachment rather than by programme participation, alleviating concerns that differential observability across treatment status may bias our estimates.

3.9 Description of the Sample

Summary statistics at baseline: As explained earlier, the baseline sample comprises 856 individuals in total, with 428 assigned to the control group and 428 to the treatment group. Table 1 presents descriptive statistics for key socio-economic characteristics measured at baseline. These include location of residence (12 stratified municipalities), labour-market status (employment), educational attainment (coded as 0 = no education, 1 = at least primary education, 2 = at least secondary education, 3 = at least bachelor's degree, and 4 = postgraduate education), Spanish language proficiency (native, high, intermediate, low), nationality (Spanish, European, non-European), age groups (five categories: 19–28, 29–38, 39–48, 49–58, and 59 or older), and household composition (four categories: two-parent, one-parent, divorced/separated, and other household types).

and 26 days in the other job, their *maxdays* for December 2023 would be 26.

Table 1: Descriptive statistics of the covariates

	Baseline Survey: N = 856		**Endline Survey: N=755**	
	Mean	**Std. Dev.**	**Mean**	**Std. Dev.**
Age 19-28	0.08	0.27	0.17	0.38
Age 29-38	0.39	0.49	0.33	0.47
Age 39-48	0.37	0.48	0.34	0.47
Age 49-58	0.13	0.33	0.12	0.33
Age 59-68	0.04	0.20	0.04	0.20
HH: 2-parent family	0.75	0.43	0.74	0.44
HH: 1-parent family	0.08	0.27	0.10	0.30
HH: Others	0.06	0.25	0.07	0.26
Spanish language: Native	0.11	0.31	0.10	0.31
Spanish language: High	0.17	0.38	0.17	0.37
Spanish language: Middle	0.39	0.49	0.37	0.48
Spanish language: Low	0.33	0.47	0.36	0.48
Edu: No education	0.24	0.43	0.24	0.43
Edu: Primary	0.30	0.46	0.30	0.46
Edu: Secondary	0.19	0.39	0.19	0.39
Edu: Post-secondary/Vocational	0.19	0.39	0.19	0.39
Edu: Higher education	0.08	0.27	0.08	0.27
Employed	0.13	0.34	0.19	0.40
Area: Murcia	0.31	0.46	0.31	0.46
Area: Cartagena	0.14	0.34	0.14	0.35
Area: Lorca	0.14	0.35	0.14	0.35
Area: Cieza	0.03	0.18	0.03	0.16
Area: Totana	0.02	0.14	0.02	0.13
Area: Alhama de Murcia	0.07	0.26	0.06	0.25
Area: Alguazas	0.02	0.15	0.02	0.15
Area: Mazarrón	0.05	0.21	0.05	0.21
Area: Fuente Álamo	0.05	0.21	0.05	0.22
Area: Torre Pacheco	0.07	0.25	0.07	0.25
Area: Los Alcázares	0.05	0.23	0.06	0.23
Area: San Pedro del Pinatar	0.05	0.21	0.05	0.21
Nationality: Spanish	-	-	0.02	0.13
Nationality: Non-European	0.94	0.24	0.91	0.28
Partner at the household	0.26	0.44	0.28	0.45
Number of adults in the household	2.08	0.76	2.22	3.54
Number of children	2.28	1.22	2.25	1.24
Number of children under 18	2.05	1.21	2.00	1.24
IMV: Yes	0.91	0.28	0.91	0.28
RBI: Yes	0.01	0.09	0.01	0.09
Child benefit: Yes	0.10	0.30	0.10	0.30
Month (baseline): February	0.25	0.43	-	-
Month (baseline): March	0.74	0.44	-	-
Month (baseline): April	0.01	0.11	-	-
Month (endline): September	-	-	0.33	0.47
Month (endline): October	-	-	0.52	0.50
Month (endline): November	-	-	0.15	0.36

Notes: The table reports the descriptive statistics of the covariates included in both the baseline and endline surveys. It presents the mean and standard deviation for age group, household composition, Spanish language proficiency, education level, labour market status, geographic area, nationality, welfare benefits (IMV, RBI, and child benefit), interview month, and additional household characteristics (living with partner and household size). The full sample size, without conditioning on observed covariates, consists of 856 observations at baseline and 755 observations at endline.

Columns 1-2 of Table 1 report the summary statistics of each covariate at the baseline (with 856 observations). All participants are female migrants (94% are non-European, 11% have Spanish as their native language). 91% are IMV recipients whilst only 1%

and 10% are beneficiaries of RBI or child benefit, respectively.[24] As the target group is recipients of IMV or RBI, the low level of employment is expected—with only 13% are with an employment. The average age is 41.6 years old. 54% of the participants have an education attainment lower than secondary school.

Moreover, columns 3-4 in Table 1 report analogous statistics, but taken from the sample at the endline. The full sample size, without conditioning on observed covariates, consists of 856 observations at baseline and 755 observations at endline. Overall, given the low attrition rate (see more details in Section 3.7), the sample appears balanced between the baseline and the endline surveys along all dimensions.

Balancing Test: Table 2 reports the balance tests on outcomes, measured at baseline. The randomisation was well-conducted, with all outcomes balanced in the pre-treatment sample, between the treatment and the control group. Only at the index of the ability to use digital tools for daily life that we detect a statistically significant difference at 10%. In addition, Appendix Table C.1 reports the mean comparison of characteristics of our participants between those in the control group and the treatment group, using the information collected at the baseline.

Overall, we have a sample randomisation that is successful along almost all dimensions. We note that, marginally, the control group has more participants from 1-parent households (but significant only at 10%). In terms of language proficiency, both groups are balanced in terms of the proportion of those with Spanish as their native language (11% in both treatment and control groups), and those with low proficiency. Some minor differences exist among those with intermediate and high (but not native) levels of Spanish (at 5% significance).

[24] In our estimations, we include a set of indicators of beneficiary status. Unfortunately, with very small sample of certain welfare beneficiary groups, we cannot perform subsample analysis for all of them.

Table 2: Balancing test of baseline outcome

	Control Group	Treatment A	Pairwise t-test
	Mean (SD)	Mean (SD)	(p-value)
Panel A: Social resources			
Social resources	no baseline	no baseline	no baseline
Trust in social work	no baseline	no baseline	no baseline
Autonomy in managing of the IMV	no baseline	no baseline	no baseline
Autonomy accessing social resources	no baseline	no baseline	no baseline
Panel B: Digital skills			
Ability to use digital tools for daily life	-0.06	0.06	0.09*
	(1.00)	(1.00)	
Panel C: Psychosocial well-being			
Self-esteem	0.01	-0.01	0.68
	(1.00)	(1.00)	
Satisfaction with family relationships	-0.02	0.02	0.56
	(1.00)	(1.00)	
Psychological well-being	0.05	-0.05	0.11
	(1.01)	(0.99)	
Life satisfaction	0.05	-0.05	0.17
	(1.01)	(0.99)	
Panel D: Community participation			
Participation in community's life	0.00	-0.00	0.90
	(1.03)	(0.98)	
Knowledge of community's resources	0.02	-0.02	0.58
	(0.96)	(1.04)	
Panel E: Economic resources			
Financial Difficulties	-0.01	0.01	0.67
	(1.03)	(0.97)	
N	428	428	856

Notes: The table reports the results of the balancing test for baseline outcomes, comparing the control and treatment groups. Columns 1 and 2 present the mean and standard deviation (in parentheses) for each group, while the last column shows the p-value from a pairwise t-test assessing the difference in means between the two groups. Statistics are reported only for outcomes that were measured at baseline. The full sample size, without conditioning on observed covariates, consists of 856 observations at baseline

4 Empirical Approach

4.1 Specifications

Our main analysis follows an ANCOVA specification for each main outcome index whose information we observed at both the pre- and post-treatment surveys. The dependent variable is the post-treatment outcome. We include pre-treatment outcomes to control for potential imbalances we observed in the sample. As the randomisation was conducted at the individual level, we use robust standard errors at this level.

Specifically, for the outcomes that we observe both in the baseline and the endline surveys, we estimate Equation 1 as our main specification:

$$\mathrm{Y}_i{}^{\mathrm{POST}} = \beta_0 + \beta_1 \times \mathrm{T}_i + \beta_2 \times \mathrm{Y}_i{}^{\mathrm{PRE}} + \gamma \mathrm{X}_i + \epsilon_i \quad (1)$$

where $\mathrm{Y}_i{}^{\mathrm{POST}}$ is the standardised index at the endline survey, and $\mathrm{Y}_i{}^{\mathrm{PRE}}$ is the standardised index at the baseline survey. T_i is the treatment indicator, with the value of 1 for participants assigned to the treatment group and zero otherwise. Therefore, β_1 is the main parameter of interest that shows an intent-to-treat effect of the programme. X_i is a vector of socio-economic controls at the baseline (as described earlier in Section 3.8), including month-of-interview fixed effects, indicators if participants are recipients of other social welfare schemes (namely, Minimum Basic Income, Renta Mínima de Inserción, child benefit), and fixed effects of location of residence.

As we remarked earlier in Section 3.8, for selected variables that are available only at the endline, we estimate a modified version of Equation 1, which excludes $\mathrm{Y}_i{}^{\mathrm{PRE}}$. Therefore, readers should note that, for these outcomes, the interpretation of the treatment coefficients are different from the main specification, and they are more likely to suffer from omitted variable biases.

5 Results

5.1 Main Findings from the Surveys

Table 3 presents the estimates of the treatment's impact on the key outcome variables adjusting for socioeconomic controls. Each row shows the estimated effect of the intervention on a specific outcome variable (column 1), its standard error (column 2), and the estimation method used (column 5). The sample consists of the 755 participants who completed both the baseline and follow-up surveys.

In the domain of social resources of participants (panel A), the intervention produced statistically significant and positive effects on social resources (an increase of 0.22 standard deviations) and autonomy in managing the Minimum Basic Income (an increase of 0.12 standard deviations). For psychosocial wellbeing (panel B), significant changes were detected for the psychological wellbeing index. Where the intervention increases in 0.15 standard deviations the level of psychological wellbeing. Lastly, in the domain of community participation (panel C), the only significant effect observed was an increase in knowledge of community resources, with an improvement of 0.31 standard deviations. No significant change was observed in overall social participation within the community. In terms of digital skills (panel D), the intervention led to an increase of 0.28 standard deviations in participants' ability to use digital tools in daily life, based on a composite skills index. Lastly, we do not detect any significant change in the economic resources

domain (panel E).

The results suggest that the intervention had its most pronounced impact on digital literacy, access to social resources, and participants' awareness of community services. Primarily, it points to an improvement in digital inclusion from the intervention. However, before we reach the final conclusion, it is worth noting that the positive effects in the domain of social resources of the participants are found among the itemised outcomes where we did not collect the baseline level (and thus, were estimated without its pre-intervention value as a key covariate).

Table 3: Main regression results

	Coeff	(SE)	N	R^2	Method	Mean
Panel A: Social resources						
Social resources	0.23***	(0.07)	703	0.14	OLS	-0.12
Trust in social work	0.00	(0.08)	703	0.08	OLS	0.02
Autonomy in managing of the IMV	0.12*	(0.07)	703	0.31	OLS	-0.08
Autonomy accessing social resources	0.10	(0.07)	703	0.26	OLS	-0.07
Panel B: Digital skills						
Ability to use digital tools for daily life	0.28***	(0.05)	703	0.59	ANCOVA	-0.20
Panel C: Psychosocial well-being						
Self-esteem	0.01	(0.07)	703	0.21	ANCOVA	-0.02
Satisfaction with family relationships	0.02	(0.07)	703	0.30	ANCOVA	-0.04
Psychological well-being	0.15**	(0.07)	703	0.27	ANCOVA	-0.06
Life satisfaction	0.07	(0.06)	703	0.42	ANCOVA	-0.01
Panel D: Community participation						
Participation in the community's life	0.00	(0.07)	703	0.30	ANCOVA	-0.02
Knowledge of community's resources	0.31***	(0.06)	703	0.41	ANCOVA	-0.17
Panel E: Economic resources						
Financial Difficulties	-0.01	(0.05)	703	0.59	ANCOVA	0.01

Notes: The table presents the results of the regression analysis that includes socioeconomic controls. The first column reports the estimated coefficient β_1 from Equation 1. Statistical significance is denoted as follows: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. The second column shows the standard errors (in parentheses), while the third column indicates the number of observations. The fourth column reports the R^2 of each model, and the fifth column specifies the estimation method used (ANCOVA or OLS). The final column shows the mean of the dependent variable in the control group.

5.2 Heterogenous Effect of the Programme

At this section, we examine potential heterogeneous effects of the intervention across a range of individual characteristics. Specifically, we estimate Equation 1 separately for subsamples defined by employment status (unemployed only), place of residence (rural/urban), Spanish language proficiency (fluent/non-fluent), household composition (two-person /other households), and nationality (non-EU only).[25] Appendix Figures C.2–C.6 display coefficient plots of the estimated programme effects for each outcome dimension.

[25]The number of observations for individuals who were (a) employed or (b) EU nationals is very small. As a result, we are unable to conduct reliable estimations for these subgroups.

Overall, we find little evidence of substantial heterogeneity in the effects of the intervention across participant groups. One notable exception concerns social resources: participants who were unemployed, non-EU nationals, non-Spanish speakers, living in a two-parent household in an urban area appear to benefit more from the intervention along this dimension.

Furthermore, when restricting the sample to IMV beneficiaries only, the results remain broadly consistent with those obtained from the full sample. Appendix Table C.11 reports these estimates. In summary, we find limited heterogeneity in the effects of the intervention across outcome dimensions among the migrant subpopulations considered in this study.

5.3 Robustness Checks

Multiple Hypothesis Testing: In addition to concerns about the absence of baseline data for some of the indicators, it is also important to consider an issue that arises in the context of econometric modelling when a large number of hypotheses are tested simultaneously. Given the extensive number of hypotheses in the study, there is a well-known risk that some results may appear statistically significant purely due to random variation in the data. To address this, two sets of multiple hypothesis testing procedures were conducted to control for this possibility.

