

Personalized Employment Support for the Homeless: Evidence from a Randomized Evaluation*

Miguel Almunia

CUNEF Universidad
& CEPR

Cristian Navarro

CEMFI

Begoña Varela

Ministerio de Inclusión,
Seguridad Social y
Migraciones

March 24, 2026

Abstract

We evaluate the impact of a randomized intervention designed to promote labor market integration among people experiencing homelessness in Spain. Participants were randomly assigned to either a personalized employment program, featuring intensive caseworker support and financial assistance, or to the traditional employment model. Short-term results show larger improvements in housing stability, labor market integration and employment income for individuals in the personalized treatment. However, these differences largely dissipated after six months, as the outcomes of those in the traditional model improved. The findings highlight both the potential of personalized approaches to accelerate integration and the challenges of sustaining long-term effects in homelessness interventions.

JEL codes: I38, J22, H53.

Keywords: homelessness, employment, housing stability, randomized control trial (RCT), long-term effects, Spain.

*Contact information: miguel.almunia@cunef.edu, cristian.navarro@cemfi.edu.es, and begona.varela@seg-social.es. This project was promoted by the General Secretariat for Inclusion (SGI) of the Ministry of Inclusion, Social Security and Migration (MISSM) as part of the Recovery, Transformation and Resilience Plan (PRTR), with funding from Next Generation EU and implemented by the nonprofit organization *Hogar Sí*. This entity collaborated with the SGI and the research team jointly coordinated by CEMFI and J-PAL Europe in the design of the RCT methodology, actively participating in the provision of the necessary information for the design, monitoring, and evaluation of the program. The views expressed in this paper are those of the authors and do not necessarily reflect the position of the SGI or *Hogar Sí*. The authors thank all the staff at *Hogar Sí*, the implementing partner, for a fruitful collaboration throughout the project. Miguel Almunia gratefully acknowledges funding from the Agencia Estatal de Investigación - Ministry of Science and Universities (grants RYC2021-031858-I and PID2023-150638NB-I00). Cristian Navarro gratefully acknowledges financial support from Grant PRE2022-102202, funded by MCIN/AEI/10.13039/501100011033 and the European Social Fund Plus ("ESF+"), as well as from the María de Maeztu Unit of Excellence CEMFI (MDM-2016-0684) and CEMFI CEX2020-001104-M, both funded by MCIN/AEI/10.13039/501100011033, and from CEMFI.

1 Introduction

Homelessness is one of the most visible forms of social exclusion in advanced economies, and its prevalence has increased in many European countries over the past decade (FEANTSA 2022). In Spain, more than 28,000 people were recorded as experiencing homelessness in 2022, a figure that has risen by nearly 25% since 2012 (INE 2023). Beyond the lack of stable housing, individuals in this situation face multiple and interrelated disadvantages, including poor health, limited education, and above all, severe barriers to labor market participation. Survey evidence from Spain (INE 2023) confirms that job loss is a leading cause of homelessness, while the inability to secure stable employment is consistently identified as the main obstacle to exiting homelessness and achieving long-term social reintegration.

Employment programs are a central component of strategies to address homelessness, as access to stable work can provide both the financial resources and the social integration needed to exit precarious housing situations. Yet, the evidence on the effectiveness of such programs remains limited, particularly in Europe (for recent evidence from the US, see Evans, Sullivan, and Wallskog 2016, Cohen 2024 and Abdul-Razzak et al. 2025). While some interventions emphasize rapid access to housing under the “Housing First” model (see Woodhall-Melnik and Dunn 2016, for an overview), fewer studies have rigorously examined models that focus on labor market integration as a pathway out of homelessness. This paper contributes to filling that gap by evaluating an employment program specifically tailored to the needs of individuals experiencing homelessness in Spain.

The intervention we study, implemented by the nonprofit organization *Hogar Sí*, consists of a personalized employment program that combines intensive, individualized support with financial assistance and active engagement with employers over a period of 12 to 18 months. Participants are randomly assigned to either this personalized model or the traditional employment services offered by the organization, allowing us to identify the causal effects of the more intensive approach relative to the traditional model. The program was rolled out in six Spanish cities (A Coruña, Cartagena, Madrid, Murcia, Palma de Mallorca and Valencia) between 2022 and 2023, targeting adults who had recently experienced homelessness and faced significant barriers to reentering the labor market.

What makes the intervention studied here particularly novel is its multidimensional and accelerated approach to labor market integration. In contrast to standard programs, it reduces the participant-to-staff ratio to about half, adapts training and job search activities to individual goals, and provides comprehensive financial support covering not only transport and training but also housing-related expenses, food, and personal

appearance. It also prioritizes long-term job retention through extended follow-up after placement, while addressing other barriers such as health or administrative issues. By combining individualized support with broader financial and social assistance, the program is designed to achieve faster and more sustained improvements than the traditional model—an important feature given the difficulty of retaining individuals experiencing homelessness in employment programs.

We find that the personalized employment model produces meaningful short-term (i.e., measured immediately after the end of the intervention) improvements across several dimensions relative to the traditional model. In terms of housing, treated participants improved their ETHOS score¹ by 2 points relative to the control group, equivalent on average to a shift from temporary or insecure living arrangements toward more stable forms of accommodation. They also spent about 5 additional weeks in decent housing over a six-month period (from a baseline of only 3.02 weeks) and reported higher life satisfaction by 0.3 standard deviations, suggesting that the intervention not only increased housing stability but also improved perceived quality of life.

Labor market outcomes show similarly encouraging short-term effects. Treated participants were 12 percentage points more likely to be employed at the end of the intervention, worked an average of 15 additional days over a six-month period, and their monthly employment income increased by €101 more than those in the traditional model.² Compared to the baseline levels of each outcome, these differences correspond to 133% of the employment rate, 77% of the days worked and roughly three times the employment income, highlighting the magnitude of the short-term impacts. Treated participants also reported higher job search intensity, measured by the number of job applications and participation in selection processes, indicating stronger engagement with the labor market.

Consistent with these improvements, participants in the personalized model were more likely to achieve a successful exit from the program—defined as leaving the program after securing employment or stable housing—with 25% doing so compared with just 8% in the traditional model. Moreover, because not all treated participants engaged fully with the program activities, the estimated effects might underestimate the potential impact of personalized interventions under higher participation. Taken together, our results suggest that personalized employment interventions can generate material and subjective improvements, highlighting their potential to accelerate the

¹ The ETHOS score goes from 1 (living in the rough) to 13 (living in an over-crowded house). Individuals not experiencing homelessness are assigned a value of 14. More details in Subsection 2.3 and Table A2.

² The effect on employment income is significant in the specification with controls, but marginally insignificant in the specification without controls. See Table 3 for details.

path toward economic independence and social inclusion for people experiencing homelessness.

We examine medium-term effects using a follow-up survey conducted six months after the end of the intervention. By this point, the differences between the personalized (treatment) and traditional (control) groups largely disappeared. Although attrition patterns were more pronounced among lower-performing participants in the control group—possibly biasing upward measured medium-term outcomes in that group—these dynamics suggest that, while the personalized model seems to yield faster improvements in the short term, the traditional approach can deliver similar results over a longer horizon, provided that participants remain engaged.

The convergence of outcomes in the medium term raises a natural question about cost-effectiveness. The personalized program is approximately twice as costly as the traditional model, yet the two groups largely converge in outcomes by the medium term. The short-term gains of the personalized approach could still justify the additional expenditure if faster integration has lasting benefits not captured in our follow-up window, but a full assessment of this trade-off is beyond the scope of this paper.

We contribute to the literature on the impact of social programs addressing homelessness. While there is an extensive literature in specialized journals (see Woodhall-Melnik and Dunn 2016), a large majority of these studies use non-experimental methods that cannot always fully correct for endogenous selection into treatment. Among the smaller set of experimental studies, mostly from the United States and Canada, results generally show that Housing First-type programs improve housing stability, perceived choice, quality of life, and some health or criminal justice outcomes, although effects on substance use and psychiatric symptoms are more mixed. However, this evidence is largely concentrated in a few high-income English-speaking countries (US, Canada, UK and Australia), while the evidence for other settings is more limited. We thus contribute to the literature by providing high-quality experimental evidence from a new setting: cities in a high-income Southern European country.

While we study the impact of personalized employment support, our findings also connect to a recent study by Cohen (2024) that focuses on rapid placement into housing programs. The paper shows that quickly placing individuals into those housing programs reduces returns to the homeless support system, criminal activity, and reliance on emergency cash assistance. More importantly, it shows that the savings generated by rapid housing placement can offset a large share of the costs of other support programs in the medium and long term. While we study a different treatment margin and a detailed cost-benefit analysis is beyond the scope of our paper, both

Cohen (2024) and our results emphasize the importance of studying medium-term effects and suggest that acting quickly and intensively on key barriers faced by people experiencing homelessness can accelerate improvements across a variety of outcomes.

The rest of the paper is organized as follows. Section 2 presents the context and the intervention. Section 3 describes the data and the randomization process. Section 4 outlines the estimation strategy. Section 5 presents the results and Section 6 concludes.

2 Context and Intervention

2.1 Homelessness: definition and causes

The European Federation of National Organizations Working with the Homeless (FEANTSA) defines homelessness as the inability to access or maintain adequate and stable housing due to economic hardship, social exclusion, or personal difficulties. While measuring the incidence of homelessness is challenging due to its varied forms and the absence of consistent administrative data, 2022 survey data indicate that over 28,000 individuals in Spain were experiencing homelessness, a 24.5% increase since 2012 (INE 2023).³ Notably, 40% of them had been without stable accommodation for more than three years, highlighting the chronic nature of the phenomenon.

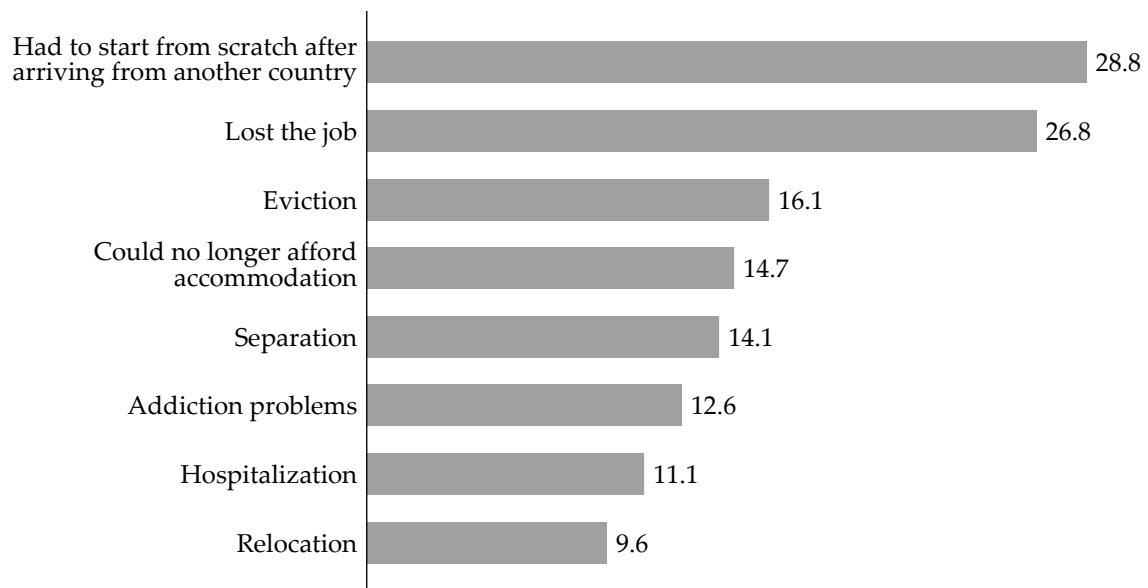
Survey evidence provides an approximation to its causes and barriers to exit. First, Figure 1a reports the main reasons for entering homelessness, as identified by individuals experiencing it. Difficulties faced when arriving in a new country (28.8%) and job loss (26.8%) are the most frequently cited causes. Physical and mental health problems are also common, and often aggravate other situations. Second, Figure 1b highlights the barriers that individuals identify as preventing them from exiting homelessness. The two most prominent obstacles are finding stable employment (38.7%) and securing adequate housing (32.4%), which far outweigh other factors. Since employment is instrumental not only for generating income but also for accessing and maintaining housing, these results highlight the key role of labor market integration in breaking the cycle of homelessness.

2.2 A Personalized Employment Intervention

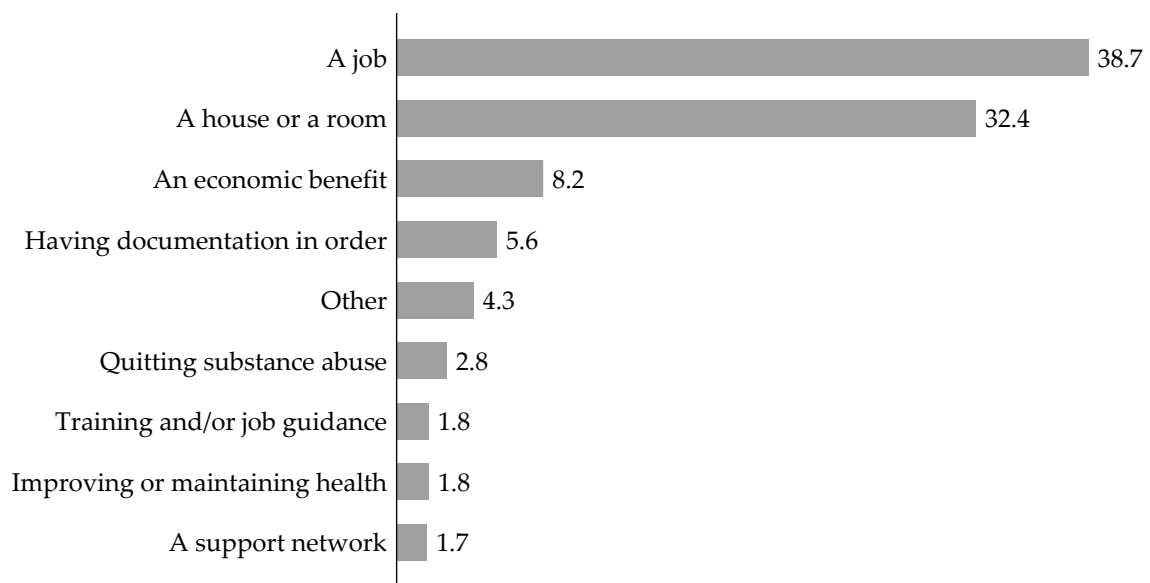
The evidence in Subsection 2.1 highlights job loss as a major cause of homelessness and employment as a key pathway out of it. However, homelessness is a complex

³ This figure likely underestimates the total number of people experiencing homelessness in Spain, as it only includes individuals using care system centers. Based on *Hogar Sí* estimates, the actual number could be around 30% higher.