Table 4 presents the regression coefficients for each outcome (listed in rows) in the first column, along with their corresponding levels of statistical significance. The second column reports the p-values for the family-wise error rate (FWER), as calculated using the Westfall and Young (1993) method. The third column shows the p-values from joint hypothesis testing using the same method.

When reviewing each p-value associated with the multiple hypothesis testing (MHT), the following results emerge: for the outcomes that were statistically significant in the initial estimates, these remain significant under the multiple hypothesis testing approach—specifically with either the p-value of the Westfall-Young or of Randomisation T do not fall below 0.10. These robust results include: social resource levels (+), autonomy in managing the Minimum Basic Income scheme (+), self-assessed digital skills (+), psychological wellbeing (+), and knowledge of community resources (+). In summary, the multiple hypothesis testing exercise confirms that results are consistent with those obtained from the initial regression analyses.

Table 4: Estimation Results, with p-values from multiple hypothesis testing

	Coeff	Westfall-Young p-values	Randomization-T's p-values
Panel A: Social resources			
Social resources	0.23***	0.014	0.002
Trust in social work	0.00	0.998	0.995
Autonomy in managing of the IMV	0.12*	0.422	0.047
Autonomy accessing social resources	0.10	0.549	0.118
Panel B: Digital skills			
Ability to use digital tools for daily life	0.28***	0.000	0.001
Panel C: Psychosocial well-being			
Self-esteem	0.01	0.998	0.925
Satisfaction with family relationships	0.02	0.998	0.799
Psychological well-being	0.15**	0.549	0.022
Life satisfaction	0.07	0.998	0.247
Panel D: Community participation			
Participation in the community's life	0.00	0.998	0.918
Knowledge of community's resources	0.31***	0.000	0.000
Panel E: Economic resources			
Financial Difficulties	-0.01	0.996	0.746
All outcomes			0.004

Notes: The table presents the results of the regression analysis that includes socioeconomic controls. The coefficients in the first column are the same as those reported in Table 3. Statistical significance is denoted as follows: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. The second column reports p-values adjusted for multiple hypothesis testing using the Westfall–Young procedure to control the family-wise error rate (FWER). The third column presents p-values from joint hypothesis testing using randomization inference. Both methods follow the approach described in Westfall and Young (1993).

Addressing sample attrition: Considering that we find selective attrition in our sample, it is worth checking the extent to which our original estimates are sensitive to attrition. Therefore, we follow Lee (2009) and conduct a trimming procedure to bound the average treatment effects in the presence of sample selection due to attrition. The method involves identifying the excess number of individuals who are induced to be selected due to the treatment and then *trimming* the upper and lower tails of the outcome distribution (at 12% of each tail), yielding worst-case and best-case scenario bounds. Table 5 presents the estimates (upper and lower bounds) across each outcome based on the method. Given that the attrition issue is not severe, the estimates with Lee bounds present consistent findings with those we found in the last section.

Table 5: Lee-Bound with controls

	A: Upper bound effect			B: Lower bound effect		
	coeff	(sd)	R^2	coeff	(sd)	R^2
Panel A: Social resources						
Social resources	0.37***	(0.07)	0.16	0.23***	(0.07)	0.14
Trust in social work	0.00	(0.08)	0.08	-0.13*	(0.07)	0.08
Autonomy in managing of the IMV	0.12*	(0.07)	0.31	0.12*	(0.07)	0.31
Autonomy accessing social resources	0.10	(0.07)	0.26	-0.00	(0.06)	0.25
Panel B: Digital skills						
Ability to use digital tools for daily life	0.35***	(0.05)	0.61	0.26***	(0.05)	0.58
Panel C: Psychosocial well-being						
Self-esteem	0.01	(0.07)	0.21	-0.18***	(0.07)	0.20
Satisfaction with family relationships	0.02	(0.07)	0.30	-0.15**	(0.06)	0.24
Psychological well-being	0.24***	(0.07)	0.27	-0.03	(0.06)	0.26
Life satisfaction	0.07	(0.06)	0.42	-0.06	(0.06)	0.38
Panel D: Community participation						
Participation in the community's life	0.10	(0.07)	0.28	-0.14**	(0.06)	0.29
Knowledge of community's resources	0.31***	(0.06)	0.41	0.21***	(0.06)	0.35
Panel E: Economic resources						
Financial Difficulties	0.04	(0.05)	0.58	-0.12**	(0.05)	0.57

Notes: The table presents the results of the regression analysis following the method proposed by Lee (2009), which applies a trimming procedure to address potential bias due to sample attrition. Statistical significance is denoted as follows: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. The first three columns correspond to the upper bound estimates, while the last three columns report the lower bound estimates. These bounds are obtained by trimming either the upper or lower tail of the outcome distribution, depending on the direction of attrition. For each bound, the table reports the estimated coefficient, standard deviation (in parentheses), and the R^2 of the model.

5.4 Intensive Margin of the Treatment Effect

Given that the main analysis relies on the specification outlined in Equation 1, where the treatment variable captures assignment rather than actual attendance, the estimations so far capture the Intent-to-Treat effect (ITT). However, as shown in Appendix Table C.4, not all participants who were assigned the treatment fully attended the programme eventually. On average, approximately 80% of the treated participants took part at least one in the activities of each module.[26]

In order to account for such variations in programme's attendance, first, we estimate the *intensive* margin of the programme assignment—replacing the binary treatment assignment variable, T_i, in Equation 1 by Attend_i, which measures the fraction of all activities of the programme that each participant actually attended.[27] More specifically, we estimate Equation 2 where α_1 captures the association between attendance intensity and the post-intervention outcome, $\mathrm{Y}_i^{\mathrm{POST}}$.

[26]Note that for the interpretation support activities reported in panel B of Appendix Table C.4, participation was not compulsory. Participants who were able to understand Spanish were not required to use this service. Consequently, approximately 30 per cent of participants in both the treatment and control groups made use of interpretation support.

[27]We omitted the participation in the Initial Diagnostic Assessment module as individuals in both the treatment as well as the *control group* took part in this activity.

$$\mathrm{Y}_i^{\mathrm{POST}} = \alpha_0 + \alpha_1 \times \mathrm{Attend}_i + \alpha_2 \times \mathrm{Y}_i^{\mathrm{PRE}} + \omega \mathrm{X}_i + \psi_i \tag{2}$$

The initial estimated results, reported in Appendix Table C.6, point that the ITT effects that are previously found to be statistically significant under Equation 1 also remain significant in our intensive-margin estimations. Most of all, the size of the effect becomes relatively larger under this specification.

Additionally, we can further calculate the intensity of programme's participation by each of the three modules—namely, psycho-social supports; knowledge-and-awareness-of-community-resources, and digital competency. (See Appendix Table C.5 for the descriptive statistics of programme's participation.) Specifically, in Equation 3, we modify the intensity variable Attend_i in Equation 2 into a set of Attend_i^k, which represents the fraction of time that participant i took part the activities in module k of the full programme.

$$\mathrm{Y}_i^{\mathrm{POST}} = \alpha_0 + \sum_k (\alpha_1^k \times \mathrm{Attend}_i^k) + \alpha_2 \times \mathrm{Y}_i^{\mathrm{PRE}} + \omega \mathrm{X}_i + \psi_i \tag{3}$$

Appendix Table C.7 reports the estimation results for Equation 3, where each column corresponds to the intensity margin of participation in a specific module and each row to an outcome. As before, we estimate ANCOVA specifications when the outcome is observed at baseline, and OLS specifications when the outcome is observed only at endline. Relative to the aggregated estimates reported in Appendix Table C.6, the disaggregated results yield fewer statistically significant effects. For social resources, only participation in the *Community Knowledge* module exhibits a significant association. Contrary to prior expectations, participation in the *Digital Training* module has no detectable effect on digital skills. In contrast, improvements in psychosocial wellbeing appear to be driven by participation in the *Digital Training* module. Moreover, gains in community participation are also primarily associated with digital training, with some evidence that psycho-social support increases knowledge of community resources. Finally, we find no statistically significant effects of any individual module on financial difficulties. Overall, exploiting endogenous variation in participation across modules yields largely inconclusive evidence regarding the intervention's effects.

5.5 Treatment Effect on the Treated Estimation

Given that the intensity of attendance is unlikely to be exogenous and may be driven by unobserved individual choices and constraints, the estimates presented earlier in Section 5.4 should be interpreted with caution. To address this potential endogeneity, we adopt

a two-stage least squares approach (2SLS), instrumenting Attend$_i$ with random assignment to treatment, T$_i$. This strategy allows us to estimate the Treatment-on-the-Treated (TOT) effect or the LATE effect.

Table 6 reports the estimated results (i.e., the second stage of our two-stage least squares estimations). In this table, the F-statistics from the first-stage regressions are presented in the last column. As shown, all F-statistics are greater than or equal to 2300, indicating that the instrument is indeed strong, as suggested by Stock et al. (2002). After accounting for endogeneity, the size of the effect of Attend$_i$ becomes smaller for most outcomes that the intervention shows statistically significant effects. One exception is that, under the new approach, the positive effect of the programme on life satisfaction is halved and is no longer statistically meaningful. Overall, we find that the treatment effect is larger under the TOT approach—confirming a positive contribution of the programme to female migrants who took part in it.

Table 6: 2SLS results with the treatment status as an instrument

	Coeff	(SE)	N	R^2	F-stats (1^{st} stage)
Panel A: Social resources					
Social resources	0.31***	(0.09)	703	0.15	2398.82
Trust in social work	0.00	(0.10)	703	0.08	2387.44
Autonomy in managing of the IMV	0.16*	(0.08)	703	0.31	2398.82
Autonomy accessing social resources	0.14	(0.09)	703	0.27	2398.82
Panel B: Digital skills					
Ability to use digital tools for daily life	0.38***	(0.07)	703	0.59	2387.25
Panel C: Psychosocial well-being					
Self-esteem	0.01	(0.09)	703	0.21	2309.33
Satisfaction with family relationships	0.02	(0.09)	703	0.28	2301.87
Psychological well-being	0.20**	(0.09)	703	0.27	2358.11
Life satisfaction	0.09	(0.08)	703	0.42	2358.80
Panel D: Community participation					
Participation in the community's life	-0.01	(0.09)	703	0.29	2356.21
Knowledge of community's resources	0.41***	(0.08)	703	0.41	2416.66
Panel E: Economic resources					
Financial Difficulties	-0.02	(0.07)	703	0.59	2397.24

Notes: The table reports the results from a two-stage least squares (2SLS) regression, where treatment assignment is used as an instrument for programme participation. The estimated coefficients correspond to the local average treatment effect (LATE) among compliers. Statistical significance is denoted as follows: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. The first column shows the estimated coefficient, the second column reports the standard error (in parentheses), the third column indicates the number of observations, the fourth column presents the R^2, and the fifth column displays the F-statistic from the first stage, providing evidence on the strength of the instrument. The endogenous attendance measure is defined as the fraction of time that a participant took part in the full programme (following Equation 2).

5.6 Labour Market Outcomes with Administrative Data

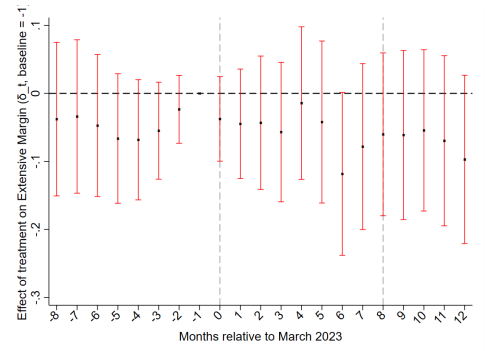
Next, we turn to assess if the intervention may have produced any changes in *actual* labour market behaviours and outcomes of the programme's participants that we may observe from the administrative dataset (as described in Section 3.8.2).

Specifically, we estimate a difference-in-differences specification as:

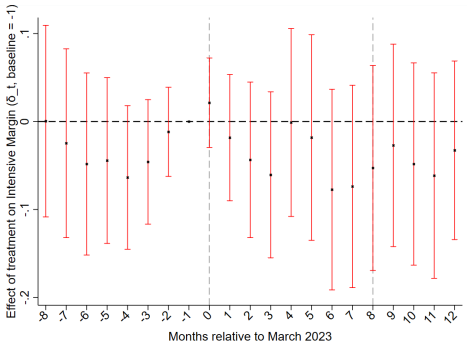
$$\mathrm{Y}_{i,t} = \theta_t + \lambda_1 \mathrm{T}_i + \lambda_2 \times (\mathrm{T}_i \times \mathrm{Post}_t) + \gamma \mathrm{X}_i + \eta_{i,t} \tag{4}$$

where $\mathrm{Y}_{i,t}$ denotes the labour-market outcome of individual i in month t over the analysis period, spanning July 2022 to March 2024. The variable T_i is a treatment indicator equal to one for individuals assigned to the employment support programme, and Post_t is an indicator equal to one from March 2023 onwards, marking the start of the intervention as our *post* period in this estimation. The term θ_t represents month fixed effects that account for common temporal shocks. The vector X_i includes the same set of baseline covariates used in Equation 1. The coefficient λ_2 captures the intention-to-treat effect, measuring the causal impact of the programme on labour-market outcomes. Standard errors are clustered at the individual level.

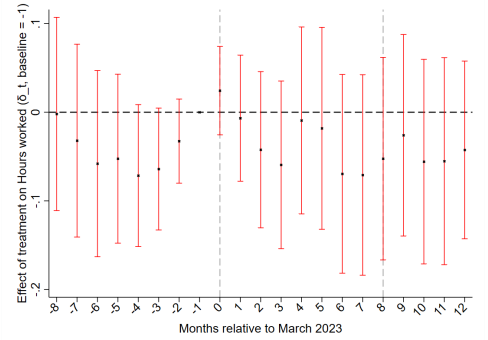
Figure 3: Labour Market Outcomes



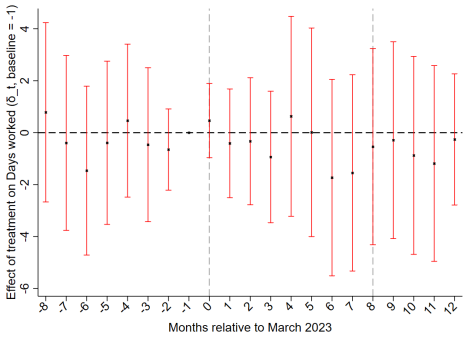
(a) Extensive Margin



(b) Intensive Margin



(c) Hours of Work



(d) Days of Work

Notes: The figure consists of four panels: (a) Extensive Margin, (b) Intensive Margin, (c) Hours of Work, and (d) Monthly Days of Work. All coefficients are estimated following Equation 4. Point estimates are shown in black, and 95% confidence intervals are depicted in red. Dashed grey vertical lines indicate the start and end of the intervention.

Figure 3 reports the estimated effects of the intervention by month, based on the specification described in Equation 4. Each panel of Figure 3 presents estimates for a different labour-market outcome: panel A shows the extensive margin of labour-market participation (i.e. whether the individual worked in the formal sector in a given month); panel B reports the corresponding intensive margin (the proportion of days worked within the month); panel C presents a proxy for hours worked; and panel D reports the maximum number of working days in the month. Two vertical lines divide the timeline into three phases: (i) the pre-intervention period, (ii) the intervention period, and (iii) the post-intervention period. The value zero on the horizontal axis denotes the end of the intervention phase.

As shown in Figure 3, we find no statistically significant effects of the intervention on official labour market outcomes.[28] The large standard errors suggest that, even when using administrative records, the analysis lacks sufficient statistical power to detect economically meaningful effects along this dimension. Because access to the administrative data was

[28]See Appendix Tables C.8 and C.9 for baseline imbalances between the treatment and control groups and for covariates predicting inclusion in the administrative data.

not anticipated *ex ante*, the pre-analysis plan did not include power calculations for these outcomes. To address this limitation *ex post*, Appendix Table C.10 (column 4) reports Minimum Detectable Effect (MDE) calculations for the administrative-data estimates, assuming a significance level of $\alpha = 0.05$ and power of $1 - \beta = 0.8$. The resulting MDEs are large, indicating that the empirical design is substantially underpowered for detecting effects on labour market outcomes.

Aside from the limited statistical power of our empirical design—as indicated by the ex-post Minimum Detectable Effect analysis—the absence of detectable labour-market effects may also reflect the complex socioeconomic circumstances faced by the women in our sample. The duration of the intervention and the subsequent follow-up period may have been insufficient for improvements in social inclusion, psychosocial well-being, or access to information to translate into observable labour-market outcomes. While participants may have become better integrated and more functional in their daily lives, successful job placement or sustained increases in labour supply are likely to require a longer time horizon. Job search, skill acquisition, and employer matching are often slow processes, particularly for migrant women confronting multiple structural barriers to employment. We therefore interpret the null labour-market effects with caution. A more extensive discussion of potential explanations for these findings is provided in the Discussion section.

6 Discussion and Conclusions

Potential Contamination and Spillover Effects: Randomisation in this study was implemented at the individual level, with stratification by town of residence. As a result, interactions between treated and control participants within the same local areas—and potentially within the same diaspora communities—cannot be fully ruled out. This raises the possibility of contamination effects if treated participants were to share information or resources with untreated peers.

Several features of the intervention, however, suggest that such spillovers are likely to be limited in practice. The programme was intensive and highly structured, comprising many hours of workshops, mentoring sessions, and substantial supporting materials. These components were delivered exclusively to treated participants and required sustained engagement over time. Consequently, it would be difficult for treated individuals to convey the full content, skills, and knowledge of the intervention informally to members of the control group. In addition, all activities were conducted at fixed times during working hours and were accessible only to enrolled participants, further restricting opportunities for indirect participation. While informal information sharing within communities cannot be entirely excluded, any resulting contamination would likely bias estimated treatment

effects towards zero. The presence of statistically meaningful treatment effects therefore suggests that potential spillovers are unlikely to be driving the main findings of the study.

External Validity: One potential concern is that both the intervention design and the outcomes analysed are specific to our participant sample, which consists of migrants residing in a particular region of Spain. As a result, the external validity of the programme may be shaped by the characteristics of the target population and the local implementation context. The intervention—providing digital training and information on access to community resources to female migrants, predominantly of Muslim background, in the region of Murcia—relies heavily on the involvement of social workers and the availability of tailored support for participants with limited Spanish proficiency and weak labour market attachment. Consequently, direct replication in other regions of Spain would require comparable institutional capacity, particularly local social services equipped to deliver linguistically and culturally sensitive assistance. Nevertheless, the underlying mechanisms—enhancing digital inclusion and awareness of welfare entitlements among socially excluded women—may be transferable to other Spanish regions or to countries with similar welfare systems and income-support schemes targeting individuals at high risk of poverty or social exclusion (AROPE). Such adaptations would, however, need to account for differences in migrant composition, language barriers, and the organisation of local social service networks.

With respect to the digital skills component, a related programme implemented in Ceuta (Spain)—IMVOLUCRA2—offers a useful point of comparison. This programme was conducted under the same initiative of Spain's Ministry of Inclusion, Social Security and Migration and took place contemporaneously with our intervention.[29] Unlike our study population, participants in the Ceuta programme were not migrants, although they were also recipients of the Minimum Basic Income scheme. The Ceuta intervention followed a randomised controlled design with two treatment arms and a pure control group. Participants in Treatment Group A ($N = 243$) received training in soft skills only (24 hours), while participants in Treatment Group B ($N = 231$) received the same soft skills training plus an additional 35 hours of digital skills training. In contrast, individuals in the control group ($N = 239$) did not receive any training.

Estimates from the Ceuta programme, which similarly adopted an ANCOVA specification and exploited information from both baseline and endline surveys, indicate improvements in digital-based skills among participants in the treatment arm that combined soft skills and digital skills training.[30] Overall, the Ceuta intervention provides

[29]For more detailed information on the design and evaluation of the Ceuta programme (in Spanish and English), see Cabrales and Lekfuangfu (2024) as well as https://www.inclusion.gob.es/web/policy-lab/w/ciudad-autonoma-de-ceuta-imvolucrados-proyecto-de-acompanamiento-para-el-empleo-y-competencias-digitales-para-personas-en-situacion-de-exclusion-social.

[30]Specifically, the estimated effects reflect improvements in the availability of digital tools, the ability

supportive evidence that digital training can enhance digital skills, particularly among socio-economically disadvantaged individuals. However, it is important to note that once the estimates are adjusted for multiple hypothesis testing, these effects lose statistical significance.

Survey and Administrative Data: Our analysis provides causal evidence of the effectiveness of the intervention by exploiting the data from both the surveys and the administrative data. While we find statistically meaningful improvement in multiple dimensions in the survey data, we do not find much evidence with regard to the labour market outcomes from the analysis with the administrative data. One possible conjecture is that the positive outcomes in the survey data may, to some extent, be attributed to the self-reporting nature of the survey. Participants may be subjected to certain social desirability bias whereby they may be aware of the *right* answers that the survey administers look for—especially after they had already been through the curriculum. On the other hand, the fact that we do not detect an improvement in every behavioural and psychological outcomes may serve as supportive evidence that this bias is not very severe.

We also need to comprehend better the no-effect results in the administrative data with respect to labour market situation. As discussed in Section 5.6, the absence of statistically significant effects may reflect limited statistical power. Besides the statistical reasons, several other factors may help explain the absence of detectable effects of the intervention on labour market outcomes. First, even for individuals who experience improved access to information, assistance, and support, securing employment may remain challenging and may require a substantially longer time horizon for effects to materialise. Job finding is not solely determined by supply-side factors; rather, it is also shaped by demand-side conditions. In this regard, the programme did not address key demand-side constraints in the labour market, such as limited local labour demand, hiring frictions, or discrimination—factors that are likely to disproportionately affect migrant women.

A further consideration relates to the social and economic context in which participants are embedded. Gender norms within migrant households can significantly shape women's labour supply decisions, not only through expectations around domestic and care responsibilities, but also through the influence of other family members. In particular, male partners or relatives may play a decisive role in whether and how women engage in paid work. As the intervention did not involve family members—especially male household members who may influence labour supply decisions—these intra-household dynamics may have constrained participants' ability to translate improved access to resources into labour market participation.

Moreover, many migrant women are employed in sectors characterised by high levels of informality, such as domestic services, hospitality, and seasonal agricultural work.

to use these tools, and the development of digital identity.

Employment transitions occurring within these informal segments are unlikely to be captured in administrative records. Consequently, the absence of detectable effects in formal labour market data may reflect limitations of the data rather than an absence of underlying changes in employment behaviour.

Taken together, these considerations suggest that the null results observed in formal labour market outcomes should be interpreted with caution. Rather than indicating a lack of impact, they highlight the importance of structural, cultural, and institutional constraints—both within the labour market and the household—that may limit the effectiveness of individual-level interventions. Addressing these barriers may require more comprehensive or sustained policies that engage both demand-side actors, such as employers, and the household context in which women's labour supply decisions are negotiated.

Finally, one might also be concerned that, because eligibility for the IMV is closely tied to beneficiaries' economic circumstances, recipients could be discouraged from reporting financial improvements in self-reported survey data, potentially attenuating estimated effects on economic resource indices. In our setting, however, this concern is unlikely to be salient, as participants were explicitly informed that their survey responses were confidential and would not be shared at the individual level with the administering authorities. Moreover, a legal mechanism established by Real Decreto 789/2022 allows recipients of the IMV to earn labour income without automatically losing eligibility for the benefit. This policy was introduced to mitigate potential poverty traps by making the benefit partially compatible with employment income, thereby reducing incentives to misreport labour income.

Conclusions: Overall, our findings underscore the potential of non-monetary interventions to foster social inclusion and enhance the well-being of marginalised populations. While the programme did not yield measurable improvements in employment outcomes, we observe improvements in some dimensions of digital literacy, psychological wellbeing, and knowledge of community resources. These patterns do not rule out the possibility that interventions focused on social inclusion and personal empowerment may operate through channels that are complementary to conventional labour market measures—such as employment and hours worked—particularly for vulnerable populations. Future research could investigate the long-term impacts of such interventions and employ alternative designs to causally identify which specific components of the pedagogical programme contribute most effectively to the various dimensions of social inclusion. Moreover, additional randomised evaluations in diverse settings would further illuminate the elements that best support the social and economic inclusion of vulnerable population in our society.

Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability Statement

The data, both raw and processed, which support the findings of this study are available from the Secretary General of Inclusion (SGI) at the Ministry of Inclusion, Social Security and Migration of Spain (MISSM). However, restrictions apply to the availability of these data, which were used under licence for the current study and so are not publicly available. The data used are only available to the researchers through a virtual desktop at the Ministry's server, after being anonymized, and they cannot be downloaded. The results can be downloaded only after verification by the Ministry. The researchers can only use these data for the purpose of the evaluation implemented in this paper. The researchers have signed an agreement with the Ministry that indicates that they cannot share any of these data through any means and the Ministry has not indicated their willingness to share the data with journal editors or referees for the purpose of refereeing the paper for its potential publication.

References

Abbiati, G., Battistin, E., Monti, P., and Pinotti, P. (2025). Fast-tracked jobs help asylum seekers integrate faster.

Almunia, M., Samkov, A., and Zohar, T. (2025). Digital inclusion and labor market performance: An experimental evaluation. Technical report, Mimeo.

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.

Audhoe, S. S., Hoving, J. L., Sluiter, J. K., and Frings-Dresen, M. H. (2010). Vocational interventions for unemployed: effects on work participation and mental distress. a systematic review. *Journal of occupational rehabilitation*, 20:1–13.

Blattman, C., Jamison, J. C., and Sheridan, M. (2017). Reducing crime and violence: Experimental evidence from cognitive behavioral therapy in liberia. *American Economic Review*, 107(4):1165–1206.

Bracco, C. O. and Eisenberg, J. (2017). Neighbors link's" parent-child together" program: Supporting immigrant parents' integration to promote school readiness among their emergent bilingual children. *Journal of Multilingual Education Research*, 7(6):59–73.

Briscese, G., Zanella, G., and Quinn, V. (2022). Providing government assistance online: A field experiment with the unemployed. *Journal of Policy Analysis and Management*, 41(2):579–602.

Cabrales, A. and Lekfuangfu, W. N. (2024). Inclusion policy lab evaluation results: Autonomous city of ceuta: Imvolucrados - employment and digital skills support targeting people in a situation of social exclusion.

Canals Botas, L. and Sanz Angulo, A. (2025). El estado de la pobreza 2025: Avance de resultados. Dirección técnica: Alejandro Sanz Angulo.

Choudhary, H. and Bansal, N. (2022). Addressing digital divide through digital literacy training programs: A systematic literature review. *Digital Education Review*, (41):224–248.

Dahlberg, M., Egebark, J., Vikman, U., and Özcan, G. (2024). Labor market integration of refugees: Rct evidence from an early intervention program in sweden. *Journal of Economic Behavior & Organization*, 217:614–630.

Dierckx, D. and Van Dam, S. (2014). Redefining empowerment interventions of migrants experiencing poverty: The case of antwerp, belgium. *The British journal of social work*, 44(suppl_1):i105–i122.

European Commission and Social Protection Committee (2019). Annual report on social protection and social inclusion.

Eurostat (2024). *Key figures on European living conditions – 2024 edition*. Publications Office of the European Union, Luxembourg. Product code: KS-01-24-001.

Eurostat (2024). People at risk of poverty or social exclusion (arope), eu-27 and member states. EU-SILC Highlights.

Fairlie, R. W. and Bahr, P. R. (2018). The effects of computers and acquired skills on earnings, employment and college enrollment: Evidence from a field experiment and california ui earnings records. *Economics of Education Review*, 63:51–63.