Figure 1: Perceived causes and solutions to homelessness, according to people experiencing it



(a) Main reasons for entering homelessness



(b) Main factors identified for exiting homelessness

Note: Each figure shows the share of respondents in [INE \(2023\)](#) who mention each of the reasons to enter or barriers to exit homelessness.

phenomenon, often involving different, interrelated causes. In line with this, the intervention we evaluate in this paper is a personalized employment model that provides close, intensive support from professional staff. This program is expected to facilitate an autonomous exit from the specialized homelessness care system by enhancing access to and stability in the labor market, while addressing other individual needs that may hinder labor market integration.

We evaluate this personalized employment intervention using a randomized controlled trial, comparing it to a traditional employment model, which typically offers less individualized and extensive support. Upon arrival at a *Hogar Sí* center, participants were randomly assigned to one of two groups: the treatment group, which received the personalized employment model, or the control group, which received the standard employment services traditionally offered by the organization. The resulting comparison therefore reflects the relative effectiveness of the personalized model vs. the traditional approach, rather than a contrast with no support at all. The decision not to include a pure control group without intervention was motivated by ethical considerations, as denying highly vulnerable individuals access to any form of support would have been ethically unacceptable.

The personalized employment model features five main advantages with respect to the traditional one. First, it offers flexible, participant-led pathways with on-demand training tailored to individual goals, fostering early trust and enabling the deployment of caseworker support based on individual needs and strengths. In contrast, the traditional model follows a predefined, caseworker-led itinerary with standardized group workshops focused on pre-employment and basic skills. Second, caseworker support is more intensive, reducing the participant-to-staff ratio by about half and providing broader assistance to address employment and related needs such as housing, health, or administrative issues. Third, financial support covers not only participation-related expenses but also transport, food, personal appearance, and training, thereby reducing barriers to labor market access. Fourth, it involves more active employer engagement, enabling the creation or adaptation of job roles to fit participant profiles. Finally, it not only supports labor market access, but also emphasizes job retention, providing extended follow-up after placement to promote employment stability. Appendix Table A1 provides extensive details of the different actions included in each program.

The personalized employment model is expected to generate improvements not only in labor market access, but also in four additional dimensions: housing situation (through support to secure and maintain accommodation), economic situation (by increasing monthly income), employability (via skill development and confidence building), and overall quality of life (through better material and subjective well-being). In the short term, the program seeks to enhance housing conditions, financial stability, and employability through targeted financial support and personalized guidance. These intermediate outcomes are expected to lead, in the medium term, to more stable labor market integration, residential inclusion, and improved quality of life — ultimately enabling economic independence.

2.3 Program timeline and implementation

The personalized employment intervention, conducted by *Hogar Sí*, was implemented between March 2022 and September 2023 in six cities: A Coruña, Cartagena, Madrid, Murcia, Palma de Mallorca, and Valencia. The evaluation was designed in collaboration with the research team and staff from the General Secretariat of Inclusion (SGI), who played a key role in the randomization, as explained below.

The intervention consisted of four main phases. First, participants were recruited and randomly assigned to either the treatment or control group. Second, a baseline survey was conducted to collect pre-intervention data. Third, the intervention was implemented, with participants receiving support according to their assigned group. Finally, outcomes were collected both during and after the intervention, including an endline survey and a follow-up survey six months after the intervention.

Recruitment and random assignment. The recruitment of beneficiaries took place between March 15 and September 30, 2022. The target population included adults facing homelessness, recruited through two main channels: i) individuals who approached *Hogar Sí* directly and were then offered participation; ii) individuals referred by other public or private organizations that support people experiencing homelessness.

To participate in the intervention, individuals had to meet a set of eligibility criteria: they must be adults who had experienced homelessness⁴ during the last nine months, had no regular income and had worked no more than 20% of the time over the previous year. Moreover, participants were also required to hold a valid work permit or renewable asylum card with work authorization, and have an adequate level of comprehension of Spanish.

Eligible participants who expressed interest provided informed consent during recruitment and underwent random assignment. This process was sequential, as the recruitment period lasted several months. The SGI developed a custom-made software that was installed in *Hogar Sí* computers. Caseworkers collected basic information from each new participant on three dimensions: age, gender, and housing status. With this information, the software used a random-number generator to assign the participant either to the treatment or control group. More details on the stratified randomization are provided in Subsection 3.2 After the random assignment had been implemented, a *Hogar Sí* caseworker explained the services the participant would receive depending on their assignment to either the personalized or traditional model, without explicitly revealing the assignment or mentioning the alternative support

⁴ Defined as sleeping in public spaces or shelters and spending the rest of the day in public areas.

program.

Baseline survey. The baseline survey was administered either at the time of recruitment or during the first sessions of the intervention. In addition to collecting demographic information (apart from gender, age, residential status and location, already used for randomization), participants completed four short questionnaires. The first asked about self-perceived employability and skills. The second measured feelings of housing stability and personal autonomy. The third covered overall well-being, including satisfaction with different areas of life. The fourth was the Rosenberg self-esteem scale, which consists of 10 items assessing general self-worth (Rosenberg 1979).

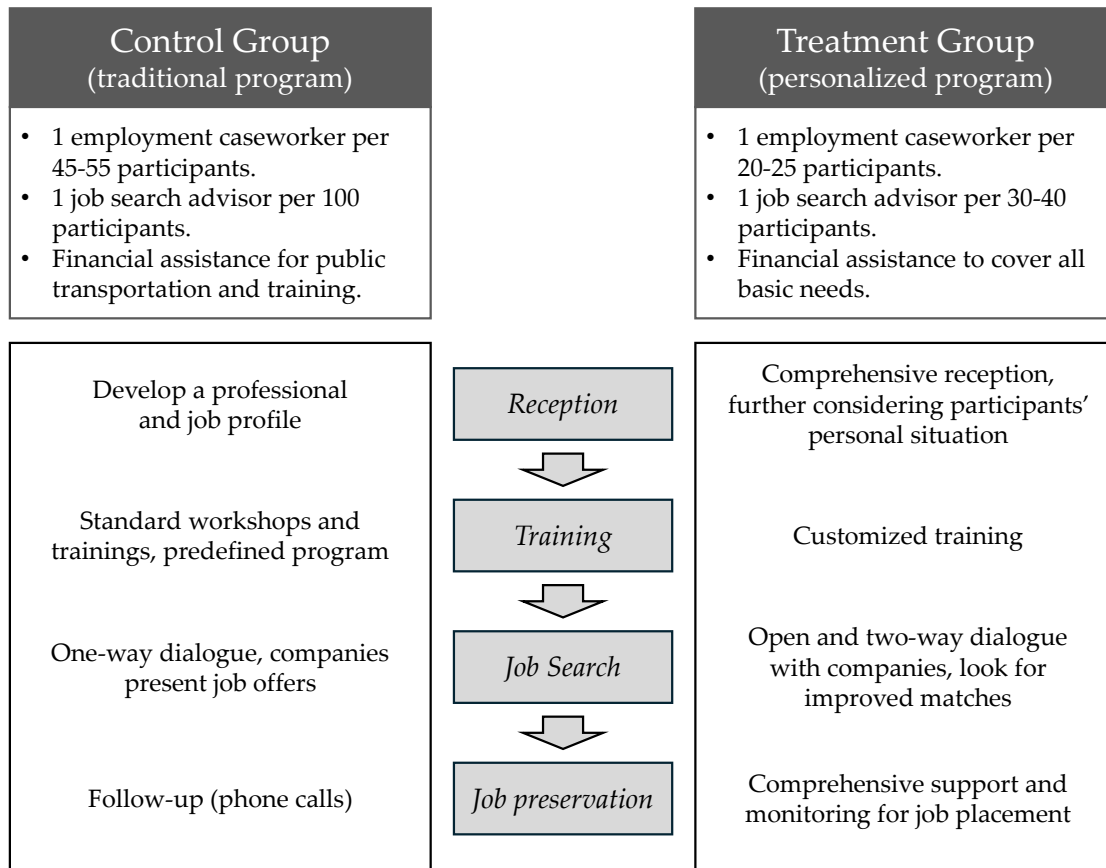
In parallel, the caseworker responsible for implementation also completed a professional employability assessment questionnaire for each participant assigned to them. This form evaluates four key dimensions: professional and training profile, competencies for job search, digital skills, and socio-occupational abilities such as communication and teamwork.

Intervention. Each participant's intervention began immediately upon entry and continued until either a successful exit from the program or the implementation deadline (September 30, 2023), which leads to a maximum exposure ranging from 12 to 18 months depending on the entry date. A successful exit is defined as one of three cases: a) Securing employment; b) Indicating that no further support from the program was needed; c) Achieving an ETHOS scale score above 7 (which corresponds to being neither roofless nor houseless and not receiving long-term housing support; see Table A2 for a full description).

The intervention consists of four main stages, summarized in Figure 2. First, the reception phase, to build a profile and to obtain a full understanding of each participant's situation. At this stage, the first contact between the caseworker and the participant takes place, and the baseline survey is administered. Second, the training phase, to provide activities for job training and job search. Third, the job search phase, to identify and apply for job opportunities. Finally, the job preservation phase, to ensure that participants retain employment. Financial assistance is provided throughout the process. Appendix Table A1 further details the differences between the personalized and traditional interventions across the different actions included in the programs.

Endline and follow-up surveys. To construct the outcome measures used in the evaluation, two surveys were conducted: the first, the endline survey, immediately after the intervention (to assess short-term outcomes), and the second, the follow-

Figure 2: Phases of the intervention



up survey, six months later (to capture medium-term effects).⁵ The four types of questionnaires used in the baseline survey were answered again in each of these two surveys.

Apart from the information in the two surveys, we also collected information about the employment contract and satisfaction with working conditions every time a participant got a job (one questionnaire for each job placement). Additionally, we use the information from the Social Security labor register of working lives, to obtain objective measures of labor market integration for the participants. All indicators used are detailed in Subsection 3.4.

⁵ Additional information was recorded throughout the intervention, ensuring some data was available even for participants who leave the program without completing the final questionnaires. Moreover, if a participant exited the intervention early, the endline surveys were conducted when the participant was still reachable.

3 Data and Randomization

3.1 Final analysis sample

The main data source used in the analysis is the baseline and follow-up surveys conducted on all participants. We add to this some program implementation data collected by *Hogar Sí's* caseworkers. For the employment outcomes, we use administrative data from Social Security records linked at the individual level for all the individuals in our sample. These administrative records include information on the employment spells and type of labor contracts of each individual for the period between six months before the start of the intervention and the end of the intervention. More details are provided in the definitions of the outcome indicators below.

We work with a final sample of 322 individuals experiencing homelessness in the cities of A Coruña, Cartagena, Madrid, Murcia, Palma de Mallorca and Valencia. This sample was formed from an original pool of 739 potential participants identified by *Hogar Sí* through different channels. Out of these, 277 individuals did not access the program because they did not meet the entry requirements described in Subsection 2.3 (they had an ETHOS score higher than 7, did not have a work permit, etc.) or due to lack of interest. Moreover, 118 were randomly assigned a treatment arm but did not continue the process, so they neither completed the baseline survey nor started the intervention. Finally, 22 individuals originally assigned to the treatment group were non-randomly selected into a separate program and are excluded from the analysis.⁶ Table A3 provides details of participant entry in the final sample by location.

Table A4 shows descriptive statistics before the intervention for our final sample of participants. It includes stratification variables, sociodemographic characteristics and outcome indicators of the different dimensions tested in the evaluation.

Sociodemographic Characteristics. Participants are, on average, about 42 years old (with about one-third aged 50 or older), and 77% are men. Two-thirds have EU nationality—55% of all participants are Spanish nationals and 12% hold other EU nationalities—while one-third hold non-EU nationality. One third reports experiencing mental health issues. The sample is broadly representative of the population experiencing homelessness in Spain (INE 2023), which is composed of 77% men, 50% Spanish nationals, 38% aged 50 or older, and 44% non-EU nationals.

Regarding education, participants have an average of 7.6 years of formal schooling.

⁶ These participants entered an insertion enterprise program in which *Hogar Sí*, rather than the employer, assumed the full wage cost. Given the higher level of support and the non-random selection into this subgroup, they are not included in the final analysis sample, as their inclusion would bias our estimates upward.

Around 2% are illiterate, 27% did not complete primary education, and only 8% completed university studies. In terms of labor market activity, individuals report on average more than 4 years of work experience and 25 months of unemployment since the end of the last job. Finally, the geographic distribution of participants across the six cities is the following: Madrid (25%), Murcia (19%), Palma de Mallorca (17%), Valencia (14%), A Coruña (13%), and Cartagena (11%).

Outcome indicators. Table A4 reports pre-intervention outcomes across the five dimensions evaluated: housing situation, labor market integration, economic situation, employability, and quality of life. We briefly summarize the objective measures here: at baseline, all participants score 7 or lower on the ETHOS scale, corresponding to roofless, houseless, or insecure living conditions (see Table A2).⁷ On average, they spent just 3 weeks in decent housing over the prior six months. Average total monthly income is €167.40, of which only €32.96 come from employment, and just 9% of participants were employed at the start of the intervention, according to Social Security records. Details on subjective measures (defined in Table A17) are available in Table A4.

3.2 Randomization and Balance Checks

Randomization. Stratified randomization was performed for a total of 462 individuals in the initial sample. Stratification was based on gender (man, woman), age group (under 35 years, between 35 and 49 years, 50 years or over), residential status (1 to 2, and 3 to 7, based on ETHOS scale), and location (the six cities listed above). After randomization, 224 individuals were assigned to the treatment group and 238 assigned to the control group. However, as described in the previous subsection, 118 were randomized but did not complete the baseline survey nor start the intervention, so they are not included in our final sample.