Faye, R. and Ravneberg, B. E. (2024). Making vulnerable groups able to connect socially and digitally—opportunities and pitfalls. In *Frontiers in Education*, volume 9, page 1346721. Frontiers Media SA.

Fung, K. K., Lai, C. Y., Hung, S. L., Yu, Y., and He, L. (2025). A systematic review of the digital divide experienced by migrant women. *Journal of International Migration and Integration*, pages 1–28.

Gönültaş, S. and Mulvey, K. L. (2019). Social-developmental perspective on intergroup

attitudes towards immigrants and refugees in childhood and adolescence: A roadmap from theory to practice for an inclusive society. *Human Development*, 63(2):90–111.

Hainmueller, J., Hangartner, D., and Lawrence, D. (2016). When lives are put on hold: Lengthy asylum processes decrease employment among refugees. *Science advances*, 2(8):e1600432.

Haushofer, J., Mudida, R., and Shapiro, J. (2020). The comparative impact of cash transfers and psychotherapy on psychological and economic well-being. *NBER working paper*, 7.

Haushofer, J. and Shapiro, J. (2016). The short-term impact of unconditional cash transfers to the poor: experimental evidence from kenya. *The Quarterly Journal of Economics*, 131(4):1973–2042.

Haushofer, J. and Shapiro, J. (2018). The long-term impact of unconditional cash transfers: experimental evidence from kenya. *Busara Center for Behavioral Economics, Nairobi, Kenya*, 10.

Heller, S. B., Shah, A. K., Guryan, J., Ludwig, J., Mullainathan, S., and Pollack, H. A. (2017). Thinking, fast and slow? some field experiments to reduce crime and dropout in chicago. *The Quarterly Journal of Economics*, 132(1):1–54.

Heyeres, M., Perera, N., Udah, H., Attakey, A., Whiteside, M., and Tsey, K. (2021). Interventions targeting the wellbeing of migrant youths: A systematic review of the literature. *SAGE Open*, 11(3):21582440211046942.

INE (2023). The 2023 survey on equipment and use of information and communication technologies (ict) in households. Accessed: 2025-06-16.

INE (2023). Social exclusion and digital skills in the region of murcia. Accessed: 2025-06-16.

INE (2024). Unemployment rate by nationality and sex. Labour Force Survey (EPA), Table 21207.

INE (2025). Encuesta de condiciones de vida. Accessed: 2026-03-04.

Kelley, E. M., Ksoll, C., and Magruder, J. (2024). How do digital platforms affect employment and job search? evidence from india. *Journal of Development Economics*, 166:103176.

Kirk, K. M. and Suvarierol, S. (2014). Emancipating migrant women? gendered civic integration in the netherlands. *Social Politics*, 21(2):241–260.

Lee, D. (2009). Training, wages, and sample selection: Estimating sharp bounds on treatment effects. *Review of Economic Studies*, 76:1071–1102.

Lee, H., Lim, J.-A., and Nam, H.-K. (2022). Effect of a digital literacy program on older adults' digital social behavior: A quasi-experimental study. *International journal of environmental research and public health*, 19(19):12404.

Levitas, R. et al. (2007). The multi-dimensional analysis of social exclusion.

Llena-Nozal, A., Fernández, R., and Kups, S. (2022). Provision of social services in eu countries: Reform of the national framework for the provision of social services in spain. *OECD Social, Employment, and Migration Working Papers*, (276):0_1–84.

Marbach, M., Vallizadeh, E., Harder, N., Hangartner, D., and Hainmueller, J. (2025). Does ad hoc language training improve the economic integration of refugees? evidence from germany's response to the syrian refugee crisis. *Journal of the Royal Statistical Society Series A: Statistics in Society*, page qnae106.

MISSM (2021). Situación de las personas migrantes y refugiadas en españa.

MISSM (2024a). Compatibilidad del ingreso mínimo vital con otras prestaciones. Rules on combining IMV with work income and other social programmes.

MISSM (2024b). Ingreso mínimo vital. Official programme description and legal framework.

MISSM (2024c). Requisitos para ser beneficiario del ingreso mínimo vital. Eligibility and residence requirements.

OECD (2017). *Inclusive Growth*. OECD Publishing, Paris.

OECD (2023). *Boosting Social Inclusion in Spain: Improving Pathways and Co-ordination of Services*. OECD Publishing, Paris.

OECD (2024). International migration outlook 2024.

Rawls, J. (1971). *A Theory of Justice*. Harvard University Press, Cambridge, MA.

Roessler, P., Carroll, P., Myamba, F., Jahari, C., Kilama, B., and Nielson, D. (2021). The economic impact of mobile phone ownership: Results from a randomized controlled trial in tanzania.

Sarvimäki, M. and Hämäläinen, K. (2016). Integrating immigrants: The impact of restructuring active labor market programs. *Journal of Labor Economics*, 34(2):479–508.

Satar, M., Seedhouse, P., Kharrufa, A., Ganassin, S., Dooly, M., Pena, J. B., Öztekin, E., Akcan, S., and Haznedar, B. (2025). Migrants' digital skills development: Engaging with and creating digital cultural activities on the enact web app. *ReCALL*, pages 1–24.

Seguridad Social (2024a). Cuantías del ingreso mínimo vital. Guaranteed income thresholds by household type.

Seguridad Social (2024b). Estadística del ingreso mínimo vital. Monthly administrative statistics on beneficiaries.

Seguridad Social (2024c). Solicitud del ingreso mínimo vital. Online and in-person application procedures.

Sen, A. (1999). *Development as Freedom*. Oxford University Press, Oxford.

Silva, P. and Pereira, H. (2023). Promoting psychosocial well-being and empowerment of immigrant women: A systematic review of interventions. *Behavioral Sciences*, 13(7):579.

Stock, J. H., Wright, J. H., and Yogo, M. (2002). A survey of weak instruments and weak identification in generalized method of moments. *Journal of business & economic statistics*, 20(4):518–529.

Suh, J., Horvitz, E., White, R. W., and Althoff, T. (2022). Disparate impacts on online information access during the covid-19 pandemic. *Nature Communications*, 13(1):7094.

United Nations (2016). Leaving no one behind: The imperative of inclusive development.

Westfall, P. H. and Young, S. S. (1993). *Resampling-based multiple testing: Examples and methods for p-value adjustment*, volume 279. John Wiley & Sons.

Wheeler, L., Garlick, R., Johnson, E., Shaw, P., and Gargano, M. (2022). Linkedin (to) job opportunities: Experimental evidence from job readiness training. *American Economic Journal: Applied Economics*, 14(2):101–125.

World Bank (2013). Inclusion matters: The foundation for shared prosperity.

Zhou, X. and Gao, D.-G. (2008). Social support and money as pain management mechanisms. *Psychological Inquiry*, 19(3-4):127–144.

Appendix

A Appendix A: Details of the Intervention

A.1 Minimum Basic Income Scheme (IMV)

The Minimum Basic Income Scheme or Ingreso Mínimo Vital (IMV) is Spain's national minimum-income scheme, launched in June 2020 to guarantee a minimum household income and reduce extreme poverty. The IMV is administered by the Social Security authorities of the Ministry of Inclusion, Social Security and Migration and is intended to complement, rather than immediately replace, the heterogeneous set of regional minimum-income schemes that existed before 2020. The statutory guaranteed amounts are calibrated by household composition: for 2025 the individual guaranteed income is reported at €7,905.72 per year (approximately €658.81 per month), with the guaranteed entitlement rising for larger cohabitation units up to a statutory cap (for example the maximum shown for large households is approximately €17,392.68 per year). These statutory figures form the baseline against which the IMV top-up is calculated. The IMV payment equals the difference between the statutory guaranteed amount for the relevant household type and the household's assessed income.[31]

Basic eligibility rules: Applicants must demonstrate legal and effective residence in Spain, normally for at least one continuous year prior to application, with certain exceptions (for example, victims of trafficking, some cases involving minors, and persons formerly in institutional care). Applicants must also meet minimum age and household composition rules: typically a single adult claimant must be aged 23 or over, though exceptions exist (for example young adults with dependent children or emancipated minors). The IMV applies a household-level test: units of cohabitation must be established for a minimum period (commonly six months) and the composition of the household is used to set the income threshold and benefit calculation. In addition to assessing current income, the scheme applies an assets (patrimony) test. The law and official guidance specify maximum net-asset limits (excluding the principal residence) that vary by household size: in practice the patrimony ceiling is set as multiples of the annual guaranteed amount and official tabulations provide exact euro thresholds for each household composition. Applicants who exceed the patrimony thresholds are ineligible even if their cash income is low.[32]

[31] See for more detail, https://www.lamoncloa.gob.es/lang/en/gobierno/news/paginas/2024/minimum-salary-spain-imv.aspx

[32] See for more detail, https://imv.seg-social.es

Conditionality on Employment: The IMV's relationship with employment is intentionally flexible: the benefit is means-tested rather than strictly conditional on work (Llena-Nozal et al., 2022). Beneficiaries are not universally required to accept employment, but the IMV framework is designed to be compatible with activation and inclusion measures; in practice regional and local social services may link benefit receipt to personalised inclusion or activation plans. The scheme therefore seeks to combine income support with pathways to labour market and social inclusion, though the strength and implementation of activation varies across territories. Critics and evaluators have emphasised that, because the IMV's core instrument is a cash transfer, complementary services (training, counselling, digital access) are crucial to translate income support into sustainable labour-market attachment and social participation.

Coverage: Coverage and take-up have evolved since 2020. Recent official statistics report that the IMV reached approximately 773,272 households and 2,363,554 persons (national total) as of the most recent monthly release; earlier year-end counts for late 2024 put the number of beneficiary households at roughly 673,729 (covering about 2.05 million persons), reflecting both expanding uptake and ongoing increases in benefit recognition. These official figures also provide mean payment amounts (the national average monthly IMV payment per household has been reported in the low hundreds of euros, with some variation by month and region). At the regional level the Region of Murcia illustrates local uptake patterns: ministry and regional press reports show around 35,600-35,677 households receiving the IMV in the most recent monthly snapshot, covering some 125,000 persons and reflecting year-on-year growth in recipients in that region.

Migrant Beneficiaries: With regard to nationality and migration status, official and press statistics indicate that the majority of IMV titulars are Spanish nationals; one consolidated report indicated that roughly 82.4% of benefit holders were Spanish citizens, implying that people of foreign nationality make up a minority share (around the remaining 17-18% of holders). Interpretation of these shares must account for differences in eligibility (residency requirements, documentation) and for varying rates of take-up among migrant populations. Several analyses and commentaries have also highlighted barriers that disproportionately affect migrants—administrative complexity, proof of cohabitation and residency, and patrimony tests that can exclude households with non-liquid assets.

Relationship with other schemes: The IMV was explicitly designed to provide a national floor while remaining compatible with the different regional *Renta Mínima de Inserción* (RBI/RMI)—administered by autonomous communities. In practice, the IMV functions as a nationally guaranteed top-up and may be complementary to regional benefits: a household can in principle receive regional support and the IMV where the combined

rules and maxima make this compatible, though operational coordination has proven complex. Regions retain responsibility for many social-inclusion and activation services (the RMI is typically delivered and managed through regional social services), so the IMV's effectiveness in promoting social and labour inclusion depends heavily on co-ordination with regional RMIs and on the availability of local activation paths. Policy analyses have therefore argued for clearer complementarity, smoother administrative interfaces and stronger local activation to ensure the IMV achieves both poverty reduction and inclusion objectives.

A.2 Programme Curriculum

A.2.1 The Development of Basic Skills Module

This module consists of a series of group-based workshops as well as personalised individual sessions. The general goal of the workshop is to improve the personal, psychological, and social well-being of participants by encouraging their strengths and addressing their challenges, using tools and techniques delivered through group and individual sessions.

1. *Creating Solutions*: a group-based workshop. It consisted of 12 sessions (1.5 hours each) covering the following topics:

   - Block 1: My Place in the World
   - Block 2: The Art of Accepting Yourself
   - Block 3: Transmitting Culture
   - Block 4: My Support Network
   - Block 5: Emotion in My Life
   - Block 6: Ending the Journey

2. Individual Support Session: participants in the treatment group were offered up to five individual sessions with their assigned project psychologist (with a minimum of one session required), primarily to follow up on the mandatory group intervention. Due to the nature and duration of the intervention, these individual sessions were not intended as full psychological therapy but rather focused on psychosocial support throughout the project and the assessment of emergencies or crises, as previously mentioned. Although the content of the individual sessions varied according to personal characteristics and needs, the sessions generally focused on:

   - Alleviating psychological and emotional distress.
   - Providing a private space to express emotional and psychological experiences during the intervention process.
   - Identifying factors leading to disengagement.
   - Evaluating participant satisfaction with the project.
   - Aligning expectations regarding the project and intervention.

A.2.2 The Knowledge and Participation in the Community Module

The module was delivered in group sessions, aiming to promote community knowledge and community participation among female migrants. It consists of the following activities.

1. Workshop on conflict resolution through intercultural mediation: focussed on conflict resolution strategies and promoting co-existence and social cohesion—especially on dynamics at the levels of self, couple, family and friends, neighbourhood, wider community, and each woman's role within that community. This workshop included six sessions (1.5 hours each) titled: Me; The Couple; Family and Friends; The Neighbourhood; The Community; and Me in the Community, respectively.
2. Workshop on Getting to Know My Neighbourhood: was designed to increase awareness of available resources and encourage active community participation, particularly with regard to access to municipality-related public resources, including education, health, public administrative services. This workshop included seven sessions, each lasting 1.5 hours. They are:

   - What do I know about my town? What do I need from it?
   - Taking care of our health
   - The administration and me
   - Let's educate ourselves
   - The tree of diversity
   - Travelling safely
   - The footprint within me

3. Workshop on Meeting Spaces: focused on issues such as the role of women in history, civic participation, and how to identify and challenge hate speech. One of its key features was its hybrid format, in which participants took part in three individual sessions using digital tools with support from the training team, and three group sessions with the mediation team. In total, the workshop included six sessions (1.5 hours each), namely:

   - Online training session on *E-memory*
   - Group session on *E-memory*
   - Online training session on *E-deactivate*
   - Group session on *E-deactivate*
   - Online training session on *E-activate*
   - Group session on *E-activate*

A.2.3 The Digital Competency Training Module

The module consisted of two main activities.

1. *Online Training* was delivered online with support from a tutor or mentor in a classroom setting. The training was delivered virtually across all twelve municipalities, and were organised into four thematic modules. Each module comprises two 2.5-hour sessions (five hours total). The details of each four training blocks are the following:

   - Using information in the digital context (e-Informa, e-Tica, e-Segura, e-Organiza)
   - Using digital resources in everyday life (e-Salud, e-Economía, e-Familia, e-Desconecta)
   - Civic engagement and citizen development in digital environments (e-Transparencia, e-Construye, e-Sostenible, e-Iguales)
   - Using digital resources for digitally excluded groups (e-TIC, e-Recursos, e-Vivienda, e-Empleo)

2. *Community Learning Spaces* provided assistance to participants in completing the online components of the following modules:

   - Training session: E-memory
   - Mediation session: E-memory
   - Training session: E-deactivate
   - Mediation session: E-deactivate
   - Training session: E-activate
   - Mediation session: E-activate

A.3 Organisation of the Programme and the Surveys

The Secretaría General of Inclusión of the Ministry of Inclusion, Social Security and Migration (MISSM) in collaboration with Fundación Cepaim Acción Integral con Migrantes (CEPAIM) were in charge of the design of the programme, and in particular, the development and application of the randomised controlled trial in the programme.

CEPAIM was in charge of running the pilot projects, delivering the programme, monitoring, conducting surveys (baseline and endline), which were subsequently essential for the evaluation of the project. They also played a crucial role in obtaining informed consent and ensuring that participants were well-informed and voluntarily engaged in the programme.

The programme was financed through Next Generation EU funds, as part of Spain's Plan for Recovery, Transformation and Resilience (PRTR). This funding supported the broader Inclusion Policy Lab initiative of MISSM under which the pilot projects were developed and assessed.

The surveys and measurement instruments were designed and carried out in close coordination with MISSM, CAPAIM, and CEMFI (Centro de Estudios Monetarios y

Financieros). While a specific survey agency is not named, both the implementers and researchers contributed to gathering and processing the necessary data.

Finally, the evaluation was coordinated by CEMFI and an academic team from Universidad Carlos III de Madrid. In addition, J-PAL Europe provided essential technical support and international expertise, helping to ensure the evaluation was rigorous and evidence-based.

B Appendix B: Data Appendix

B.1 Key Outcome Variables

Table B.1: Descriptive statistics of the outcomes at baseline survey

	Mean	Std. Dev.	Min	Max
Panel A: Social resources				
Social resources	no baseline	no baseline	no baseline	no baseline
Trust in social work	no baseline	no baseline	no baseline	no baseline
Autonomy in managing of the IMV	no baseline	no baseline	no baseline	no baseline
Autonomy accessing social resources	no baseline	no baseline	no baseline	no baseline
Panel B: Digital skills				
Ability to use digital tools for daily life	0.00	1.00	-2.37	1.83
Panel C: Psychosocial well-being				
Self-esteem	0.00	1.00	-3.66	1.44
Satisfaction with family relationships	0.00	1.00	-4.89	1.22
Psychological well-being	0.00	1.00	-4.80	1.38
Life satisfaction	0.00	1.00	-2.72	1.33
Panel D: Community participation				
Participation in the community's life	0.00	1.00	-2.85	2.87
Knowledge of community's resources	0.00	1.00	-3.62	1.61
Panel E: Economic resources				
Financial Difficulties	0.00	1.00	-2.93	1.70
N: 856				

Notes: The table reports the descriptive statistics of the outcome variables included in the baseline survey. Outcomes that were only measured in the endline survey are not displayed. The table is organized into four panels: **Panel A** includes outcomes related to social inclusion, **Panel B** focuses on digital skills, **Panel C** covers psychosocial well-being, and **Panel D** presents outcomes related to community participation. For each outcome, the table displays the mean, standard deviation, minimum, and maximum values.

Appendix Table B.1 provides summary statistics of key variables we use to measure how the intervention changes the intermediate outcomes. Five sets of the measures are social resources, digital skills, psychosocial well-being, community participation, and economic resources. Below we describe each itemised measure or index that comprise each set of indicators.

I. Social resources: Several indicators were used:

   – Economic resources index: a composite measure based on questions about material deprivation, ability to make ends meet, and household economic status.

- Social support index: based on questions about receiving assistance or accompaniment in procedures and formalities. However, the data is available only at the endline.
- Trust in social workers: based on the relevant survey question. However, the data is available only at the endline.
- Autonomy in the management of the IMV: based on items assessing the respondent's capacity to respond to IMV-related requirements. However, the data is available only at the endline.
- Autonomy in accessing social resources that improve social inclusion: based on the respondent's self-reported ability to independently complete certain procedures and access services that promote social inclusion. However, the data is available only at the endline.

II. Digital Skills: Digital skills index is a composite indicator constructed from questions measuring the use of digital tools in everyday life, especially in relation to administrative tasks.

III. Psychosocial Well-Being: four indicators are derived from aggregated responses to relevant items in the surveys:

- Self-esteem
- Satisfaction with family relationships
- Psychological well-being
- Life satisfaction

IV. Community Participation: consists of two indicators:

- Community engagement index: measuring participation in social life
- Knowledge of community resources: measuring awareness of local services and infrastructure

B.2 Details of the Questionnaires

Indicator 1.1: Social resources

Q1: *I have received support and/or accompaniment with the following types of procedures or formalities:* (sum of the different items)

- Accompaniment/advice for dealing with Social Services
- Accompaniment/advice for access to social housing
- Accompaniment/advice for a court-appointed lawyer (public defender)
- Help with the digital social voucher for IMV recipients
- Advice on resources for finding housing and municipal registration (empadronamiento)

- Support for understanding and communicating with the public administration regarding IMV and other benefits
- Information/support for educational procedures
- Information/support for health procedures
- Information/support to open a bank account
- Advice on nationality/residence procedures
- Help understanding communications from public administrations (letters, documents, texts received, etc.)
- Advice regarding travelling outside Spain during holiday periods

Response options (for each item): yes, no, no answer, don't know.

Indicator 1.2: Trust in social work

Q1: *What is your level of trust in the social worker? Please rate on a scale from 0 to 10, where 0 = no trust and 10 = complete trust.*

Response options: 0-10, no answer, don't know

Indicator 1.3: Autonomy in managing of the IMV

Q1: *Perceived ability regarding IMV (Minimum Vital Income):* (sum of the different items)

- I know where to go to request support if I have any difficulty regarding IMV
- I can manage requesting information about IMV and obtaining the necessary documents or certificates
- I can understand communications sent by the public administration regarding IMV
- I can respond to the required requests and know how to submit the obtained documents

Response options (for each item): yes, no, no answer, don't know.

Indicator 1.4: Autonomy accessing social resources

Q1: *For each of the following, indicate whether you can do it:* (sum of the different items)

- Make an appointment with or access Social Services
- Make an appointment with or access social housing services
- Make an appointment with or access a court-appointed lawyer (public defender)
- Apply for the digital social voucher for IMV recipients

- Search for a new address (rental housing) and complete municipal registration (empadronamiento)
- Carry out procedures to access or related to educational resources (secondary schools, primary schools, training centres, etc.)
- Access and book an appointment at health centres (or similar)
- Apply for and open a bank account
- Manage procedures related to nationality/residence
- Understand communications from public administrations (letters, documents, texts received, etc.)
- Carry out the necessary procedures to travel outside Spain during holiday periods

Response options (for each item): yes, no, no answer, don't know.

Indicator 2.1: Self-esteem

Q1: *Degree of agreement or disagreement (for each statement):*

- I deserve to be valued the same as others
- I am convinced that I have good qualities
- I am capable of doing things as well as most people
- I have a positive attitude toward myself
- Overall, I am satisfied with myself
- I feel that I don't have much to be proud of
- In general, I tend to think that I am a failure
- I would like to be able to feel more respect for myself
- There are times when I really think I am useless
- Sometimes I think I am not a good person

Response options (for each item): strongly disagree, disagree, neutral, agree, strongly agree.

Indicator 2.2: Satisfaction with family relationships

Q1: *Degree of agreement or disagreement (for each statement):*

- In most things, my life is the way I want it to be
- The circumstances of my life are very good
- In my family, nobody cares about others' feelings
- My family is close and we support each other
- In our family, it is important for everyone to say what we think

- The atmosphere in my family is usually unpleasant
- In my family, we usually do activities together
- My family listens to me
- When I have a problem, I do not tell my family
- The members of my family help and support one another
- In my family, we openly express our affection
- Conflicts in my family are never resolved

Response options (for each item): strongly disagree, disagree, neutral, agree, strongly agree.

Indicator 2.3: Psychological well-being

Q1: *Thinking about the last two weeks, rate from 1 to 5 (for each statement):*

- I have been feeling optimistic about the future
- I have been feeling useful
- I have been feeling relaxed
- I have been interested in other people
- I have had energy to spare
- I have been dealing well with problems
- I have been thinking clearly
- I have been feeling good about myself
- I have been feeling close to other people
- I have been feeling confident
- I have been able to make up my own mind about things
- I have felt loved
- I have been interested in new things
- I have been feeling cheerful

Response options (for each item): never, almost never, sometimes, almost always, always.

Indicator 2.4: Life satisfaction

Q1: *Degree of agreement or disagreement (for each statement):*

- In most things, my life is the way I want it to be
- The circumstances of my life are very good
- I am satisfied with my life
- So far, I have gotten the important things I want in life

- If I could live my life over, I would change almost nothing

Response options (for each item): strongly disagree, disagree, neutral, agree, strongly agree.

Indicator 3.1: Participation in community's life

Q1: *From the following list of things that other people do for us or provide, indicate how much you receive (for each item):*

- I receive visits from my friends and family
- I receive visits from my friends and family
- I receive positive feedback when I do my job well
- I have people who care about what happens to me
- I receive love and affection
- I have the possibility to talk to someone about my problems at work or at home
- I have the possibility to talk to someone about my personal and family problems
- I have the possibility to talk to someone about my personal and family problems
- I receive invitations to go out and socialize with other people
- I am given good advice when something important happens in my life

Response options (for each item): Much less than I would like, Less than I would like, Neither too much nor too little, Almost as much as I would like, As much as I would like.

Q2: *In the last 12 months, have you been an active member of any of the following?* (sum of the different items)

- A neighbourhood association/organization
- A sports organization/club
- A school parents' association (AMPA)
- An NGO (non-governmental organization)
- A religious organization (e.g., church, mosque, synagogue)
- Volunteering with an association
- A political party (active membership)

Response options (for each item): yes, no, no answer, don't know.

Indicator 3.2: Knowledge of community's resources

Q1: *Indicate which local resources you know about:* (sum of the different items)

- I know the health centers in my municipality
- I know how to request an appointment with a medical specialist (e.g., dermatologist, surgeon, ophthalmologist, dentist, pediatrician, ear–nose–throat)
- I know about programs and/or campaigns in my municipality that promote community health
- I know where the building for Social Services procedures is located in my municipality
- I am able to request an appointment with the social worker in my area
- I know (or belong to) associations that assist migrants
- I know and can locate education and training centres for minors and adults (schools, secondary schools, or adult education centres)
- I know where to go if my child needs special education
- I know and can locate the libraries in my area
- I know the different cultural centres, youth spaces, libraries, or associations in my municipality and the services they offer
- There is a women's centre in my municipality, and I know the resources it can offer me
- I know the various places of tourist interest in my municipality (monuments, places of worship, etc.)
- I know the different urban bus stops in my municipality, as well as the central bus station
- There are different law-enforcement bodies in my municipality (Local Police, National Police, Civil Guard, etc.), and I know where to find them (to file reports, renew NIE, passport, etc.)

Response options (for each item): yes, no, no answer, don't know.

Indicator 4: Ability to use digital tools for daily life

Q1: *In the last 3 months, have you used the Internet to do any of the following?* (sum of the different items)

- Send or reply to emails without attachments
- Send or reply to emails with attachments
- Participate in social networks (create a user profile, send messages, or use WhatsApp, Facebook, Twitter, Instagram, TikTok)

- Read online news, newspapers, or current-affairs magazines
- Search for information on health topics (e.g., injuries, illnesses, diets)
- Shop online
- Look for a job, submit a job application, or conduct an active job search
- Take an online course
- Watch videos to learn how to do things (e.g., YouTube tutorials)
- Use Internet banking and apps (e.g., Bizum)
- Book a medical appointment online (e.g., via a health centre)
- Communicate with the school, if you have school-age children, via the "Familias" educational app
- Communicate with the school, if you have school-age children, via Teams or TokApp

Response options (for each item): yes, no, no answer, don't know.

Indicator 5: Economic resources

Q1: *In the last 12 months, have you experienced any of the following problems?* (sum of the different items)

- Non-payment or late payment of rent or mortgage
- Non-payment or late payment of utility bills (electricity, water, gas or other fuels)
- Non-payment or late payment of other loans and/or other payments
- Disconnections of electricity, water, or telephone service
- Seizure/attachment of assets
- Having to reduce leisure and free-time expenses
- Having to reduce basic expenses on clothing, food, or housing
- Having to sell property, move house, or change your children's school
- Having to ask friends, neighbours, or relatives for financial help
- Having to ask public or private social institutions for financial help
- Having to make significant use of your own savings
- Having to apply for extraordinary/exceptional loans or credit

Response options (for each item): yes (once), yes (several times), no.

Q2: *In fact, with your current income, how do you make it to the end of the month? Mark one option.*

Response options (mark one): With great difficulty, With difficulty, With some difficulty, With some ease, With ease, With great ease.

Q3: *Considering your financial means, would you say your household is in which situation? Mark one option.*

Response options (mark one): Very disadvantaged, Disadvantaged, Somewhat disadvantaged, Somewhat advantaged, Advantaged, Very advantaged.