Table A5 reports the distribution of the final sample of 322 participants used in our analysis across all stratification cells.⁸ The stratification design generates 72 potential strata. Given the limited sample size, 59 cells effectively contain at least one observation and 38 cells contain participants in both treatment and control groups. Empty cells are more common in strata corresponding to women and to participants with ETHOS score between 3 and 7,⁹ as these groups are less represented both in our sample and in the overall population. This sparsity motivates our use of a main specification without

⁷ 69.6% of the sample lived roofless, 10.9% houseless, and 19.6% in insecure conditions.

⁸ Table A7 reports the corresponding distribution for the initial sample of 462 individuals who were randomized, including those who did not start the intervention.

⁹ That is, better housing conditions, as categories 1 and 2 correspond to roofless and categories 3 to 7 correspond to houseless.

strata fixed effects in the analysis, though we also report specifications with strata fixed effects as robustness checks (see Section 4).

Table A6 reports a summarized version of the randomization results, displaying the distribution of treatment and control participants by gender, age group, and residential status (aggregated across locations). The distribution across groups remains broadly balanced across these dimensions, even though some individuals drop out between randomization and the start of the intervention. Minor deviations appear in a few cells—particularly among female participants, who represent a smaller share of the sample—but the overall allocation remains close to the original randomization shown in Table A8, which was fully balanced across groups.

Power calculations. We performed power calculations before implementing the experiment using Optimal Design software. We assumed a two-arm RCT with individual-level outcome measurement, a significance level $\alpha = 0.05$ and a target power of $(1 - \beta) = 0.80$. The sample size was assumed to be 300 participants, equally divided between treatment and control arms, with attrition rates between 5% and 15%.

We considered two main outcomes for these calculations: weeks in stable housing (assuming a baseline mean of 3 weeks, with a standard deviation of 2.3 weeks) and average monthly earnings (assuming a baseline mean of €300, with a standard deviation of €300). Both groups were assumed to have identical baseline values prior to the intervention, and no stratification variables were incorporated into the calculations.

Given these assumptions, the study was adequately powered to detect moderate effect sizes.¹⁰ For the residential inclusion indicator, the minimum detectable effect (MDE) ranged from 4 to 5.5 days of stable housing at 80% statistical power. For the economic independence indicator, the corresponding MDE on average monthly earnings ranged from €75 to €105 at 80% statistical power. In both cases, the minimum detectable effects are equivalent to about 0.3 standard deviations of the outcome of interest.

Balance checks. Table A9 reports tests of balance for stratification variables and baseline characteristics by treatment status.^{11,12} For each variable, we report the mean

¹⁰ The minimum detectable effect (MDE) is given by $MDE = (t_{1-\beta} + t_{1-\alpha/2})\sigma\sqrt{\frac{1}{n_T} + \frac{1}{n_C}}$, where $t_{1-\alpha/2}$ is the critical value associated with the significance level α , $t_{1-\beta}$ corresponds to the desired statistical power, σ is the standard deviation of the outcome variable at baseline, and n_T and n_C denote the number of observations in the treatment and control groups, respectively.

¹¹ Figure B1 provides the graphical counterpart, reporting standardized differences in means and the corresponding 95% confidence intervals.

¹² Table A10 and Figure B2 provide equivalent tests of balance by recruitment channel (autonomous entry vs. referral by a public or private institution). The results show that, despite minor imbalances for some locations, individuals entering autonomously exhibit only small differences in residential stability and satisfaction with accommodation compared with those referred by public or private support organizations.

for the treatment and control groups, along with the difference in means and the standard error, which are obtained using the following simple regression:

$$X_i = \alpha_1 + \beta_1 T_i + \varepsilon_i \quad (1)$$

where i denotes the individual. X_i is each of the stratification variables and baseline characteristics, and T_i is an indicator variable for treatment assignment that takes value 1 for the personalized model and 0 for the traditional model. The coefficient β_1 represents the mean difference between treated and control individuals; positive values indicate higher baseline levels among the treated group. Standard errors are clustered at the level of the randomization strata—defined by gender, age group (under 35 years, between 35 and 49 years, 50 years and over), residential status (1 to 2, and 3 to 7, based on ETHOS scale), and location (six cities).

Overall, our results show that the treatment and control groups are statistically similar across most observed variables, although some baseline differences remain. First, all variables used for stratification are well balanced between groups, confirming the validity of the randomization. Second, out of the remaining 13 sociodemographic characteristics, five exhibit statistically significant differences at conventional levels: EU nationality and four education-related variables (years of schooling and the shares of participants who have not completed primary, completed secondary, or completed postsecondary education). These education measures are mechanically related and therefore reflect the same underlying difference in schooling. Third, of the remaining 17 baseline outcomes used to evaluate the intervention (the baseline ETHOS scale was used for stratification and is balanced), four differ significantly across groups: residential stability (in weeks), employed dummy (over the past six months) employability (assessed by professionals), and quality of life (index), with the latter three differences small in magnitude.¹³

While these differences point to some imbalances, this is not unexpected in relatively small samples, where randomization cannot ensure perfect comparability across all variables. While the variables used for stratification are well balanced between groups (confirming that the randomization was valid), we account for the baseline differences identified above by controlling for baseline levels of the dependent variable in the regression models presented in the results section. In addition, we include controls for individual baseline characteristics—such as gender, nationality, education, prior work experience, unemployment duration, and the presence of mental health problems—which may influence the impact of the intervention. Importantly, this set of controls includes the characteristics displaying the baseline imbalances discussed above (most

¹³ Notably, treated individuals exhibit slightly lower employment levels over the previous six months (according to Social Security records) and slightly lower employability (assessed by caseworkers).

notably nationality, education, and employability).¹⁴

3.3 Early dropout after randomization, degree of participation and attrition

In this section, we show that our estimates are likely to represent a lower bound of the potential impact of the intervention, as participation in its activities was voluntary. Moreover, we find that early dropout after randomization—before the intervention started—is slightly lower among treated individuals, but does not vary across key stratification variables. Finally, we show that although attrition during the intervention is unrelated to treatment status, it varies similarly in both treatment and control groups across some observable baseline characteristics, highlighting the importance of controlling for these variables in our analysis.

Participation in program components. Since participation in the intervention activities was voluntary, the estimated treatment effects reflect the average impact of being offered the program (intention-to-treat), rather than the effect of actual participation. If participation rates are low, observed differences between treatment and control groups may represent a lower bound of the true effect of the intervention.

We examine the degree of participation both for financial and non-financial assistance. With respect to financial assistance, Table A11 shows the percentage of final-sample participants who received each form of support. While transport and training aids were available to both treatment and control groups, all other forms were exclusive to the treatment group. However, no single type of financial aid was received by more than 58% of participants in the treatment group, and some forms—such as job equipment—were accessed by only one in five. Regarding the non-financial assistance, Table A12 reports participation in different tutoring sessions and activities. Average participation rates were 56% for the treatment group and 34% for the control group, with substantial variation across components. Tutoring sessions on job orientation and activities related to submission of job offers stand out for their high degree of participation.

Taken together, these patterns indicate that a significant portion of treated participants did not engage fully with the program. As a result, our estimates should be interpreted as a lower bound on the potential impact of the personalized model under full implementation.

Early dropout and attrition by treatment status. The comparability of the treatment

¹⁴ As an additional robustness check, we report specifications including strata fixed effects, which further address potential concerns related to baseline differences in residential stability and other stratification dimensions.

and control groups after the intervention would be reduced if the likelihood of starting the intervention or completing the endline survey varies by treatment assignment. To test whether early dropout after randomization or attrition during the intervention differ significantly between groups, we estimate the following specification:

$$L_i = \alpha_2 + \beta_2 T_i + \varepsilon_i \quad (2)$$

where i denotes the individual. L_i represents either a binary indicator for early dropout after randomization or a binary indicator for attrition during the intervention, and T_i is an indicator for treatment assignment defined as in equation (1).

The estimated coefficient for early dropout after randomization is -0.08 (s.e. 0.04 , $N = 462$), which is statistically significant at the 10% level, indicating slightly lower early dropout among individuals assigned to treatment before the intervention started. However, attrition during the intervention is not significantly related to treatment status: the estimated coefficient is -0.05 (s.e. 0.05 , $N = 322$), indicating that, though attrition is somewhat higher in the control group, it does not appear to be systematically related to treatment status.¹⁵

Early dropout and attrition by stratification variables. We next examine whether early dropout after randomization and attrition during the intervention vary across the stratification variables used in the randomization (gender, age group, residential status, and location). In Panel A of Tables A13 and A14, we replicate the regression in Equation (2), replacing treatment assignment with each stratification variable used in the randomization, as follows:

$$L_i = \alpha_3 + \beta_3 X_i + \varepsilon_i \quad (3)$$

where i and L_i have the same definition as in Equation (2), and X_i is each of the stratification variables: gender, age, residential status, and location. Results show that neither early dropout after randomization nor attrition during the intervention are correlated with the stratification variables, except for location.

We further examine whether early dropout and attrition vary differentially by treatment status across the stratification variables. For that purpose, in Panel B of

¹⁵ Additionally, Table A16 shows that the treatment group has slightly higher completion rates for both program participation (49% vs. 44%) and the endline survey (59% vs. 49%). While these differences are not statistically significant, the lower survey response rate in the control group affects the construction of some composite indicators used in the analysis, where sample sizes vary across specifications depending on data availability. For some indicators, the sample size is slightly larger because *Hogar Si* caseworkers were able to collect the necessary information throughout the intervention or at the time of departure, even when the final survey was not completed.

Tables A13 and A14 we estimate the following specification:

$$L_i = \alpha_4 + \beta_4 X_i + \beta_5 (X_i \times T_i) + \varepsilon_i \quad (4)$$

where i , L_i and T_i have the same definition as in Equation (2), and X_i includes the same variables as in Equation (3). The interaction coefficients in Panel B of Tables A13 and A14 are small and statistically insignificant, indicating no differences in early dropout or attrition by stratification variables across treatment status, again with the exception of location, which is less likely to affect the comparability of the treatment and control groups. Taken together, these results indicate that early dropout and attrition patterns are broadly balanced across the main stratification variables and do not differentially affect treatment and control groups.

Attrition by other sociodemographic characteristics. Because program attrition may also vary with other individual characteristics—particularly in vulnerable populations facing unstable conditions—we examine whether baseline sociodemographic characteristics predict attrition during the intervention.¹⁶ For that purpose, Panel A of Table A15 replicates the regression in Equation (3), replacing X_i with different sociodemographic characteristics: nationality, educational level, work experience, time unemployed, and an indicator for having mental health issues. Moreover, we also test for differences in attrition across recruitment channels, as individuals who access the program autonomously may be less likely to abandon the intervention.

Results in Panel A of Table A15 show that attrition is not significantly correlated with autonomous entry to the program, work experience, or mental health status. However, three variables do show systematic differences. First, Spanish nationality is associated with a 14 percentage point higher probability of leaving the program early compared to non-Spanish participants, significant at the 1% level. Second, educational attainment is negatively correlated with attrition: each additional year of education reduces the likelihood of non-completion by about 1 percentage point, significant at the 10% level. Third, for every additional month spent in unemployment since the end of the last job, the probability of attrition during the intervention increases by 0.3 percentage points.

Finally, we explore whether the relationship between attrition during the intervention and these sociodemographic characteristics varies by treatment status. Results in Panel B of Table A15, which replicate Equation (4) using each demographic variable or the indicator for autonomous entry as X_i , show no significant differences in attri-

¹⁶ Additional sociodemographic characteristics beyond the stratification variables are collected in the baseline survey and are therefore not available for individuals who dropped out immediately after randomization, before the intervention started. As a result, we cannot examine whether early dropout following randomization varied across this broader set of sociodemographic characteristics.

tion between treatment and control groups for any of these baseline characteristics. Nonetheless, the differences reported in Panel A of Table A15 support the inclusion of these variables as controls in the main regressions used to evaluate the intervention.

3.4 Outcome indicators

In this subsection, we describe the indicators used to evaluate the impact of the intervention. They cover each of the five dimensions in which the program is expected to generate effects: labor market integration, housing situation, economic situation, employability, and quality of life. These indicators are constructed using data from the three surveys conducted during the intervention (baseline, endline, and follow-up—six months after the intervention), which include both objective and subjective measures, as well as from administrative records. Table A17 describes in detail their definition and sources.

Housing situation. We use four indicators from the endline and follow-up surveys to assess participants' housing conditions. First, we rely on two objective measures: the *ETHOS scale*, which ranges from 1 to 13 (with values 1 and 2 indicating rooflessness and values 11 to 13 indicating inadequate housing),¹⁷ and *residential stability*, defined as the number of weeks spent in decent housing over the previous six months. Second, we include two subjective indicators: *satisfaction with accommodation* (rated on a 1 to 5 scale, from not at all satisfied to very satisfied), and *residential security*, based on six questions capturing self-perceived safety about the place of residence.

Labor market integration. We use both survey and administrative data to assess labor market integration. From the endline and follow-up surveys, we construct four indicators: a *dummy for employment status* (binary indicator for whether the respondent is employed at the time of the survey), *number of days worked* in the past six months, a composite *index of employment quality* (scored 1 to 10 based on job status and search, contract type, and working hours), and *satisfaction with the job situation* (1 to 5 scale, from not at all satisfied to very satisfied).

Regarding administrative data, we merge our sample with the data provided by the Social Security labor register of working lives, an individual-level administrative dataset based on Spanish Social Security records that contains detailed information on labor market spells. Using this data, we create two dummies for *employment status*: the first takes value one if the individual is employed at a specific date (which can be the start of the intervention, or the end of the intervention), and the second takes value one if the individual was employed at some point during the previous six months.

¹⁷ The complete scale is described in Table A2. Individuals not experiencing homelessness are assigned a value of 14.

Moreover, we compute the *number of days worked* over the previous six months, and a *work intensity index*, ranging from 0 to 1, based on the share of days employed in this six-month reference period. Finally, we also compute the corresponding *number of full-time equivalent days worked*.

Economic situation. We use three indicators from the endline and follow-up surveys. Two objective measures capture *total monthly income* (including labor income, public benefits, and other sources) and *gross employment income* (set to zero for unemployed individuals). A third, subjective indicator records *satisfaction with the individual's economic situation* on a 1 to 5 scale.

Employability. This dimension is assessed using two objective indicators from the endline survey: the *number of job applications* submitted and the *number of selection processes* that the participant engaged in during the job search period. Additionally, in the medium term, since data on job applications and selection processes are unavailable, we rely on two alternative measures of employability: one based on caseworker evaluations and another self-reported by participants.

Quality of life. We construct a synthetic index of *quality of life* using responses to several questions from the endline and follow-up surveys. Specifically, we combine six questions from the third questionnaire (which covers overall well-being) and ten questions from the fourth questionnaire (the Rosenberg self-esteem scale). This index of subjective well-being is built using Anderson 2008's methodology and then standardized to have mean equal to zero and standard deviation equal to one. Lower values indicate low levels of perceived well-being; higher values indicate better quality of life.

4 Estimation Strategy

To estimate the causal effect of the intervention, we compare outcomes between individuals randomly assigned to the treatment and control groups. While randomization ensures comparability in expectation, we account for the observed imbalances described in Subsection 3.2. To do so, we include the value of the dependent variable before the intervention in all regressions. In addition, we estimate specifications that include other baseline characteristics—such as gender, nationality, and educational attainment—as additional controls to account for the baseline imbalances observed in Subsection 3.2 and the differences in attrition described in Subsection 3.3. By doing so, we adjust for potential bias due to chance imbalances and improve the precision of our estimates.

Short-term analysis. To estimate short-term results, our estimating equation is as

follows:

$$Y_{i,t=1} = \alpha + \beta T_i + \gamma Y_{i,t=0} + \delta X_{i,t=0} + \varepsilon_{i,t} \quad (5)$$

where $Y_{i,t=1}$ denotes the outcome of interest for individual i immediately after the intervention ($t = 1$), and T_i is an indicator for treatment assignment. When available, we include the value of the dependent variable before the intervention ($Y_{i,t=0}$).¹⁸ Additionally, for every outcome, we also estimate a version of the regression including $X_{i,t=0}$, a vector of baseline characteristics that includes gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems.¹⁹ Standard errors are clustered at the level of the randomization strata—defined by gender, age group (under 35 years, between 35 and 49 years, 50 years and over), residential status (1 to 2, and 3 to 7, based on ETHOS scale), and location (six cities).²⁰

Medium-term analysis. To estimate medium-term results, we use two alternative specifications. First, to assess the differential impact of the intervention between treatment and control groups in the medium term, we estimate a cross-sectional model analogous to the one used for short-term outcomes:

$$Y_{i,t=2} = \alpha + \beta T_i + \gamma Y_{i,t=0} + \delta X_{i,t=0} + \varepsilon_{i,t} \quad (6)$$

where $Y_{i,t=2}$ denotes the outcome of interest for individual i six months after the intervention ($t = 2$). T_i , $Y_{i,t=0}$, and $X_{i,t=0}$ are defined as in equation (5). This specification estimates the static difference in outcomes between treatment and control groups in the medium term.

In addition, we go beyond cross-sectional estimates and evaluate the evolution of both groups over time. This is relevant for two reasons. First, as discussed in Subsection 2.2, the control group is not a “pure control”, but instead received support through the traditional employment model. Therefore, the coefficient $\hat{\beta}$ in Equations (5) and (6) does not capture the total effect of the personalized model, but its differential effect relative to the traditional one. Second, attrition in the medium term is more likely among individuals who received fewer benefits from the intervention.²¹ These

¹⁸ Table A19 reports equivalent results excluding the baseline value of the dependent variable from the set of controls.

¹⁹ Because the sample is relatively small and only a subset of strata contain both treated and control observations (38 strata; see Table A5), including strata fixed effects would lead to the loss of approximately 10–20 observations across the different specifications (up to about 10% of the sample in some cases). We therefore keep our main specification without strata fixed effects and report specifications including strata fixed effects for the short-term results as a robustness check in Table A20.

²⁰ Despite sample size limitations, the number of clusters given by non-empty strata ranges between 48 and 59 in all our short-term estimates, above the threshold for reliable cluster-robust inference (Cameron, Gelbach, and Miller 2008).

²¹ As described in Subsection 3.3, attrition rates are higher in the control group, although the

factors may bias the cross-sectional estimates comparing both groups in the medium term, by overestimating the performance of the control group.

To address this, we go further and analyze trajectories of both treatment and control groups over time. This allows us to examine the underlying dynamics and better understand how outcomes evolve for participants in each of the groups. For that purpose, we use a simple difference-in-differences specification:

$$Y_{i,t} = \alpha T_i + \lambda_t + \beta_1 (T_i \times \mathbf{1}\{t = 1\}) + \beta_2 (T_i \times \mathbf{1}\{t = 2\}) + \varepsilon_{i,t} \quad (7)$$

where $Y_{i,t}$ denotes the outcome of interest for individual i at time t (which is defined as in Equations (5) and (6)). T_i is an indicator for treatment status, and λ_t are a set of three time fixed effects (at the start, immediately after, and six-months after the intervention). Standard errors are again clustered at the level of randomization strata.

5 Results

5.1 Short-term Results

This section presents the short-term effects of the personalized employment intervention, measured immediately after its completion, across the five dimensions of interest. Results are obtained using Equation (5), controlling for the pre-intervention value of the outcome variable (when available), both with and without additional baseline covariates. In the Appendix, we report estimates from two alternative versions of Equation (5): Table A19 presents estimates from a specification that excludes the baseline value of the dependent variable, and Table A20 reports results from an augmented specification that includes strata fixed effects. We comment on the results below, after presenting our main estimates.

Before turning to the five dimensions of interest, it is worth noting the stark contrast in successful exits²² achieved within the maximum implementation period. While 38 participants successfully completed the personalized model (25% of the treatment group), only 13 did so under the traditional model (8% of the control group)—a rate more than three times higher in the treatment group. This difference alone already suggests a remarkable improvement of the personalized model over the traditional approach.

difference is not statistically significant.

²² As described in Subsection 2.3, a successful exit was defined as one of three cases: a) Securing employment; b) Indicating that no further support from the program was needed; c) Achieving an ETHOS scale score above 7 (which corresponds to being neither roofless nor houseless and not receiving long-term housing support).

Housing situation. Table 1 reports the short-term effects on participants' housing situation. Columns (1) and (2) present results for the ETHOS scale,²³ while columns (3) and (4) do so for residential stability (number of weeks spent in decent housing during the previous six months). Columns (5) to (8) show results for the standardized self-reported measures of satisfaction with accommodation and residential security, respectively. Standard errors clustered by randomization strata are reported in parentheses.

Table 1: Short-term effects on the housing situation

	ETHOS scale [1 to 14]		Residential Stability (Weeks)		Satisfaction with accomm. (std.)		Residential Security (std.)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	2.08 (0.48)***	2.22 (0.43)***	5.11 (1.19)***	5.48 (1.19)***	0.30 (0.12)**	0.33 (0.11)***	0.24 (0.13)*	0.34 (0.15)**
Observations	312	289	307	288	173	162	174	163
Num. of clusters	59	59	59	59	50	50	50	50
Controls	No	Yes	No	Yes	No	Yes	No	Yes
$\bar{Y}_{t=0}$	2.84	2.75	3.02	3.13	-0.39	-0.40	-0.42	-0.42

Note: This table reports results for the short-term effects of the personalized intervention on the housing situation of the participants, estimated by OLS using Equation (5). Columns (1) and (2) report results using as an outcome the ETHOS scale; Columns (3) and (4) for the number of weeks spent in decent housing in the previous six months; Columns (5) and (6) using the standardized self-reported index of satisfaction with accommodation; finally, Columns (7) and (8) for the standardized self-reported measure of residential security. Control variables include gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Results show that the personalized employment model led to substantially larger improvements in housing conditions relative to the traditional model. First, treated individuals scored more than two points higher on the ETHOS scale than the control group. While participants' average housing situation at baseline corresponded to category 2 on the ETHOS scale (roofless, with emergency accommodation such as night shelters), the estimated effect implies a shift at endline from category 6 in the control group (houseless, in institutional accommodation with no housing secured upon release) to category 8 in the treatment group (conventional but insecure housing), indicating a notable improvement in housing quality. Second, the intervention led to a sizable gain in residential stability: on average, treated individuals spent five additional weeks sleeping in decent housing over the previous six months (corresponding to a 161% increase relative to the control group mean at endline, which is about 3.4 weeks). Third, treated participants reported significantly higher satisfaction with both their accommodation (0.33 standard deviations) and their sense of residential security (0.34 standard deviations).

²³ See Table A2 for a full description of the ETHOS scale.

Point estimates from specifications excluding the lag of the dependent variable and from those including strata fixed effects, reported in Tables A19 and A20, are of similar magnitude, although results in Columns (6) to (8) are estimated less precisely and fall short of conventional significance levels in the strata fixed-effects specification. Taken together, the evidence shows that the personalized intervention led to larger improvements in housing conditions compared to the traditional model.

Labor market integration. Table 2 reports the short-term effects of the intervention on labor market outcomes using administrative records.²⁴ Columns (1) and (2) show the effect on the probability of being employed at the end of the intervention. Columns (3) to (6) report the effect on total days worked, measured both in raw days and in full-time equivalents over the previous six months. Columns (7) and (8) present the effect on work intensity, expressed in raw days as a share of the previous six-month period.

Table 2: Short-term effects on labor market integration (based on data from the Social Security labor register of working lives)

	Employed (binary)		Work activity (days)		Work activity (days FTE)		Work intensity (% days)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	0.12 (0.05)**	0.12 (0.05)**	10.80 (7.65)	14.99 (7.38)**	9.71 (6.76)	12.68 (6.57)*	0.06 (0.04)	0.08 (0.04)**
Observations	322	295	322	295	322	295	322	295
Num. of clusters	59	59	59	59	59	59	59	59
Controls	No	Yes	No	Yes	No	Yes	No	Yes
$\bar{Y}_{t=0}$	0.09	0.09	19.48	20.20	14.23	14.85	0.11	0.11

Note: This table reports results for the short-term effects of the personalized intervention on the labor market integration of the participants using administrative data, estimated by OLS using Equation (5). Columns (1) and (2) display results using as an outcome a dummy taking value one if the respondent is employed at the end of the intervention; Columns (3) and (4) report the number of days worked in the previous six months; Columns (5) and (6) use the number of full-time equivalent days worked in the previous six months; finally, Columns (7) and (8) use the same outcomes as in Columns (3) and (4), but as a share of the period. Control variables include gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

As in the case of housing, the personalized intervention seems to improve labor market integration. First, results in Columns (1) and (2) show that treated participants were 12 percentage points more likely to be employed at the end of the intervention.²⁵

²⁴ Table A18 presents analogous results based on self-reported measures.

²⁵ We also estimate results using an alternative outcome: a binary indicator equal to one if the respondent was employed at any point during the six months preceding the end of the intervention. With and without controls, the estimated coefficient is 0.07 (s.e. 0.04, $N = \{322, 295\}$), and is not statistically significant. This result is consistent with two potential explanations: (i) a possible increase in employment among treated participants concentrated in the final period of the program; and (ii) a

Second, the intervention raised work activity across all three measures: treated participants worked about 15 more days over a period of six months—an increase of about 32% relative to the control group mean at endline—with similar effects in the full-time equivalent measure (almost as large as pre-intervention levels of work activity and intensity). Third, results in Table A18, based on self-reported data, also show positive and statistically significant effects on employment status, employment quality, and job satisfaction.²⁶ Finally, results excluding the baseline value of the dependent variable (Table A19) remain largely unchanged, and point estimates using strata fixed effects (Table A20) become, if anything, larger in magnitude, with similar levels of statistical significance. These findings point to meaningful gains in participants’ integration into the labor market.

Economic situation. Table 3 presents estimates for the intervention’s effects on the economic situation. Columns (1) and (2) report the effect on total monthly income (which includes income transfers received). Columns (3) and (4) show the impact on formal employment income. Finally, Columns (5) and (6) present estimates for self-reported satisfaction with the economic situation.

Table 3: Short-term effects on the economic situation

	Total Income		Employment Income		Economic Satisfaction (std.)	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	91.08 (54.93)	86.30 (55.81)	76.15 (49.82)	101.55 (51.50)*	0.31 (0.16)*	0.35 (0.17)**
Observations	296	274	302	279	173	162
Num. of clusters	57	57	59	59	50	50
Controls	No	Yes	No	Yes	No	Yes
$\bar{Y}_{t=0}$	167.40	178.63	32.96	35.86	-0.48	-0.48

Note: This table reports results for the short-term effects of the personalized intervention on the economic situation of the participants, estimated by OLS using Equation (5). Columns (1) and (2) report results using as an outcome total monthly income (in euros); Columns (3) and (4) for the employment monthly income (in euros); Columns (5) and (6) using a standardized measure of economic satisfaction. Control variables include gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

The results point to a short-term improvement in the economic situation of treated

higher share of participants in the control group entering and exiting short-term employment spells (also consistent with the difference in baseline shares of the two variables: 9% vs. 34%).

²⁶ Notably, the self-reported employment rate recorded in the baseline survey (5%, as shown in Columns (1) and (2) of Table A18) is similar to that computed from Social Security records (9%, as shown in Columns (1) and (2) of Table 2). These measures have a correlation of 0.41 and coincide in 91.8% of observations, with remaining discrepancies likely driven by small differences in the reference date used to compute each measure. Consistent with this, the estimated effects on employment status using the self-reported measure are of a similar magnitude, at around 10 percentage points (Column (2) of Table A18).

individuals. First, they report significantly higher employment income: the estimated increase is economically meaningful at €101.55 per month in the specification with all controls, and significant at the 10% level. This corresponds to a 35% increase relative to the control group mean at endline and nearly triples participants’ pre-intervention income levels. Second, the coefficient for total income is also positive and of comparable magnitude, although not statistically significant. This likely reflects the role of non-employment income sources, such as the Minimum Income Scheme, which could narrow the total income gap between treated and control individuals. Finally, treated participants report an increase of 0.35 standard deviations in economic satisfaction relative to the control group. Results with strata fixed effects remain similar (Table A20), while excluding the baseline value of the dependent variable from the set of controls yields slightly smaller point estimates—with the estimate for employment income becoming statistically insignificant (Table A19). Overall, the evidence suggests that the intervention strengthened participants’ economic situation in the short term.