B.3 Key characteristics of respondents

Q1: *What is your level of Spanish?*
Response options (mark one): one category from the list, no answer, don't know.

- Native language
- High level (almost perfect oral and written comprehension)
- Intermediate level (limited oral and written comprehension)
- Basic or minimal level (major difficulty with oral and written comprehension)

Q2: *City of residence:*
Response options (mark one): one municipality from the list, no answer, don't know.

- Murcia
- Cartagena
- Lorca
- Cieza
- Totana
- Alhama de Murcia
- Alguazas
- Mazarrón
- Fuente Álamo
- Torre Pacheco
- Los Alcázares
- San Pedro del Pinatar

Q3: *What is your current level of education?*
Response options (mark one): one category from the list, no answer, don't know.

1. No schooling; cannot read/write
2. No schooling; can read
3. Incomplete primary education
4. Completed primary education
5. Incomplete secondary education

6. Completed secondary education
7. Incomplete vocational training (intermediate level)
8. Completed vocational training (intermediate level)
9. Incomplete upper-secondary ("Bachillerato")
10. Completed upper-secondary ("Bachillerato")
11. Incomplete university or higher vocational degree
12. Completed university or higher vocational degree

Derived aggregated education variable: we recode the 12-category education variable into five groups: (i) *No education* (categories 1–3), (ii) *Primary* (categories 4–5), (iii) *Secondary* (categories 6, 7, and 9), (iv) *Post-secondary / Vocational* (categories 8, 10, and 11), and (v) *Higher education* (category 12).

Q4: *What is your employment status?*
Response options (mark one): one category from the list, no answer, don't know.

- Working (employed, with or without a contract, and receiving pay)
- Unemployed and actively looking for a job
- Caring for children or dependent persons
- Never worked
- In job-related training (professional certificate or training of more than 10 hours)
- Total or permanent disability
- Early retirement
- Other

Derived indicator (working status): we define an indicator equal to 1 if the respondent selected *"Working (employed, with or without a contract, and receiving pay)"* and 0 otherwise.

Q5: *Household type:*
Response options (mark one): one category from the list, no answer, don't know.

- Two-parent family
- Single-parent family
- Divorced/separated
- Other (specify)

Q6: *Age (years) / Year of birth:* _____.

Response options: continuous (years) or year of birth, no answer, don't know.

Derived age groups: 18–28, 29–38, 39–48, 49–58, 59–68 (years).

Q7: *Nationality:*
Response options (mark one): one category from the list, no answer, don't know.

- Spanish
- European Union member state (other than Spain)
- Non-European Union country

Q8: *Month when the interview is conducted: (Derived from the survey data)*

- February
- March
- April

Q9: *Is your household currently receiving any of the following benefits?*
Response options (for each item): yes, no, no answer, don't know.

- IMV (Minimum Vital Income)
- RBI (Regional minimum-income scheme / social insertion income)
- Child benefits

Derived indicators (welfare benefits): we create separate binary indicators for IMV, RBI, and child benefits equal to 1 if "yes" and 0 if "no" (treating no answer/don't know as missing).

C Appendix C: Additional Results

C.1 Additional results in the full sample

Table C.1: Balancing test of baseline covariates

	Control		Treatment		Pairwise t-test
	Mean	**Std. Dev.**	**Mean**	**Std. Dev.**	**(p-value)**
Age 19-28	0.07	(0.25)	0.09	(0.28)	0.25
Age 29-38	0.37	(0.48)	0.41	(0.49)	0.26
Age 39-48	0.37	(0.48)	0.36	(0.48)	0.94
Age 49-58	0.15	(0.35)	0.11	(0.31)	0.10
Age 59-68	0.05	(0.22)	0.03	(0.17)	0.16
HH: 2-parent family	0.76	(0.43)	0.75	(0.43)	0.83
HH: 1-parent family	0.06	(0.24)	0.09	(0.29)	0.05*
HH: Others	0.06	(0.24)	0.07	(0.25)	0.90
Spanish language: Native	0.11	(0.31)	0.11	(0.32)	0.73
Spanish language: High	0.14	(0.35)	0.20	(0.40)	0.02**
Spanish language: Middle	0.43	(0.50)	0.35	(0.48)	0.02**
Spanish language: Low	0.32	(0.47)	0.34	(0.47)	0.69
Edu: No education	0.26	(0.44)	0.23	(0.42)	0.30
Edu: Primary	0.31	(0.46)	0.29	(0.46)	0.55
Edu: Secondary	0.18	(0.39)	0.19	(0.39)	0.73
Edu: Post-secondary/Vocational	0.18	(0.38)	0.20	(0.40)	0.38
Edu: Higher education	0.07	(0.26)	0.09	(0.28)	0.38
Nationality: No European	0.93	(0.26)	0.94	(0.23)	0.39
Employed	0.14	(0.35)	0.12	(0.32)	0.27
Area: Murcia	0.31	(0.46)	0.31	(0.46)	0.94
Area: Cartagena	0.13	(0.34)	0.14	(0.35)	0.84
Area: Lorca	0.14	(0.35)	0.14	(0.35)	0.92
Area: Cieza	0.04	(0.19)	0.03	(0.17)	0.57
Area: Totana	0.02	(0.14)	0.02	(0.14)	1.00
Area: Alhama de Murcia	0.07	(0.26)	0.07	(0.26)	1.00
Area: Alguazas	0.02	(0.15)	0.02	(0.15)	1.00
Area: Mazarrón	0.05	(0.21)	0.05	(0.21)	1.00
Area: Fuente Álamo	0.05	(0.21)	0.05	(0.22)	0.87
Area: Torre Pacheco	0.07	(0.25)	0.07	(0.26)	0.89
Area: Los Alcázares	0.05	(0.23)	0.06	(0.23)	0.88
Area: San Pedro del Pinatar	0.05	(0.21)	0.05	(0.21)	1.00
IMV: Yes	0.92	(0.27)	0.90	(0.30)	0.34
RBI: No	1.00	(0.07)	0.99	(0.11)	0.26
Child benefit: No	0.91	(0.29)	0.90	(0.30)	0.65
Month of interview: February	0.27	(0.44)	0.22	(0.42)	0.15
Month of interview: March	0.72	(0.45)	0.77	(0.42)	0.12
Month of interview: April	0.01	(0.12)	0.01	(0.10)	0.53
N	428		428		

Notes: The table reports the results of the balancing test for baseline covariates, comparing the control and treatment groups. Columns 1 and 2 display the mean and standard deviation (in parentheses) for the control group, while columns 4 and 5 present the corresponding values for the treatment group. The last column shows the p-value from a pairwise t-test assessing the difference in means between the two groups. The test is conducted for all baseline covariates to evaluate the success of random assignment in producing balanced groups.

Table C.2: Probability of attrition on main outcomes

Dependent var: Prob of Attrition		
	(1)	(2)
Treatment	0.08***	
	(0.02)	
Financial Difficulties		0.02
		(0.01)
Ability to use digital tools for daily life		-0.02
		(0.01)
Self-esteem		0.03***
		(0.01)
Satisfaction with family relationships		0.00
		(0.01)
Psychological well-being		0.00
		(0.01)
Life satisfaction		0.00
		(0.01)
Participation in community's life		-0.01
Knowledge of community's resources		0.00
		(0.01)
N	856	856
R^2	0.02	0.01

Notes: The table presents the results of a Linear Probability Model that estimates the likelihood of attrition from the endline survey. Column (1) reports the relationship between treatment assignment and attrition, while Column (2) includes additional controls based on baseline outcomes. The dependent variable is a binary indicator equal to 1 if the individual did not participate in the endline survey. Standard errors are reported in parentheses. Statistical significance is denoted as follows: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. The full sample size, without conditioning on observed covariates, consists of 856 observations at baseline.

Table C.3: Probability of attrition on characteristics

Dep var: Prob of Attrition	(1)	(2)
Treatment	0.09***	0.21
	(0.02)	(0.21)
National: European	-0.02	-0.01
	(0.04)	(0.06)
Labour market status: Employed	0.09**	0.06
	(0.04)	(0.05)
Spanish language: High	0.01	-0.05
	(0.05)	(0.06)
Spanish language: Middle	0.00	-0.03
	(0.04)	(0.06)
Spanish language: Low	0.01	-0.04
	(0.05)	(0.06)
Edu: Primary	-0.01	-0.03
	(0.03)	(0.04)
Edu: Secondary	-0.02	-0.02
	(0.04)	(0.04)
Edu: Post-secondary/Vocational	-0.05	0.02
	(0.04)	(0.06)
Edu: Higher education	0.00	-0.00
	(0.05)	(0.06)
Age 29-38	0.01	0.06
	(0.05)	(0.05)
Age 39-48	0.03	0.04
	(0.05)	(0.06)
Age 49-58	-0.04	0.01
	(0.06)	(0.06)
Age 59-68	-0.04	-0.04
	(0.06)	(0.07)
HH: 1-parent family	-0.01	-0.07**
	(0.04)	(0.03)
HH: Divorced/Separated	-0.01	-0.02
	(0.03)	(0.04)
HH: Others	0.04	-0.01
	(0.05)	(0.06)
Area: Cartagena	-0.06*	-0.02
	(0.03)	(0.04)
Area: Lorca	-0.03	0.04
	(0.04)	(0.05)
Area: Cieza	0.11	-0.02
	(0.08)	(0.06)
Area: Totana	-0.02	0.05

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Table C.3 – continued from previous page

Dep var: Prob of Attrition	(1)	(2)
	(0.09)	(0.13)
Area: Alhama de Murcia	-0.02	0.05
	(0.06)	(0.07)
Area: Alguazas	0.04	0.08
	(0.09)	(0.12)
Area: Mazarrón	0.02	0.09
	(0.06)	(0.09)
Area: Fuente Álamo	-0.10**	-0.08**
	(0.04)	(0.03)
Area: Torre Pacheco	-0.02	0.01
	(0.05)	(0.06)
Area: Los Alcázares	-0.07*	-0.04
	(0.04)	(0.05)
Area: San Pedro del Pinatar	-0.00	0.07
	(0.06)	(0.08)
IMV benefit	-0.08	-0.11
	(0.05)	(0.09)
RBI benefit	-0.18***	-0.18
	(0.05)	(0.13)
Child benefit	-0.09**	-0.15**
	(0.04)	(0.07)
treat x European		-0.04
		(0.09)
treat x Employed		0.03
		(0.09)
treat x Spanish language: High		0.10
		(0.09)
treat x Spanish language: Middle		0.05
		(0.09)
treat x Spanish language: Low		0.08
		(0.10)
treat x Primary edu		0.05
		(0.07)
treat x Secondary edu		-0.01
		(0.08)
treat x Postsecondary edu		-0.13
		(0.09)
treat x Higher ed		0.01
		(0.11)
treat x Age 29-38		-0.09
		(0.10)
treat x Age 39-48		-0.01

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Table C.3 – continued from previous page

Dep var: Prob of Attrition	(1)	(2)
		(0.10)
treat x Age 49-58		-0.12
		(0.12)
treat x Age 59-68		0.00
		(0.14)
treat x HH: 1-parent family		0.12
		(0.08)
treat x HH: Divorced/Separated		0.03
		(0.07)
treat x HH: Others		0.06
		(0.10)
treat x Cartagena		-0.09
		(0.07)
treat x Lorca		-0.17**
		(0.08)
treat x Cieza		0.26
		(0.16)
treat x Totana		-0.19
		(0.18)
treat x Alhama de Murcia		-0.15
		(0.12)
treat x Alguazas		-0.05
		(0.18)
treat x Mazarrón		-0.14
		(0.13)
treat x Fuente Álamo		-0.03
		(0.09)
treat x Torre Pacheco		-0.05
		(0.10)
treat x Los Alcázares		-0.08
		(0.09)
treat x San Pedro del Pinatar		-0.14
		(0.12)
treat x February		-0.05
		(0.05)
treat x March		0.15
		(0.30)
treat x IMV benefit		-0.05
		(0.14)
treat x RBI benefit		-0.10
		(0.17)
treat x Child benefit		0.01

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Table C.3 – continued from previous page

Dep var: Prob of Attrition	(1)	(2)
		(0.10)
N	794.00	794.00
R^2	0.07	0.12
F (interactions)		0.89
p-value		0.64

Notes: The table presents the results of Linear Probability Models estimating the probability of attrition from the endline survey. Column (1) includes treatment status and a set of baseline covariates as independent variables. Column (2) extends the specification by including interaction terms between treatment status and key baseline characteristics to explore heterogeneous patterns of attrition. The dependent variable is a binary indicator equal to 1 if the individual did not participate in the endline survey. Coefficients reflect the change in the probability of attrition associated with each variable. Standard errors are reported in parentheses. Statistical significance is denoted as follows: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. The full sample size, after conditioning on observed covariates, consists of 794 observations at baseline.

Table C.4: Attendance by activity: intensity and at least one session, by treatment status

	Extensive Margin: Attended at least once (%)		Intensive Margin: Fraction of module attended (%)	
	Treatment	Control	Treatment	Control
	(I)	(II)	(III)	(IV)
Panel A: Questionnaires				
Baseline questionnaire	100	100	100	100
Endline questionnaire	84.1	92.3	84.1	92.3
Panel B: Supportive activities				
Follow-up of social inclusion itinerary	79.0	87.9	75.6	87.6
Interpretation support (recruitment & evaluation)	28.7	29	28.7	30
Interpretation support (intervention)	20.1	Not offered	20.1	Not offered
Panel C: Psycho-social supports				
Creating Solutions	83.9	Not offered	72.4	Not offered
Psycho-social support & appreciative inquiry	76.9	Not offered	17.5	Not offered
Panel D: Knowledge & awareness of community resources				
Conflict resolution	83.9	Not offered	76.5	Not offered
Knowing my neighbourhood	75.2	Not offered	70.2	Not offered
Meeting spaces	64.7	Not offered	58.9	Not offered
Panel E: Digital competency training				
Digital training	79.7	Not offered	75.3	Not offered

Notes: The table reports two measures of attendance. Columns I and II present the extensive margin of attendance—the share of individuals who attended at least one session of a given module—for the treatment and control groups, respectively. Columns III and IV report the intensive margin of attendance, measured as the share of sub-sessions attended within each module. For workshops, the intensity measure is computed as the number of sessions attended divided by the total number of sessions offered. For single-event activities (baseline survey, endline survey, and linguistic mediation), attendance is measured using a binary participation indicator, as each activity occurs only once.