Employability. Table 4 presents the short-term effects of the intervention on two indicators of job search activity. Columns (1) and (2) show the number of job offers the participant applied to. Columns (3) and (4) report the number of selection processes the participant entered.

Table 4: Short-term effects on employability

	Job Applications		Selection Processes	
	(1)	(2)	(3)	(4)
Treatment	7.45 (1.53) ^{***}	7.06 (1.72) ^{***}	2.10 (0.45) ^{***}	1.94 (0.43) ^{***}
Observations	322	295	322	295
Num. of clusters	59	59	59	59
Controls	No	Yes	No	Yes
$\bar{Y}_{t=0}$	n.a	n.a	n.a	n.a

Note: This table reports results for the short-term effects of the personalized intervention on the employability of the participants, estimated by OLS using Equation (5). Columns (1) and (2) report results for the number of job applications submitted by the participant; Columns (3) and (4) do so for the number of selection processes in which the individual participated in. Control variables include gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 4 shows that treated individuals applied to about seven more job offers and participated in two more selection processes than those in the control group, who applied to only 3.7 and 1.3, respectively. These differences are statistically significant at the 1% level. Overall, the results indicate that the treatment increased the intensity of job search.

Quality of Life. Table 5 reports estimates for the effect on quality of life, using a standardized, self-reported index of life satisfaction.

Table 5: Short-term effects on quality of life

	Quality of life (std.)	
	(1)	(2)
Treatment	0.29 (0.16)*	0.26 (0.17)
Observations	165	155
Num. of clusters	48	48
Controls	No	Yes
$\bar{Y}_{t=0}$	-0.18	-0.15

Note: This table reports results for the short-term effects of the personalized intervention on the quality of life of the participants, estimated by OLS using Equation (5). Results are reported using as an outcome a standardized self-reported measure of quality of life. Control variables include gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Our results suggest that, in addition to improvements across the four dimensions previously described, the personalized intervention was also associated with gains in life satisfaction. The effect is statistically significant in the regression without controls but becomes marginally insignificant in the specification with controls. The point estimate is similar in the regression that excludes the value of the dependent variable at baseline (Table A19), but becomes smaller and imprecisely estimated in the specifications with strata fixed effects (see Table A20). These differences across specifications likely reflect the limited sample size, as only about half of participants responded to this question in the endline survey. Despite these limitations, the magnitude reported in Table 5—around one-quarter of a standard deviation—points to potentially meaningful improvements in quality of life.

5.2 Medium-term Results

The results presented in the previous subsection capture only the immediate effects of the intervention and measure its differential impact compared to the traditional approach, rather than its total effect. As described in Section 4, we address these limitations by estimating medium-term effects using two approaches: a cross-sectional regression that evaluates outcomes six months after the intervention and a difference-in-differences design that traces the trajectories of treatment and control groups over time.

Cross-sectional estimates. Tables A21 to A25 in the Appendix report medium-term

cross-sectional estimates from Equation (6) for the five dimensions of interest: housing situation, labor market integration, economic situation, employability, and quality of life.²⁷ These regressions mirror the short-term estimates, comparing differential treatment effects between treatment and control groups, with the only change being the timing of the outcomes.

Results show no significant differences between treatment and control groups in the medium term. Across all five dimensions, outcomes are statistically indistinguishable between the two groups. As discussed in Section 4, this may result from two factors. First, the coefficient $\hat{\beta}$ in Equation (6) does not capture the total effect of the personalized model, but rather its differential effect relative to the traditional one. Therefore, the medium-term cross-sectional estimates may reflect either improvements in outcomes for the control group or declines in outcomes for the treatment group. Second, follow-up rates are lower among participants with weaker performance, which is more common in the traditional intervention. This may bias medium-term outcomes upward for the control group, thereby closing the gap with the treatment group. We address these issues by examining group trajectories using a difference-in-differences approach.

Difference-in-differences estimates. Figure 3 presents difference-in-differences estimates from Equation (7) for four dimensions.²⁸ Panel (a) reports results for the housing situation, measured with the ETHOS scale. Panel (b) shows estimates for labor market integration using the index of employment quality.²⁹ Panel (c) displays results for the economic situation, measured by employment income. Finally, Panel (d) reports results for quality of life, using the self-reported measure. Table A26 in the appendix reports the detailed regression estimates for the four dimensions.

The difference-in-differences estimates reveal three main findings. First, the differential effect between the treatment and control groups identified in the short-term analysis represents only about 20 to 40% of the total impact of the personalized intervention across the different dimensions. This is reflected in the substantial improvements observed from baseline to the end of the intervention for participants in the personalized model across all outcomes. Second, the positive short-term impacts of the personalized intervention persist over time: improvements in housing, labor market integration, and economic situation do not fade in the medium term, while the effect on quality of life declines but the measure remains at least as high as in the

²⁷ For labor market integration, administrative records are not available in the medium term; we therefore rely only on self-reported measures. For employability, data on job offers and selection processes are also unavailable. Instead, we use two indices of employability: one based on evaluations by caseworkers and one self-reported by participants.

²⁸ We do not include estimates for employability because outcome measures are not consistently available in both the short and medium term.

²⁹ Administrative data on labor market integration are not available in the medium term.

Figure 3: Difference-in-differences estimates in the medium-term



Note: These figures display difference-in-differences point estimates of the personalized employment intervention on the housing situation, labor market integration, economic situation and quality of life of the participants, estimated using Equation (7). Short-term outcomes are obtained from the endline survey. Medium-term outcomes are obtained from the follow-up survey, six months after the intervention. In Subfigure (a), we use as an outcome the ETHOS scale; in Subfigure (b), a standardized index of employment quality; in Subfigure (c), monthly employment income (in euros); in Subfigure (d), a standardized self-reported measure of quality of life. Table A26 in the appendix reports the detailed regression estimates for the four dimensions.

control group and at pre-intervention levels. Finally, the absence of significant differences in the medium-term cross-sectional estimates is explained by the substantial improvement of outcomes among control group participants after the first endline survey, which narrowed the gap created by the larger short-term improvement in the treatment group.

To sum up, the personalized intervention delivered faster improvement in the key outcomes than the traditional model. While those improvements seem to persist into the medium term, participants in the traditional model also improved on all dimensions over time, broadly catching up after about 6 months. These results indicate that the personalized model yields some early gains that could be important given the difficulties of retaining people experiencing homelessness in insertion programs. However, the convergence of those in the traditional model suggests a cautious approach to adopting this model, since a more comprehensive cost-benefit analysis would be required to determine whether these early gains are worth the extra cost.

5.3 Heterogeneity Analysis

This subsection explores whether the effects of the intervention vary with participants' baseline characteristics—specifically gender, age, education, nationality, recruitment channel and duration of unemployment prior to enrollment. We focus on short-term outcomes and extend Equation (5) by adding an interaction term between the treatment indicator and group indicators, as follows:

$$Y_{i,t=1} = \alpha + \beta T_i + \theta(T_i \times D_i) + \gamma Y_{i,t=0} + \varepsilon_{i,t} \quad (8)$$

where D_i denotes the relevant group indicator. T_i , $Y_{i,t=0}$, and $Y_{i,t=1}$ are defined as in Equation (5).

Figure 4 presents the results. Specifically, we estimate heterogeneous effects by gender (women vs. men), age (aged 50 or above vs. under 50), education (primary or lower vs. above primary), nationality (Spanish vs. non-Spanish and EU vs. non-EU), recruitment channel (autonomous entry vs. referral by other public or private organizations), and duration of unemployment prior to enrollment (a year or more vs. less than a year). The figure reports the standardized coefficient $\hat{\theta}^{std}$ of the interaction term for each outcome and heterogeneity dimension.^{30,31}

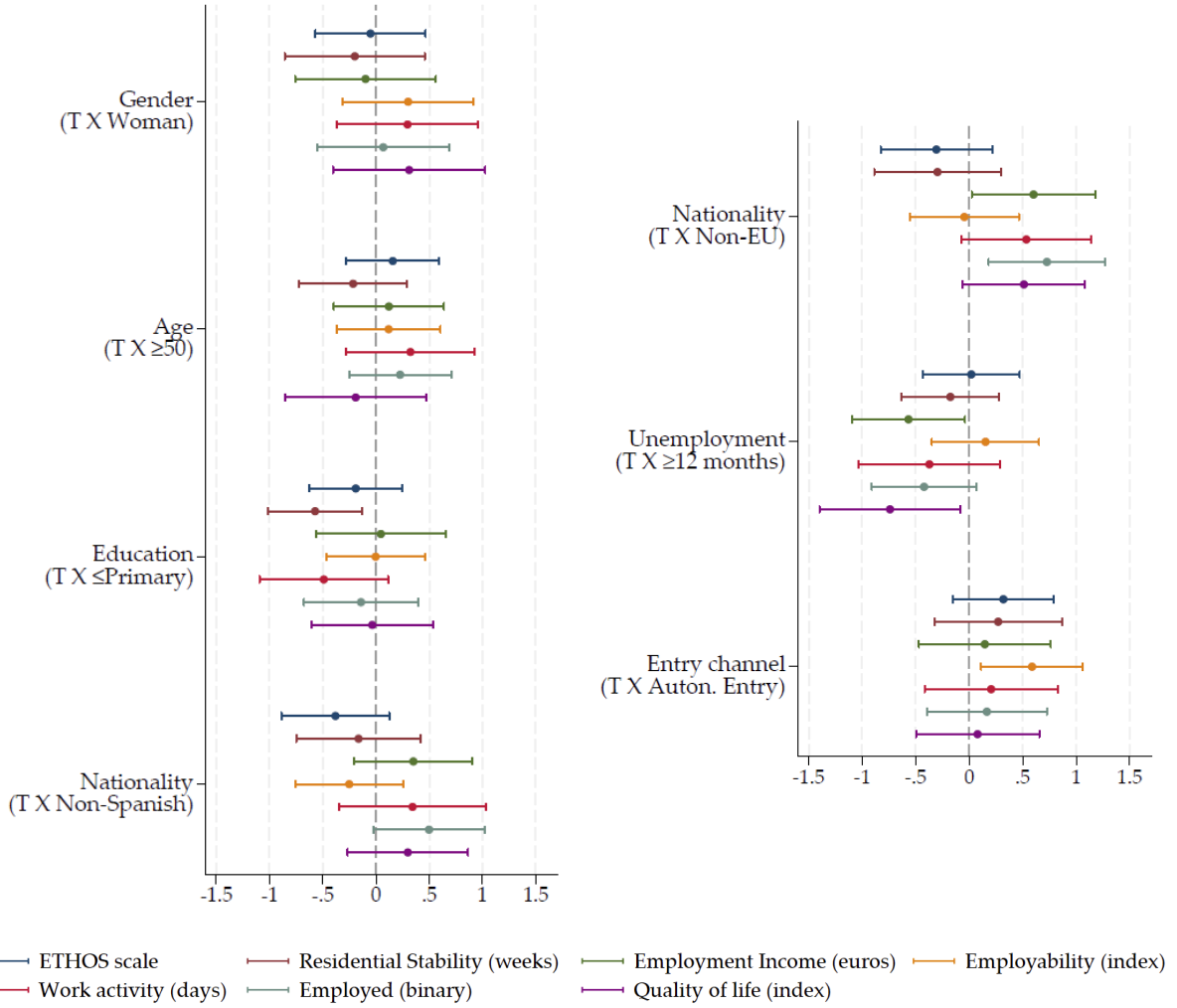
Across the seven dimensions, we find no significant heterogeneity in the short-term effects by gender or age, but the results show some heterogeneity across the other five dimensions—despite the limited sample size. First, more educated participants appear to drive the increase in the number of weeks spent in decent housing within the treatment group. However, this pattern does not extend to the ETHOS scale, which fails to provide clear evidence of differential effects in housing stability by level of education. Second, improvements in labor market outcomes, economic situation, and quality of life are mostly driven by individuals with non-EU status (with effect magnitudes larger than in the pooled estimates).³² Third, individuals with unemployment spells longer than 12 months benefit much less from the intervention across labor market, economic, and quality of life outcomes. Finally, individuals entering through autonomous recruitment experience somewhat larger gains, particularly in employability-related outcomes, though differences are less pronounced.

³⁰ Standardized coefficients are obtained by standardizing the outcomes of interest, $Y_{i,t}^{std} = (Y_{i,t} - \bar{Y}_i) / \sigma_0^Y$, where \bar{Y}_i and σ_0^Y denote the mean and standard deviation of the corresponding variable in the full sample, respectively. Standard errors are clustered by randomization strata.

³¹ Tables A27 to A32 report the corresponding full regression estimates.

³² The heterogeneity observed in the estimates comparing participants with and without Spanish nationality status seems to be driven by non-EU nationals, given the similar magnitude of the coefficients.

Figure 4: NEW - Heterogeneous short-term effects across seven individual characteristics



Note: This figure displays results for the short-term effects of the personalized intervention on the five dimensions of interest, allowing for heterogeneous effects across seven individual characteristics. We report the standardized coefficient θ^{std} , and the corresponding 95% confidence interval, from estimating Equation (8) using standardized outcomes: $Y_{i,t=1}^{std} = \alpha^{std} + \beta^{std} T_i + \theta^{std} (T_i \times D_i) + \gamma^{std} Y_{i,t=0}^{std} + \varepsilon_{i,t}$, where i denotes the individual, and t the time period. $Y_{i,t=1}^{std}$ is the standardized outcome of interest for individual i immediately after the intervention, and $Y_{i,t=0}$ at baseline. T_i is an indicator for treatment assignment, and D_i denotes the relevant group indicator for heterogeneity. All specifications control for pre-intervention levels of the outcome variable. We report results on the housing situation (*ETHOS scale* and *Residential Stability [weeks]*), the economic situation (*Employment Income [euros]*), employability (*Employability [index]*), labor market integration (*Work activity [self-reported, days]*) and *Employed [self-reported, dummy]*), and life satisfaction (*Quality of life [index]*). Results allow for heterogeneous effects across gender (women vs. men), age (aged 50 or above vs. under 50), education (primary or lower vs. above primary), nationality (Spanish vs. non-Spanish and EU vs. non-EU), recruitment channel (autonomous entry vs. referral by other public or private organizations), and duration of unemployment prior to enrollment (a year or more vs. less than a year). Standardized coefficients are obtained by standardizing the outcomes of interest, $Y_{i,t}^{std} = (Y_{i,t} - \bar{Y}_i) / \sigma_0^Y$, where \bar{Y}_i and σ_0^Y denote the mean and standard deviation of the corresponding variable in the full sample, respectively. Standard errors are clustered by randomization strata. The complete results for every specification are provided in Tables A27 to A32.

6 Conclusion

This paper has evaluated, through a randomized controlled trial, a personalized employment model against the traditional approach to supporting the labor-market integration of people experiencing homelessness. The personalized program delivers

sizable short-run gains in housing, labor-market integration, employment income, and job-search intensity relative to the traditional model. Comparing trajectories, the extra benefits of the personalized model emerge early, and those gains persist into the medium term. However, the gap narrows among control-group participants who remain engaged six months after the intervention. Given high attrition rates in insertion programs and the unstable living conditions of people experiencing homelessness, faster progress is critical: a personalized approach that helps remove barriers to exiting homelessness sooner can make a difference for many participants.

Our findings extend previous experimental evidence from high-income English-speaking countries and align with (Cohen 2024) in pointing to the potential of personalized and more intensive interventions to accelerate integration. These results suggest a potentially promising direction for practice. Governments and organizations aiming to reduce homelessness can adapt existing programs by making support more personalized and flexible, offering tailored itineraries with broader forms of assistance and lowering the ratio of participants to caseworkers. Targeted financial support can help remove barriers to work, while stronger engagement with employers can improve job opportunities. Finally, continued follow-up after placement is essential to sustain results. That said, the convergence of outcomes in the medium term raises questions about cost-effectiveness, since the personalized program is approximately twice as costly as the traditional model. Whether the short-term gains justify the additional expenditure depends on whether they generate lasting benefits beyond our follow-up window. This question requires both longer-horizon evidence and detailed cost data, so it is beyond the scope of this paper.

Further research is needed to identify which program components drive the observed differences, and our heterogeneity analysis suggests that effects vary substantially across participant profiles, pointing to the value of tailoring interventions. Larger trials with broader samples and longer follow-up would help assess the full potential and scalability of personalized employment interventions.

References

- Abdul-Razzak, Nour, John Eric Humphries, Stephen Stapleton, and Winnie van Dijk. 2025. "Labor Market Attachment and Perceived Barriers to Work among Homeless Families." *AEA Papers and Proceedings* 115:103–107. (Page 2).
- Anderson, Michael 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. (Page 19).
- Cameron, A. Colin, Jonah B. Gelbach, and Douglas L. Miller. 2008. "Bootstrap-Based Improvements for Inference with Clustered Errors." *The Review of Economics and Statistics* 90, no. 3 (August): 414–427. eprint: <https://direct.mit.edu/rest/article-pdf/90/3/414/1614600/rest.90.3.414.pdf>. (Page 20).
- Cohen, Elior. 2024. "Housing the homeless: The effect of housing assistance on recidivism to homelessness, economic, and social outcomes." *American Economic Journal: Applied Economics* 16 (2): 130–175. (Pages 2, 4, 5, 31).
- Evans, William N, James X Sullivan, and Melanie Wallskog. 2016. "The impact of homelessness prevention programs on homelessness." *Science* 353 (6300): 694–699. (Page 2).
- FEANTSA. 2022. *Seventh Overview of Housing Exclusion in Europe*. Technical report. European Federation of National Organisations Working with the Homeless. (Pages 2, 35, 38).
- INE. 2023. *Survey on Homeless People 2022*. Instituto Nacional de Estadística (INE). Accessed June 28, 2025. (Pages 2, 5, 6, 11).
- Rosenberg, Morris. 1979. *Conceiving the Self*. New York: Basic Books. (Pages 9, 51).
- Woodhall-Melnik, Julia R, and James R Dunn. 2016. "A systematic review of outcomes associated with participation in Housing First programs." *Housing Studies* 31 (3): 287–304. (Pages 2, 4).

Competing Interest Statement

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

All data, both raw and processed, for this paper are kept at the Ministerio de Inclusión, Seguridad Social y Migraciones. The data used in this paper are only available to the researchers through a virtual desktop at the Ministerio's server, after being anonymized, and they cannot be downloaded. The results can be downloaded after verification by the Ministerio. 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 Ministerio 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.

Online Appendix

For web publication only

List of Appendix Tables

A1	Description of the actions conducted in the traditional and personalized employment models	37
A2	Description of the 14 categories of the <i>European Typology of Homelessness and Housing Exclusion</i> (FEANTSA 2022)	38
A3	Participant entry into the project	39
A4	Descriptive statistics of the final sample	40
A5	Full randomization results for the final sample of participants, by strata level	41
A6	Randomization results for the final sample of participants, by age group, gender, and ETHOS scale	41
A7	Full randomization results before the intervention started (immediately after randomization), by strata level	42
A8	Randomization results before the intervention started (immediately after randomization), by age group, gender, and ETHOS scale	42
A9	Test of randomization balance	43
A9	(continues) - Test of randomization balance	44
A10	Test of balance across recruitment channels	45
A10	(continues) - Test of balance across recruitment channels	46
A11	Percentage of participants who have received financial support	47
A12	Percentage of participation in tutoring sessions and activities	47
A13	Correlation between early dropout after randomization and stratification variables	48
A14	Correlation between sample attrition during the intervention and stratification variables	49
A15	Correlation between sample attrition during the intervention and baseline characteristics	50
A16	Attrition rates by treatment status	50
A17	Description of the indicators used to evaluate the impact of the intervention.	51

A18	Short-term effects on labor market integration (based on self-reported data)	52
A19	Short-term effects of the intervention, estimated excluding the lagged dependent variable	53
A19	<i>(continues)</i> - Short-term effects of the intervention, estimated excluding the lagged dependent variable	53
A20	Short-term effects of the intervention, estimated using strata fixed effects	54
A20	<i>(continues)</i> - Short-term effects of the intervention, estimated using strata fixed effects	54
A21	Medium-term effects on the housing situation (cross-sectional estimates)	55
A22	Medium-term effects on labor market integration (based on self-reported data, cross-sectional estimates)	55
A23	Medium-term effects on the economic situation (cross-sectional estimates)	56
A24	Medium-term effects on employability (cross-sectional estimates)	56
A25	Medium-term effects on quality of life (cross-sectional estimates)	56
A26	Difference-in-differences estimates in the medium-term	57
A27	Heterogeneous effects by gender	58
A28	Heterogeneous effects by age	58
A29	Heterogeneous effects by level of education	59
A30	Heterogeneous effects by nationality	60
A31	Heterogeneous effects by the duration of unemployment prior to enrollment	61
A32	Heterogeneous effects by recruitment channel	61

List of Appendix Figures

B1	Test of randomization balance	62
B2	Balance test across recruitment channels	63

A Appendix Tables

Table A1: Description of the actions conducted in the traditional and personalized employment models

Category	Traditional employment model (Control Group)	Personalized employment model (Treatment group)
Methodological principles	Support follows a structured process with predefined activities. Focus is on pre-employment aspects and labor market demands. Participants engage in tutorials, training, and group workshops. Relationship with companies is based on the capture of offers, submission of applications, and management of non-work internships.	Training and job search are simultaneous, with participants guiding their own process. Emphasis is placed on listening and relationship-building, with special focus on cross-cutting areas impacting employment (housing, health, administrative issues) using both caseworker and financial support. It considers not only access, but also job retention and improvement. Relationships with companies are closer, aiming to match individual and employer needs, including the creation or adaptation of positions, and follow-up to improve retention.
Intervention phases	Defined itinerary with fixed phases, timing, and actions. Participants must adapt to the path.	Flexible support system based on participant interests and decisions. Individuals design their own process, and the program adapts accordingly.
Caseworker support	The support team defines a work itinerary with objectives, activities, and timing. Support centers on the execution of the itinerary and follow-up. Activities include guidance tutorials, training, and group workshops. Follow-up after job entry is occasional.	Support is adapted to participant needs and interests (type and intensity). Activities include guidance on employment and other transversal areas (housing, health, administrative issues), on-demand training, approach to companies, job search, and job retention.
Financial support	Covers public transport to participate in training and support activities and scholarships for training attendance.	Wide range of financial support, including housing, transport, food, personal appearance, on-demand training, connectivity, job equipment.
Training	Predefined group workshops and training on pre-employment, digital or socio-labor skills.	On-demand training aligned with professional goals. Tuition fees are covered.
Attention ratios	One employment caseworker per 45–55 participants; one job search advisor per 100. These ratios limit the intensity of support.	One employment caseworker per 20–25; one job search advisor per 30–40. Allows deeper engagement between caseworkers and participants.

Table A2: Description of the 14 categories of the *European Typology of Homelessness and Housing Exclusion* (FEANTSA 2022)

Operational Category	Living Situation	Generic Definition	
Roofless	1 People Living Rough	1.1 Public space or external space	Living in the streets or public spaces, without a shelter that can be defined as living quarters.
	2 People in emergency accommodation	2.1 Night shelter	People with no usual place of residence who make use of overnight shelter, low threshold shelter.
Houseless	3 People in accommodation for the homeless	3.1 Homeless hostel 3.2 Temporary accommodation 3.3 Transitional supported accommodation	Where the period of stay is intended to be short term.
	4 People in Women's Shelter	4.1 Women's shelter accommodation	Women accommodated due to experience of domestic violence and where the period of stay is intended to be short term.
	5 People in accommodation for immigrants	5.1 Temporary accommodation or reception centres 5.2 Migrant workers accommodation	Immigrants in reception or short-term accommodation due to their immigrant status.
	6 People due to be released from institutions	6.1 Penal institutions 6.2 Medical institutions 6.3 Children's institutions/homes	No housing available prior to release. Stay longer than needed due to lack of housing. No housing identified (e.g. by 18th birthday).
Insecure	7 People receiving longer-term support (due to homelessness)	7.1 Residential care for older homeless people 7.2 Supported accommodation for formerly homeless people	Long stay accommodation with care for formerly homeless people (more than one year).
	8 People living in insecure accommodation	8.1 Temporarily with family/friends 8.2 No legal (sub)tenancy 8.3 Illegal occupation of land	Living in conventional housing but not the usual place of residence due to lack of housing. Occupation of dwelling with no legal tenancy. Occupation of land with no legal rights.
	9 People living under threat of eviction	9.1 Legal orders enforced (rented) 9.2 Re-possession orders (owned)	Where orders for eviction are operative. Where mortgage has legal order to re-possess.
	10 People living under threat of violence	10.1 Police recorded incidents	Where police action is taken to ensure place of safety for victims of domestic violence.
Inadequate	11 People living in temporary/non-conventional structures	11.1 Mobile homes 11.2 Non-conventional building 11.3 Temporary structure	Not intended as place of usual residence. Makeshift shelter, shack or shanty. Semi-permanent structure hut or cabin.
	12 People living in unfit housing	12.1 Occupied dwellings unfit for habitation	Defined as unfit for habitation by national legislation or building regulations.
	13 People living in extreme over-crowding	13.1 Highest national norm of overcrowding	Defined as exceeding national density standard for floor-space or useable rooms.

Table A3: Participant entry into the project

RCT stage	Total	A Coruña	Carta- gena	Madrid	Mallor- ca	Murcia	Valencia
Potential participants	739	111	62	265	109	110	82
Do not meet the requirements	277	55	20	109	37	29	27
Drop out after randomization	118	12	6	61	14	17	8
Non-random selection into insertion program	22	2	0	13	2	2	3
Final participants	322	42	36	82	56	62	44

Table A4: Descriptive statistics of the final sample

Variable	N	Mean	Stand. dev.	Min.	Max.
Autonomous Entry Treatment	322	0.29	0.45	0	1
	322	0.48	0.50	0	1
<i>Sociodemographic variables (pre-intervention)</i>					
Age [†]	322	42.23	12.52	19	67
Woman [†]	322	0.23	0.42	0	1
Non-EU nationality	322	0.33	0.47	0	1
EU Nationality	322	0.12	0.32	0	1
Spanish Nationality	322	0.55	0.50	0	1
Work experience (months)	315	57.17	39.43	0	96
Time of unemployment (months)	295	25.42	29.32	0	96
Educational Level (years)	316	7.59	4.16	0	16
Illiterate	316	0.02	0.15	0	1
Incomplete Primary	316	0.27	0.45	0	1
Complete Primary	316	0.26	0.44	0	1
Secondary school	316	0.22	0.42	0	1
Postsecondary	316	0.15	0.36	0	1
University	316	0.08	0.27	0	1
Mental Health Issue	322	0.33	0.47	0	1
Location - A Coruña [†]	322	0.13	0.34	0	1
Location - Madrid [†]	322	0.25	0.44	0	1
Location - Mallorca [†]	322	0.17	0.38	0	1
Location - Murcia [†]	322	0.19	0.39	0	1
Location - Valencia [†]	322	0.14	0.34	0	1
Location - Cartagena [†]	322	0.11	0.32	0	1
<i>Outcome indicators (pre-intervention)</i>					
ETHOS Scale [†]	322	2.84	2.28	1	7
Residential Stability (Weeks)	310	3.02	5.86	0	22
Satisfaction with accommodation	296	2.50	1.37	1	5
Residential Security	296	0.70	0.94	-0.79	2.43
Total Income (euros)	320	167.40	254.33	0	1,100
Employment Income (euros)	321	32.96	154.91	0	1,100
Economic Satisfaction	296	1.61	0.92	1	5
Employed (start of intervention, binary) - <i>Social Sec.</i>	322	0.09	0.29	0	1
Employed (past 6 months, binary) - <i>Social Sec.</i>	322	0.34	0.47	0	1
Work activity (days, 6 months) - <i>Social Sec.</i>	322	19.47	39.51	0	184
Work activity (days FTE, 6 months) - <i>Social Sec.</i>	322	14.23	30.18	0	184
Work intensity (% days, 6 months) - <i>Social Sec.</i>	322	0.11	0.21	0	1
Work Activity (days) - <i>Self-reported</i>	315	8.81	23.77	0	170
Employed (baseline survey, binary) - <i>Self-reported</i>	317	0.05	0.23	0	1
Employment Status - <i>Self-reported</i>	303	2.07	1.04	1	10
Job Satisfaction - <i>Self-reported</i>	296	1.65	0.94	1	5
Employability (caseworker eval.)	303	2.38	0.79	-0.21	5.10
Employability (self-perceived.)	290	3.16	0.96	-0.31	5.97
Quality of life	284	3.64	1.02	0.83	6.26

Note: This table reports descriptive statistics of sociodemographic characteristics and outcome indicators before the intervention for our final sample of participants. All variables are reported in their original units, as originally recorded in the data. Variables used for stratification (which is defined by gender, age group, residential status and location) are marked with [†].