Table C.5: Baseline characteristics associated with attendance

		Module I:		Module II:			Module III:
	Follow-up	Psycho-social supports		Community resources			Digital training
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Age 29-38	-0.069	-0.033	-0.043	-0.044	-0.034	0.017	-0.061
Age 39-48	0.103*	0.102*	0.132**	0.098*	0.138**	0.072	0.106*
Age 49-58	0.072	0.055	0.057	0.050	0.084	0.161	0.054
Age 59-68	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HH: 1-parent family	0.018	-0.002	-0.051	-0.003	0.005	-0.000	0.011
HH: Divorced/Separated	0.014	0.032	-0.009	0.031	-0.009	-0.057	-0.028
HH: Others	-0.004	-0.007	-0.067	-0.011	-0.091	-0.072	0.024
Spanish language: High	0.123	0.164*	0.170*	0.167**	0.167*	0.078	0.155*
Spanish language: Middle	0.159*	0.187**	0.184**	0.190**	0.163*	0.157*	0.172**
Spanish language: Low	0.125	0.187**	0.151	0.182**	0.154*	0.123	0.163*
Edu: Primary	0.019	0.083	0.006	0.083	0.022	0.078	0.031
Edu: Secondary	0.152***	0.132**	0.141**	0.132**	0.174***	0.124	0.157***
Edu: Post-secondary/Vocational	0.067	0.120	0.080	0.115	0.120	0.151	0.101
Edu: Higher education	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nationality: Non-European	0.033	0.049	0.054	0.049	0.082	-0.037	0.017
Labour market status: Employed	-0.199**	-0.196**	-0.208**	-0.194**	-0.191**	-0.152*	-0.224***
Area: Cartagena	0.080	-0.020	0.090	-0.017	0.090	0.129*	0.050
Area: Lorca	0.021	-0.051	0.052	-0.041	0.072	0.021	0.014
Area: Cieza	-0.209	-0.038	-0.342**	-0.032	-0.342**	-0.249	-0.297*
Area: Totana	-0.116	-0.055	-0.088	-0.054	-0.082	-0.123	-0.129
Area: Alhama de Murcia	-0.090	-0.077	-0.073	-0.069	-0.045	-0.084	-0.048
Area: Alguazas	-0.226	-0.106	-0.197	-0.106	-0.191	-0.084	-0.256*
Area: Mazarrón	-0.064	-0.128	-0.038	-0.132	-0.049	-0.139	-0.028
Area: Fuente Álamo	0.060	0.004	0.059	0.001	0.068	0.033	0.052
Area: Torre Pacheco	-0.021	-0.102	-0.032	-0.100	-0.012	-0.012	-0.034
Area: Los Alcázares	0.039	0.091*	0.107	0.046	0.045	0.105	0.105
Area: San Pedro del Pinatar	0.055	-0.038	0.072	-0.037	0.102	-0.092	0.032
IMV: Yes	0.127	0.040	0.202*	0.070	0.184*	0.171	0.160
RBI: Yes	0.299***	0.174	0.395***	0.209*	0.405***	0.472***	0.304***
Child benefit: Yes	0.202***	0.128*	0.249***	0.117*	0.242***	0.319***	0.200***
Month of interview: March	-0.006	-0.012	-0.009	-0.012	0.048	0.002	-0.005
Month of interview: April	-0.287	-0.335	-0.259	-0.321	-0.189	-0.137	-0.294
N	393	393	393	393	393	393	393
R^2	0.115	0.103	0.135	0.097	0.119	0.089	0.134

Notes: Sample: treated group only. Each column reports coefficients from a separate Linear Probability Model where the dependent variable equals 1 if the individual attended at least one session in the corresponding activity, and 0 otherwise. Columns correspond to: (1) Follow-up of social inclusion itinerary; (2) Psycho-social: Creating Solutions; (3) Psycho-social: Psycho-social support; (4) Community: Conflict Resolution; (5) Community: Knowing my neighbourhood; (6) Community: Meeting Spaces; (7) Digital: Digital training. Omitted reference categories are: Age 19–28; HH: 2-parent family; Spanish language: Native; Edu: No education; Area: Murcia; Month: February. Coefficients are reported with their statistical significance: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Figure C.1: Distribution of financial compensation: by groups

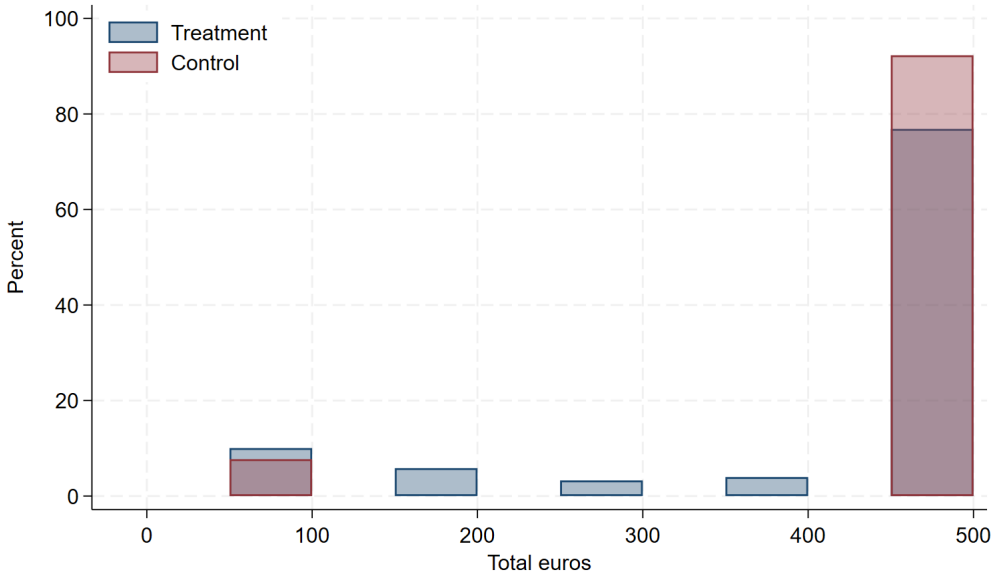


Table C.6: Intensive margin of programme participation

	Coeff	(SE)	N	R^2	Method
Panel A: Social resources					
Social resources	0.38***	(0.09)	703	0.15	OLS
Trust in social work	0.03	(0.10)	703	0.08	OLS
Autonomy in managing of the IMV	0.25***	(0.08)	703	0.31	OLS
Autonomy accessing social resources	0.25***	(0.08)	703	0.27	OLS
Panel B: Digital skills					
Ability to use digital tools for daily life	0.38***	(0.06)	703	0.59	ANCOVA
Panel C: Psychosocial well-being					
Self-esteem	0.11	(0.09)	703	0.22	ANCOVA
Satisfaction with family relationships	0.08	(0.09)	703	0.30	ANCOVA
Psychological well-being	0.34***	(0.08)	703	0.29	ANCOVA
Life satisfaction	0.17**	(0.08)	703	0.43	ANCOVA
Panel D: Community participation					
Participation in the community's life	0.14*	(0.08)	703	0.30	ANCOVA
Knowledge of community's resources	0.45***	(0.08)	703	0.41	ANCOVA
Panel E: Economic resources					
Financial Difficulties	0.06	(0.06)	703	0.59	ANCOVA

Notes: The table presents the results of the regression analysis on the intensive margin of the intervention—using the fraction of time that a participant took part in the full programme (following Equation 2) as the treatment measurement. Statistical significance is denoted as follows: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. The first column reports the estimated coefficient α_1 from Equation 2, followed by the standard error in the second column. The third column presents the number of observations, the fourth column shows the R^2, and the final column indicates the estimation method used.

Table C.7: ITT estimates: Disaggregated effect of each programme module

Modules:	Psycho-social supports (1)	Knowledge/awareness of community resources (2)	Digital competency training (3)	N	R^2	Method
Panel A: Social resources						
Social resources	-1.07	0.94**	0.23	703	0.15	OLS
	(0.66)	(0.44)	(0.46)			
Trust in social work	-0.50	-0.17	0.55	703	0.08	OLS
	(0.63)	(0.52)	(0.47)			
Autonomy in managing of the IMV	0.76	-0.20	-0.17	703	0.32	OLS
	(0.53)	(0.39)	(0.40)			
Autonomy accessing social resources	0.48	-0.14	-0.04	703	0.27	OLS
	(0.58)	(0.38)	(0.41)			
Panel B: Digital skills						
Ability to use digital tools for daily life	0.58	-0.11	-0.01	703	0.59	ANCOVA
	(0.45)	(0.29)	(0.32)			
Panel C: Psychosocial well-being						
Self-esteem	-0.22	-0.54	0.74	703	0.22	ANCOVA
	(0.68)	(0.40)	(0.54)			
Satisfaction with family relationships	-0.81	-0.16	0.81*	703	0.30	ANCOVA
	(0.61)	(0.42)	(0.46)			
Psychological well-being	-0.63	-0.37	1.08**	703	0.29	ANCOVA
	(0.59)	(0.39)	(0.45)			
Life satisfaction	-0.06	-0.22	0.38	703	0.43	ANCOVA
	(0.60)	(0.41)	(0.48)			
Panel D: Community participation						
Participation in the community's life	-0.55	-0.74*	1.19**	703	0.31	ANCOVA
	(0.63)	(0.38)	(0.51)			
Knowledge of community's resources	1.08*	-0.11	-0.33	703	0.41	ANCOVA
	(0.57)	(0.42)	(0.38)			
Panel E: Economic resources						
Financial Difficulties	0.17	0.24	-0.30	703	0.59	ANCOVA
	(0.42)	(0.34)	(0.32)			

Notes: Each row reports estimates from a regression based on Equation 3, including a full set of pre-treatment controls. Each column presents the coefficient associated with attendance in a specific programme module. Attendance in module k is defined as the fraction of time a participant took part in that module. Standard errors are reported in parentheses. Columns (1)-(3) correspond to the estimated effects of the initial assessment, psycho-social support, community knowledge and participation, and digital competency training modules, respectively. The *Method* column indicates whether the specification is estimated using ANCOVA or OLS. Statistical significance is denoted by * p<0.10, **p<0.05, and *** p<0.01. N denotes the number of observations used in the regressions.

Table C.8: Balancing test of covariates in the administrative records

	Baseline Survey					Endline Survey				
	Control		Treatment			Control		Treatment		
	N	Mean	N	Mean	P-value	N	Mean	N	Mean	P-value
Age: 18-28	176	0.07	192	0.09	0.49	176	0.15	192	0.29	0.00***
Age: 29-38	176	0.38	192	0.42	0.42	176	0.31	192	0.33	0.59
Age: 39-48	176	0.38	192	0.40	0.68	176	0.37	192	0.28	0.07*
Age: 49-58	176	0.14	192	0.08	0.07*	176	0.14	192	0.08	0.10
Age: 59-68	176	0.03	192	0.01	0.12	176	0.04	192	0.01	0.07*
HH: 2-parent family	176	0.77	191	0.70	0.10*	161	0.73	145	0.68	0.33
HH: 1-parent family	176	0.07	191	0.13	0.10	161	0.11	145	0.19	0.05**
HH: Other	176	0.03	191	0.06	0.17	161	0.06	145	0.02	0.07*
Spanish language: Native	164	0.12	174	0.13	0.65	157	0.13	144	0.15	0.64
Spanish language: High	164	0.21	174	0.24	0.54	157	0.18	144	0.22	0.42
Spanish language: Medium	164	0.43	174	0.30	0.02**	157	0.37	144	0.34	0.60
Spanish language: Low	164	0.24	174	0.32	0.11	157	0.32	144	0.29	0.62
Area: Murcia	176	0.34	192	0.34	0.96	161	0.35	147	0.32	0.53
Edu: No education	176	0.21	192	0.18	0.42	161	0.24	147	0.20	0.41
Edu: Primary	176	0.31	192	0.30	0.83	161	0.32	147	0.26	0.22
Edu: Secondary	176	0.18	192	0.19	0.78	161	0.16	147	0.20	0.27
Edu: Post-secondary/Vocational	176	0.23	192	0.24	0.79	161	0.20	147	0.25	0.33
Edu: Higher education	176	0.07	192	0.09	0.47	161	0.08	147	0.09	0.81
Nationality: Non-EU State	175	0.92	192	0.95	0.28	159	0.89	146	0.94	0.16
Employed	176	0.73	192	0.78	0.28	161	0.57	147	0.62	0.40
Area: Cartagena	176	0.07	192	0.06	0.67	161	0.07	147	0.07	0.99
Area: Lorca	176	0.16	192	0.11	0.21	161	0.17	147	0.13	0.35
Area: Cieza	176	0.05	192	0.07	0.50	161	0.04	147	0.05	0.86
Area: Totana	176	0.02	192	0.04	0.44	161	0.02	147	0.04	0.25
Area: Alhama de Murcia	176	0.10	192	0.12	0.48	161	0.09	147	0.11	0.52
Area: Alguazas	176	0.03	192	0.02	0.64	161	0.02	147	0.01	0.48
Area: Mazarrón	176	0.08	192	0.03	0.04**	161	0.07	147	0.02	0.03**
Area: Fuente Álamo	176	0.04	192	0.06	0.44	161	0.04	147	0.07	0.24
Area: Torre Pacheco	176	0.03	192	0.07	0.15	161	0.04	147	0.07	0.15
Area: Los Alcázares	176	0.05	192	0.04	0.67	161	0.05	147	0.05	0.93
Area: San Pedro del Pinatar	176	0.02	192	0.04	0.31	161	0.02	147	0.05	0.28
Receives IMV	176	0.10	192	0.11	0.69	-	-	-	-	-
Receives RBI	176	1.00	192	0.99	0.18	-	-	-	-	-
Receives child benefit	176	0.88	192	0.88	0.99	-	-	-	-	-
Survey Month 1	176	0.23	192	0.22	0.84	161	0.34	147	0.30	0.43
Survey Month 2	176	0.76	192	0.77	0.92	161	0.50	147	0.49	0.82
Survey Month 3	176	0.01	192	0.01	0.61	161	0.16	147	0.21	0.21

Notes: The table reports the results of a balancing test on covariates, for individuals who remained in the sample and are observed in the administrative records. The table is divided into two sections: the first five columns compare covariates at baseline, and the next five columns compare them at endline. For each group (control and treatment), the table displays the number of observations, the mean, and the p-value from a pairwise t-test of equality of means. The analysis serves to verify the balance of observable characteristics among respondents retained in the administrative dataset over time.