Table A5: Full randomization results for the final sample of participants, by strata level

Ethos	Group	Age Group 1 under 35 years				Age Group 2 35-49 years				Age Group 3 50 years and over				Total
		Female		Male		Female		Male		Female		Male		
		1- 2	3- 7	1- 2	3- 7	1- 2	3- 7	1- 2	3- 7	1- 2	3- 7	1- 2	3- 7	
A Coruña	CG	2	0	5	0	0	0	7	2	1	0	4	0	21
	TG	1	0	5	0	1	0	8	1	2	0	2	1	21
Cartagena	CG	2	1	4	0	2	0	2	1	1	1	3	0	17
	TG	0	0	3	0	3	0	4	1	1	0	6	1	19
Madrid	CG	2	0	5	3	2	2	6	3	3	3	9	3	41
	TG	1	0	4	6	1	6	2	4	0	3	9	5	41
Mallorca	CG	0	0	4	1	1	0	7	2	3	0	8	9	35
	TG	1	0	3	0	4	0	6	0	0	0	3	4	21
Murcia	CG	1	3	4	9	0	3	3	4	0	1	4	1	33
	TG	3	0	4	6	2	0	4	2	1	0	7	0	29
Valencia	CG	0	1	1	2	2	2	7	0	1	0	5	0	21
	TG	1	1	5	0	3	0	9	0	0	0	4	0	23
Total		14	6	47	27	21	13	65	20	13	8	64	24	322

Note: This table reports the number of participants randomized by strata level. Stratification is defined by gender, age group (under 35 years, between 35 and 49 years, 50 years and over), residential status (ETHOS scale between 1 and 2–roofless–and between 3 and 7–houseless or receiving long-term support) and location (6 cities). The sample includes the 322 participants in the final sample that participated in the intervention. TG and CG denote Treatment Group and Control Group, respectively.

Table A6: Randomization results for the final sample of participants, by age group, gender, and ETHOS scale

Age group	Gender	ETHOS	Control Group	Treatment Group	Total
< 35	Female	1-2	7 (50%)	7 (50%)	14
< 35	Female	3-7	5 (83%)	1 (17%)	6
< 35	Male	1-2	23 (49%)	24 (51%)	47
< 35	Male	3-7	15 (56%)	12 (44%)	27
35–49	Female	1-2	7 (33%)	14 (67%)	21
35–49	Female	3-7	7 (54%)	6 (46%)	13
35–49	Male	1-2	32 (49%)	33 (51%)	65
35–49	Male	3-7	12 (60%)	8 (40%)	20
≥ 50	Female	1-2	9 (69%)	4 (31%)	13
≥ 50	Female	3-7	5 (63%)	3 (38%)	8
≥ 50	Male	1-2	33 (52%)	31 (48%)	64
≥ 50	Male	3-7	13 (54%)	11 (46%)	24
Total			168 (52%)	154 (48%)	322

Note: This table reports the number of participants randomized for every combination of the three main stratification dimensions, excluding location: gender, age group (under 35 years, between 35 and 49 years, 50 years and over), and residential status (ETHOS scale between 1 and 2–roofless–and between 3 and 7–houseless or receiving long-term support). The sample includes the 322 participants in the final sample that participated in the intervention.

Table A7: Full randomization results before the intervention started (immediately after randomization), by strata level

Ethos	Group	Age Group 1 under 35 years				Age Group 2 35-49 years				Age Group 3 50 years and over				Total
		Female		Male		Female		Male		Female		Male		
		1-2	3-7	1-2	3-7	1-2	3-7	1-2	3-7	1-2	3-7	1-2	3-7	
A Coruña	CG	3	0	7	0	1	1	7	2	1	0	7	0	29
	TG	2	0	5	0	1	1	8	2	2	0	3	3	27
Cartagena	CG	2	1	4	0	3	0	2	1	1	1	3	0	18
	TG	0	1	3	2	3	0	5	1	1	0	7	1	24
Madrid	CG	4	0	10	8	4	4	9	7	4	6	15	9	80
	TG	1	1	8	9	2	8	6	7	2	10	16	5	75
Mallorca	CG	0	0	5	1	2	0	9	2	4	0	8	9	40
	TG	1	0	4	2	4	0	9	1	2	0	3	6	32
Murcia	CG	1	3	7	9	1	3	8	4	0	1	5	2	44
	TG	3	1	5	7	2	0	6	2	1	0	9	1	37
Valencia	CG	0	1	4	2	3	2	8	0	1	0	6	0	27
	TG	1	3	5	0	3	1	10	1	0	0	5	0	29
Total		18	11	67	40	29	20	87	30	19	18	87	36	462

Note: This table reports the number of participants randomized by strata level. Stratification is defined by gender, age group (under 35 years, between 35 and 49 years, 50 years and over), residential status (ETHOS scale between 1 and 2—roofless—and between 3 and 7—houseless or receiving long-term support) and location (6 cities). The sample includes the 462 individuals that were randomized, even if they did not start the program. TG and CG denote Treatment Group and Control Group, respectively.

Table A8: Randomization results before the intervention started (immediately after randomization), by age group, gender, and ETHOS scale

Age group	Gender	ETHOS	Control Group	Treatment Group	Total
< 35	Female	1-2	10 (56%)	8 (44%)	18
< 35	Female	3-7	5 (45%)	6 (55%)	11
< 35	Male	1-2	37 (55%)	30 (45%)	67
< 35	Male	3-7	20 (50%)	20 (50%)	40
35–49	Female	1-2	14 (48%)	15 (52%)	29
35–49	Female	3-7	10 (50%)	10 (50%)	20
35–49	Male	1-2	43 (49%)	44 (51%)	87
35–49	Male	3-7	16 (53%)	14 (47%)	30
≥ 50	Female	1-2	11 (58%)	8 (42%)	19
≥ 50	Female	3-7	8 (44%)	10 (56%)	18
≥ 50	Male	1-2	44 (51%)	43 (49%)	87
≥ 50	Male	3-7	20 (56%)	16 (44%)	36
Total			238 (52%)	224 (48%)	462

Note: This table reports the number of participants randomized for every combination of the three main stratification dimensions, excluding location: gender, age group (under 35 years, between 35 and 49 years, 50 years and over), and residential status (ETHOS scale between 1 and 2—roofless—and between 3 and 7—houseless or receiving long-term support). The sample includes the 462 individuals that were randomized, even if they did not start the program.

Table A9: Test of randomization balance

Variable	Control		Treatment		$\hat{\beta}_1$
	Obs.	Mean	Obs.	Mean	$\bar{x}_T - \bar{x}_C$
Autonomous entry	168	0.29	154	0.29	-0.01 (0.05)
<i>Panel A: Sociodemographic variables (pre-intervention)</i>					
Age [†]	168	42.48	154	41.96	-0.52 (1.19)
Woman [†]	168	0.24	154	0.23	-0.01 (0.05)
Non-EU Nationality	168	0.35	154	0.31	-0.04 (0.05)
EU Nationality	168	0.08	154	0.16	0.07 (0.03)**
Spanish Nationality	168	0.57	154	0.53	-0.03 (0.06)
Work experience	166	53.51	149	61.25	7.74 (6.29)
Time of unemployment	150	24.13	145	26.76	2.63 (3.19)
Educational Level	166	6.57	150	8.71	2.14 (0.47)***
Illiterate	166	0.02	150	0.03	0.01 (0.02)
Incomplete Primary	166	0.40	150	0.13	-0.28 (0.05)***
Complete Primary	166	0.25	150	0.27	0.01 (0.05)
Secondary School	166	0.15	150	0.30	0.15 (0.04)***
Postsecondary	166	0.11	150	0.19	0.07 (0.04)*
University	166	0.06	150	0.09	0.03 (0.03)
Mental Health Issue	168	0.30	154	0.35	0.05 (0.05)
Location - A Coruña [†]	168	0.13	154	0.14	0.01 (0.02)
Location - Madrid [†]	168	0.24	154	0.27	0.02 (0.04)
Location - Mallorca [†]	168	0.21	154	0.14	-0.07 (0.04)*
Location - Murcia [†]	168	0.20	154	0.19	-0.01 (0.04)
Location - Valencia [†]	168	0.13	154	0.15	0.02 (0.03)
Location - Cartagena [†]	168	0.10	154	0.12	0.02 (0.03)

Table A9: (continues) - Test of randomization balance

Variable	Control		Treatment		$\hat{\beta}_1$
	Obs.	Mean	Obs.	Mean	$\bar{X}_T - \bar{X}_C$
<i>Panel B: Outcome indicators (pre-intervention)</i>					
ETHOS Scale [†]	168	2.99	154	2.69	-0.3 (0.26)
Residential Stability	162	1.96	148	4.17	2.21 (0.7)***
Satisfaction with accomm.	157	2.42	139	2.60	0.18 (0.21)
Residential Security	157	0.65	139	0.76	0.11 (0.13)
Total Income	167	187.87	153	145.06	-42.8 (29)
Employment Income	167	34.91	154	30.84	-4.07 (17.7)
Economic Satisfaction	157	1.63	139	1.60	-0.03 (0.11)
Employed (start of intervention, binary) - <i>Social Sec.</i>	168	0.1	154	0.08	-0.02 (0.04)
Employed (past 6 months, binary) - <i>Social Sec.</i>	168	0.38	154	0.29	-0.10 (0.05)**
Work activity (days) - <i>Social Sec.</i>	168	21.7	154	17	-4.74 (4.48)
Work activity (days FTE) - <i>Social Sec.</i>	168	16	154	12.3	-3.71 (3.02)
Work intensity (% days) - <i>Social Sec.</i>	168	0.12	154	0.09	-0.03 (0.02)
Employed (baseline survey, binary) - <i>Self-reported</i>	166	0.05	151	0.05	0 (0.03)
Work Activity - <i>Self-reported</i>	165	8.42	150	9.23	0.81 (2.66)
Employment Status - <i>Self-reported</i>	160	2.03	143	2.12	0.09 (0.16)
Job Satisfaction - <i>Self-reported</i>	157	1.64	139	1.66	0.02 (0.11)
Employability (caseworker eval.)	160	2.46	143	2.30	-0.16 (0.10)*
Employability (self-perceived)	152	3.16	138	3.17	0.01 (0.14)
Quality of life	146	3.51	138	3.79	0.27 (0.15)*

Note: This table displays tests of randomization balance for stratification variables and baseline characteristics. Variables used for stratification (which is defined by gender, age group, residential status and location) are marked with [†]. Panel A reports sociodemographic characteristics, and Panel B reports outcome indicators. Column (1) lists the variables. Columns (2) and (3) display the number of observations and the mean of each variable for the control group. Columns (4) and (5) do so for the treatment group. Column (6) reports differences in means between treatment and control groups from a simple regression, using Equation (1): $X_i = \alpha_1 + \beta_1 T_i + \varepsilon_i$, where i denotes the individual, X_i is the corresponding variable and T_i is an indicator variable equal to one for individuals in the treatment group. Positive values of $\hat{\beta}_1$ indicate higher baseline levels among the treated group. Standard errors, clustered at the randomization strata (59 clusters), are reported in parentheses. \bar{X}_T and \bar{X}_C denote the mean at baseline for individuals in the treatment and control groups, respectively. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A10: Test of balance across recruitment channels

Variable	Referral		Autonomous entry		$\hat{\beta}_1$
	Obs.	Mean	Obs.	Mean	$\bar{X}_{AE} - \bar{X}_R$
<i>Panel A: Sociodemographic variables (pre-intervention)</i>					
Age [†]	229	42.2	93	42.3	0.10 (2.18)
Woman [†]	229	0.24	93	0.22	-0.03 (0.08)
Non-EU Nationality	229	0.35	93	0.29	-0.06 (0.07)
EU Nationality	229	0.13	93	0.09	-0.04 (0.03)
Spanish Nationality	229	0.52	93	0.62	0.10 (0.07)
Work experience	223	58.09	92	54.95	-3.14 (5.17)
Time of unemployment	208	24.95	87	26.53	1.58 (3.71)
Educational Level	224	7.66	92	7.41	-0.25 (0.52)
Illiterate	224	0.02	92	0.02	0 (0.02)
Incomplete Primary	224	0.27	92	0.28	0.01 (0.05)
Complete Primary	224	0.25	92	0.29	0.05 (0.05)
Secondary School	224	0.24	92	0.18	-0.05 (0.06)
Postsecondary	224	0.16	92	0.13	-0.03 (0.05)
University	224	0.07	92	0.09	0.02 (0.03)
Mental Health Issue	229	0.31	93	0.38	0.07 (0.06)
Location - A Coruña [†]	229	0.09	93	0.23	0.13 (0.07)**
Location - Madrid [†]	229	0.34	93	0.04	-0.30 (0.07)***
Location - Mallorca [†]	229	0.18	93	0.22	0.03 (0.07)
Location - Murcia [†]	229	0.21	93	0.08	-0.14 (0.06)**
Location - Valencia [†]	229	0.10	93	0.23	0.13 (0.09)
Location - Cartagena [†]	229	0.07	93	0.22	0.15 (0.07)**