Table C.9: Probability of appearing in the administrative records

Dependent Variable: Prob of appearing in the admin records		
	(1)	(2)
Treatment	0.04	0.04
Nationality: EU State	.	-0.07
Employed	.	0.42***
Spanish: High	.	0.16**
Spanish: Middle	.	0.03
Spanish: Low	.	0.03
Edu: Primary	.	0.04
Edu: Secondary	.	0.03
Edu: Post-secondary	.	0.10
Edu: Higher education	.	-0.01
Age: 29-38	.	-0.03
Age: 39-48	.	-0.01
Age: 49-58	.	-0.04
Age: 59-68	.	-0.29***
HH: 1-parent family	.	0.06
HH: Divorced/Separated	.	0.12**
HH: Others	.	-0.06
Cartagena	.	-0.21***
Lorca	.	-0.05
Cieza	.	0.18**
Totana	.	0.16
Alhama de Murcia	.	0.20**
Alguazas	.	-0.05
Mazarrón	.	0.10
Fuente Álamo	.	-0.05
Torre Pacheco	.	-0.14**
Los Alcázares	.	-0.08
San Pedro del Pinatar	.	-0.17**
IMV	.	0.04
RBI	.	-0.03
Child benefit	.	0.11
Constant	0.41***	0.28
N	856	794

Notes: The table presents results from linear probability models estimating the likelihood of appearing in the administrative data. Column (1) includes only the treatment indicator and Columns (2) adds baseline characteristics (including language, education, age, household composition, welfare benefits, and locality). Standard errors are in parentheses. Statistical significance is denoted as: * < 0.10, ** < 0.05, and *** < 0.01.

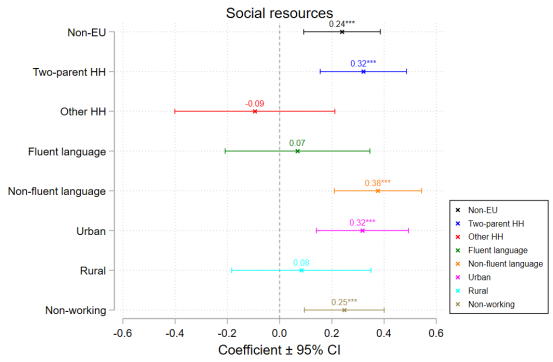
Table C.10: Effects on Labour Market Outcomes (with Minimum Detectable Effect)

	(1) Coeff	(2) (SE)	(3) N	(4) Ex-post MDE
Extensive margin	-0.018	(0.040)	7056	0.113
Intensive margin	-0.008	(0.036)	7056	0.101
Hours worked	0.002	(0.035)	6993	0.099
Days worked	-0.275	(1.101)	7056	3.085

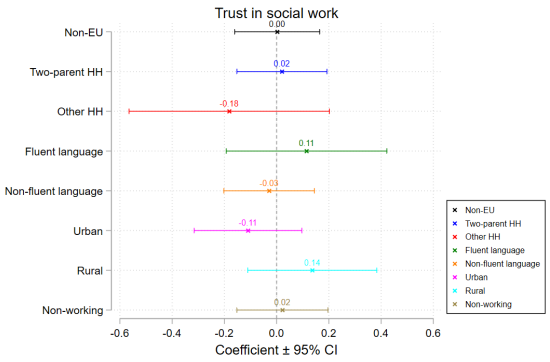
Notes: The table reports treatment effects on employment outcomes using administrative records collapsed at the individual–month level. Each row corresponds to a separate regression of the listed outcome on a treatment indicator, a post indicator, treatment indicator times a post indicator and the full set of baseline controls (language, location, education, nationality, household type, birth year, interview month, and welfare benefits), including month fixed effects. Standard errors, in parentheses, are clustered at the individual level. The column *Ex-post MDE* reports the minimum detectable effect size, computed as $(z_{1-\alpha/2} + z_{1-\beta}) \cdot \widehat{\mathrm{SE}}(\hat{\beta})$ with $\alpha = 0.05$ and power $1 - \beta = 0.80$. Statistical significance is denoted as follows: * < 0.10, ** < 0.05, and *** < 0.01.

C.2 Heterogeneity Analysis

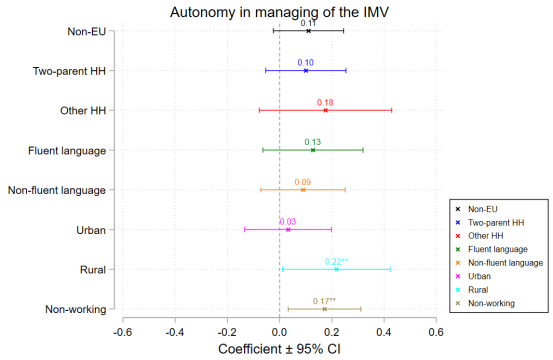
Figure C.2: Social Resources—Heterogeneous Effects



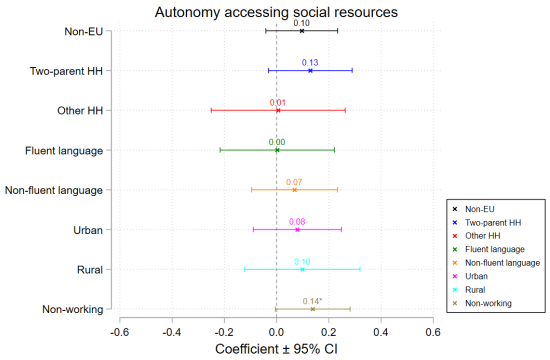
(a) Social resources



(b) Trust in social work



(c) Autonomy in managing the IMV



(d) Autonomy in accessing social resources

Figure C.3: Digital Skills—Heterogeneous Effects

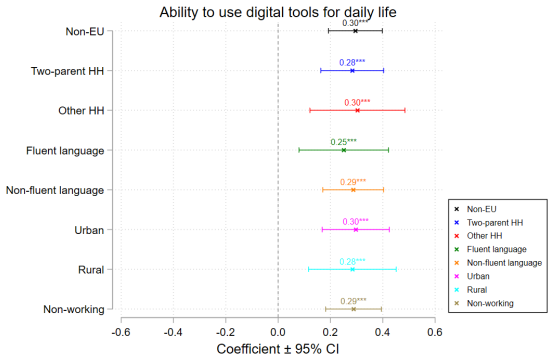
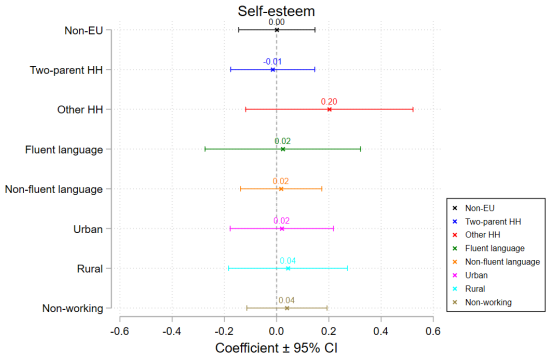
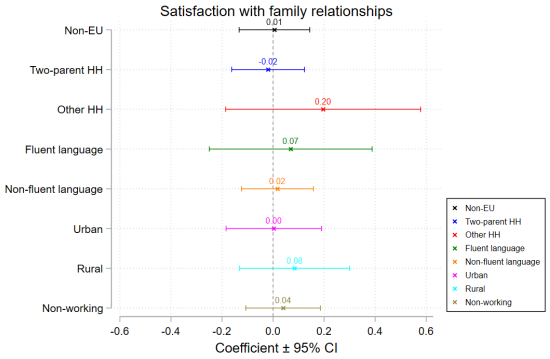


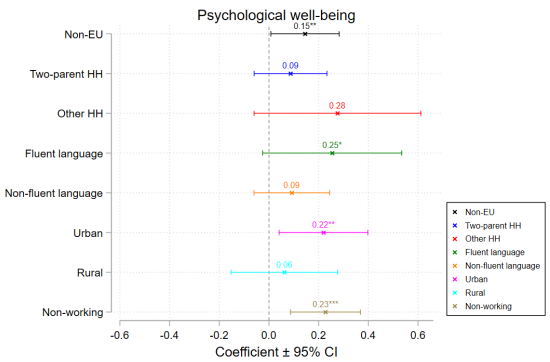
Figure C.4: Psychosocial well-being—Heterogeneous Effects



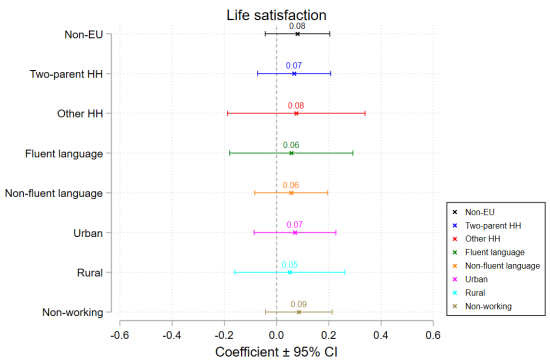
(a) Self-esteem



(b) Satisfaction with family relationships

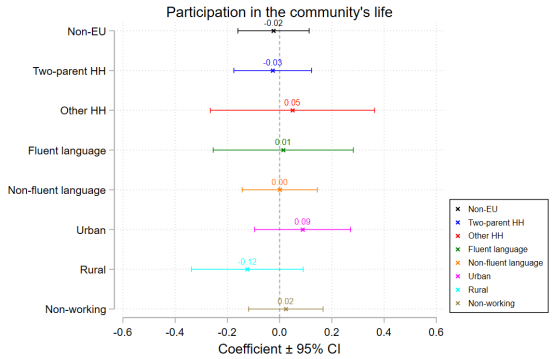


(c) Psychological well-being

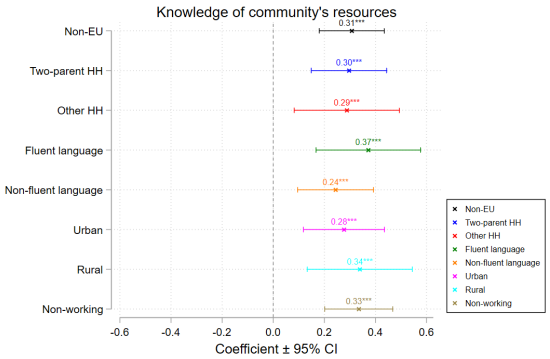


(d) Life satisfaction

Figure C.5: Community Participation—Heterogeneous Effects



(a) Participation in the community's life



(b) Knowledge of the community's resources

Figure C.6: Economic Resources—Heterogeneous Effects

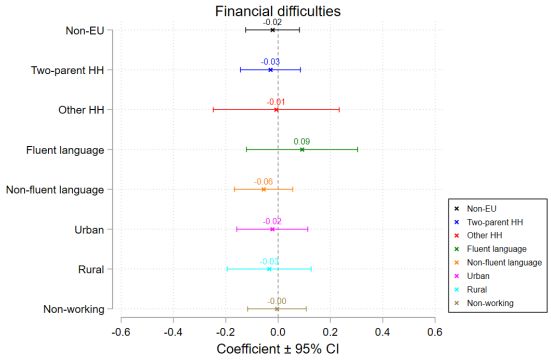


Table C.11: Main regression results: among IMV beneficiaries

	Coeff	(SE)	N	R^2	Method	Mean
Panel A: Social resources						
Social resources	0.22***	(0.08)	645	0.12	OLS	-0.08
Trust in social work	-0.05	(0.08)	645	0.07	OLS	0.04
Autonomy in managing of the IMV	0.13*	(0.07)	645	0.31	OLS	-0.09
Autonomy accessing social resources	0.08	(0.07)	645	0.26	OLS	-0.06
Panel B: Digital skills						
Ability to use digital tools for daily life	0.31***	(0.05)	645	0.60	ANCOVA	-0.23
Panel C: Psychosocial well-being						
Self-esteem	-0.00	(0.08)	645	0.22	ANCOVA	-0.02
Satisfaction with family relationships	0.00	(0.07)	645	0.30	ANCOVA	-0.05
Psychological well-being	0.12*	(0.07)	645	0.28	ANCOVA	-0.08
Life satisfaction	0.06	(0.06)	645	0.41	ANCOVA	-0.04
Panel D: Community participation						
Participation in the community's life	-0.01	(0.07)	645	0.30	ANCOVA	-0.04
Knowledge of community's resources	0.31***	(0.07)	645	0.41	ANCOVA	-0.19
Panel E: Economic resources						
Financial Difficulties	-0.00	(0.05)	645	0.60	ANCOVA	-0.03

Notes: The table presents the results of the regression analysis that includes socioeconomic controls. The first column reports the estimated coefficient β_1 from Equation 1. Statistical significance is denoted as follows: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. The second column shows the standard errors (in parentheses), while the third column indicates the number of observations. The fourth column reports the R^2 of each model, and the fifth column specifies the estimation method used (ANCOVA or OLS). The final column shows the mean of the dependent variable in the control group. This is computed for the sample of IMV beneficiaries