Table A10: (continues) - Test of balance across recruitment channels

Variable	Referral		Aut. entry		$\hat{\beta}_1$ $\bar{X}_{AE} - \bar{X}_R$
	Obs.	Mean	Obs.	Mean	
<i>Panel B: Outcome indicators (pre-intervention)</i>					
ETHOS Scale [†]	229	3.12	93	2.17	-0.95 (0.39)**
Residential Stability	218	2.39	92	4.50	2.11 (0.68)***
Satisfaction with accomm.	209	2.66	87	2.13	-0.53 (0.19)***
Residential Security	209	0.83	87	0.40	-0.43 (0.13)***
Total Income	227	170.35	93	160.22	-10.1 (31.7)
Employment Income	228	34.87	93	28.28	-6.59 (18.4)
Economic Satisfaction	209	1.69	87	1.44	-0.25 (0.13)*
Employed (start of intervention, binary) - <i>Social Sec.</i>	229	0.08	93	0.11	0.02 (0.03)
Work activity (days) - <i>Social Sec.</i>	229	18.05	93	22.98	4.93 (4.72)
Work activity (days FTE) - <i>Social Sec.</i>	229	13.23	93	16.71	3.48 (3.72)
Work intensity (days FTE) - <i>Social Sec.</i>	229	0.07	93	0.09	0.02 (0.02)
Employed (baseline survey, binary) - <i>Self-reported</i>	224	0.05	93	0.05	0 (0.03)
Work activity - <i>Self-reported</i>	223	9.06	92	8.21	-0.85 (2.55)
Employment Status - <i>Self-reported</i>	214	2.06	89	2.10	0.05 (0.13)
Job Satisfaction - <i>Self-reported</i>	209	1.70	87	1.53	-0.17 (0.12)
Employability (caseworker eval.)	216	2.40	87	2.35	-0.05 (0.09)
Employability (self-perceived)	207	3.15	83	3.19	0.04 (0.12)
Quality of life	203	3.64	81	3.65	0.01 (0.19)

Note: This table displays tests of balance for stratification variables and baseline characteristics by entry channels; specifically, between individuals that were recruited for the intervention because they approached *Hogar Sí* directly, and those that were referred to *Hogar Sí* by other public or private organizations that support people experiencing homelessness. Variables used for stratification (which is defined by gender, age group, residential status and location) are marked with [†]. Panel A reports sociodemographic characteristics, and Panel B reports outcome indicators. Column (1) lists the variables. Columns (2) and (3) display the number of observations and the mean of each variable for individuals referred by other organizations. Columns (4) and (5) do so for the individuals that approached *Hogar Sí* autonomously. Column (6) reports differences in means between individuals with autonomous entry and those referred by other public or private organizations. Estimates are obtained using a modified version of Equation (1) with standard errors clustered at the randomization strata level (59 clusters): $X_i = \alpha + \beta C_i + \varepsilon_i$, where i denotes the individual, X_i is the corresponding variable and C_i is an indicator variable equal to 1 for individuals with autonomous entry. Positive values of $\hat{\beta}_1$ indicate higher baseline levels among individuals with autonomous entry. \bar{X}_{AE} and \bar{X}_R denote the mean at baseline for individuals with autonomous entry or referred by other organizations, respectively. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A11: Percentage of participants who have received financial support

Financial Aid	Treatment Group	Control Group
Transport	58%	20%
Training	29%	15%
Accommodation	49%	–
Feeding	54%	–
Image	38%	–
Job equipment	20%	–
Connectivity	44%	–
Other	44%	–

Note: This table displays the percentage of participants receiving financial support for different purposes in the treatment and control groups. Percentages are calculated over the final analysis sample of 322 participants, 154 in the treatment group and 168 in the control group.

Table A12: Percentage of participation in tutoring sessions and activities

Tutoring Sessions and Activities	Treatment Group	Control Group
<i>Tutoring sessions</i>		
Housing	63%	12%
Health	47%	10%
Financial situation	29%	2%
Administrative situation	76%	46%
Career guidance	96%	93%
<i>Activities</i>		
Work practices	9%	9%
Internal trainings	9%	19%
External trainings	49%	27%
Submission of job offers	82%	67%
Selection process	72%	53%

Note: This table displays the percentage of participants that benefited from different types of tutoring sessions and activities in the treatment and control groups. Percentages are calculated over the final analysis sample of 322 participants, 154 in the treatment group and 168 in the control group.

Table A13: Correlation between early dropout after randomization and stratification variables

	Independent variable												
	Gender	Age			Resident. Stabil.			Location					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Woman	Age (years)	< 35 years	35–49 years	≥ 50 years	ETHOS (cont.)	ETHOS 3–7	Coruña	Cartagena	Madrid	Mallorca	Murcia	Valencia
Panel A: Difference in early dropouts by stratification variables													
$\beta_3 (X_i)$	-0.004 (0.05)	0.0003 (0.002)	-0.01 (0.06)	-0.004 (0.06)	0.01 (0.06)	-0.01 (0.01)	0.004 (0.06)	-0.05 (0.08)	-0.12 (0.07)**	0.20 (0.03)***	-0.07 (0.06)	-0.06 (0.08)	-0.11 (0.05)**
Panel B: Difference in early dropouts by stratification variables and treatment status													
$\beta_4 (X_i)$	0.02 (0.07)	-0.002 (0.003)	0.02 (0.08)	0.01 (0.08)	-0.03 (0.08)	-0.01 (0.02)	-0.02 (0.09)	-0.02 (0.10)	-0.26 (0.06)***	0.29 (0.06)***	-0.20 (0.07)***	-0.05 (0.11)	-0.08 (0.10)
$\beta_5 (X_i \times T_i)$	-0.05 (0.09)	0.004 (0.004)	-0.05 (0.10)	-0.03 (0.09)	0.08 (0.09)	0.01 (0.02)	0.06 (0.11)	-0.05 (0.09)	0.25 (0.12)**	-0.19 (0.10)*	0.28 (0.09)***	-0.01 (0.09)	-0.05 (0.12)
Observations	462	462	462	462	462	462	462	462	462	462	462	462	462
Num. of clusters	63	63	63	63	63	63	63	63	63	63	63	63	63

Note: This table reports correlation estimates for early dropout before the intervention started (immediately after randomization) and stratification variables. In Panel A, we report the β_3 coefficient for Equation (3): $\text{Attrition}_i = \alpha_3 + \beta_3 X_i + \varepsilon_i$. This specification captures differences in early dropout across stratification variables, irrespective of treatment status. In Panel B, we report the β_4 and β_5 coefficients for Equation (4): $\text{Attrition}_i = \alpha_4 + \beta_4 X_i + \beta_5 (X_i \times T_i) + \varepsilon_i$. This specification captures differences in early dropout across baseline characteristics by treatment status. Standard errors, clustered by randomization strata, reported in parentheses.

Table A14: Correlation between sample attrition during the intervention and stratification variables

Independent variable													
	Gender		Age			Resident. Stabil.		Location					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Woman		Age (years)	< 35 years	35–49 years	≥ 50 years	ETHOS (cont.)	ETHOS 3–7	Coruña	Carta- gena	Madrid	Mallor- ca	Murcia	Valencia
Panel A: Differential attrition by stratification variables													
$\beta_3 (X_i)$	0.05 (0.08)	0.003 (0.003)	-0.09 (0.08)	0.07 (0.07)	0.01 (0.08)	-0.02 (0.01)	-0.12 (0.07)	0.24 (0.12)*	-0.07 (0.14)	-0.11 (0.07)	0.13 (0.05)**	-0.18 (0.07)***	0.09 (0.07)
Panel B: Differential attrition by stratification variables and treatment status													
$\beta_4 (X_i)$	0.02 (0.11)	0.004 (0.003)	-0.11 (0.11)	0.07 (0.10)	0.04 (0.10)	-0.03 (0.02)*	-0.16 (0.09)*	0.29 (0.18)	-0.10 (0.17)	-0.13 (0.09)	0.09 (0.08)	-0.28 (0.09)***	0.29 (0.09)***
$\beta_5 (X_i \times T_i)$	0.06 (0.14)	-0.002 (0.004)	0.04 (0.12)	0.02 (0.12)	-0.06 (0.10)	0.03 (0.02)	0.06 (0.11)	-0.10 (0.14)	0.06 (0.15)	0.04 (0.12)	0.10 (0.11)	0.21 (0.12)**	-0.37 (0.12)***
Observations	322	322	322	322	322	322	322	322	322	322	322	322	322
Num. of clusters	59	59	59	59	59	59	59	59	59	59	59	59	59

Note: This table reports correlation estimates for sample attrition during the intervention and stratification variables. In Panel A, we report the β_3 coefficient for Equation (3): $\text{Attrition}_i = \alpha_3 + \beta_3 X_i + \varepsilon_i$. This specification captures differential attrition across stratification variables, irrespective of treatment status. In Panel B, we report the β_4 and β_5 coefficients for Equation (4): $\text{Attrition}_i = \alpha_4 + \beta_4 X_i + \beta_5 (X_i \times T_i) + \varepsilon_i$. This specification captures differential attrition across baseline characteristics by treatment status. Standard errors, clustered by randomization strata, reported in parentheses.

Table A15: Correlation between sample attrition during the intervention and baseline characteristics

	Independent variable						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Auton. Entry	Spanish Nation.	EU Nation.	Educat. Level (years)	Work Exper. (months)	Time Unempl. (months)	Mental Health Issue
Panel A: Differential attrition by baseline characteristics							
$\beta_3 (X_i)$	0.07 (0.06)	0.14 (0.05)***	0.11 (0.08)	-0.01 (0.01)*	-0.00 (0.00)	0.003 (0.001)***	0.10 (0.07)
Panel B: Differential attrition by baseline characteristics and treatment status							
$\beta_4 (X_i)$	0.07 (0.08)	0.09 (0.09)	0.09 (0.10)	-0.01 (0.01)	0.00 (0.001)	0.002 (0.001)**	0.07 (0.09)
$\beta_5 (X_i \times T_i)$	-0.02 (0.10)	0.10 (0.14)	0.05 (0.14)	0.001 (0.01)	-0.001 (0.001)	0.002 (0.002)	0.06 (0.11)
Observations	322	322	322	316	315	295	322
Num. of clusters	59	59	59	59	59	59	59

Note: This table reports correlation estimates for sample attrition and baseline characteristics. In Panel A, we report the β_3 coefficient for Equation (3): $\text{Attrition}_i = \alpha_3 + \beta_3 X_i + \varepsilon_i$. This specification captures differential attrition across baseline characteristics, irrespective of treatment status. In Panel B, we report the β_4 and β_5 coefficients for Equation (4): $\text{Attrition}_i = \alpha_4 + \beta_4 X_i + \beta_5 (X_i \times T_i) + \varepsilon_i$. This specification captures differential attrition across baseline characteristics by treatment status. Standard errors, clustered by randomization strata, reported in parentheses.

Table A16: Attrition rates by treatment status

Group	Total	Treatment Completed	Final Survey
Final Analysis Sample	322*	150 (47%)	174 (54%)
Treatment Group	154	76 (49%)	91 (59%)
Control Group	168	74 (44%)	83 (49%)

Note: This table summarizes attrition rates by treatment status. It includes participants that started the intervention but left the program before it ended or did not answer the endline survey. Those exits do not include successful exits.

Table A17: Description of the indicators used to evaluate the impact of the intervention.

Indicator	Description	Availability
Housing situation		
ETHOS scale	Measure ranging from 1 to 13 (and 14 for individuals in proper housing) following the ETHOS scale (see Table A2).	Baseline, endline & follow-up surveys
Residential Stability	Number of weeks spent in decent housing over the previous six months.	Baseline, endline & follow-up surveys
Satisfaction with Accommodation	Self-reported measure of satisfaction with accommodation, from 1 to 5 (standardized in the regression estimates).	Baseline, endline & follow-up surveys
Residential Security	Self-reported measure of residential security, based on six questions (standardized in the regression estimates).	Baseline, endline & follow-up surveys
Labor market integration - Administrative data		
Employed (binary)	Dummy taking value one if the respondent is employed.	Start and end of the intervention
Employed past 6 months (binary)	Dummy taking value one if the respondent was employed at some point in the previous six months.	Start and end of the intervention
Work activity (days)	Number of days worked in the previous six months.	Start and end of the intervention
Work activity (FTE days)	Number of full-time equivalent days worked in the previous six months.	Start and end of the intervention
Work intensity (% days)	Share of days worked, in the previous six months.	Start and end of the intervention
Labor market integration - Survey data (self-reported)		
Employed (binary)	Dummy taking value one if the respondent is employed.	Baseline, endline & follow-up surveys
Work activity (days)	Number of days worked in the previous six months.	Baseline, endline & follow-up surveys
Employment quality index	Index from 1 to 10 constructed from information on job status and search, contract type, and working hours (standardized in the regression estimates).	Baseline, endline & follow-up surveys
Satisfaction with the job	Self-reported measure of satisfaction with the job situation, from 1 to 5 (standardized in the regression estimates).	Baseline, endline & follow-up surveys
Economic situation		
Total monthly income	Total monthly income, in euros.	Baseline, endline & follow-up surveys
Employment monthly income	Employment monthly income, in euros.	Baseline, endline & follow-up surveys
Satisfaction with the economic situation	Self-reported measure of quality of satisfaction with the economic situation, from 1 to 5 (standardized in the regression estimates).	Baseline, endline & follow-up surveys
Employability - objective measures		
Number of job applications	Number of job applications submitted by the participant.	Endline survey
Number of selection processes	Number of selection processes that the participant engaged in.	Endline survey
Employability - alternative measures (medium-term)		
Employability (caseworker evaluation)	Index of employability based on evaluations by caseworkers (standardized in the regression estimates).	Baseline, endline & follow-up surveys
Employability (self-reported)	Index of employability self-reported by the participant (standardized in the regression estimates).	Baseline, endline & follow-up surveys
Quality of life		
Quality of life	Self-reported measure of quality of life, combining questions from the questionnaire on overall well-being (six questions) and the questionnaire on self-esteem (Rosenberg (1979), ten questions), and then standardized in the regression estimates.	Baseline, endline & follow-up surveys

Note: baseline corresponds to pre-intervention levels; endline to short-term values, immediately after the intervention; follow-up to medium-term values, six months after the intervention.

Table A18: Short-term effects on labor market integration (based on self-reported data)

	Employed (binary)		Work activity (days)		Employment Quality (std.)		Job satisfaction (std.)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	0.08 (0.05)*	0.10 (0.05)**	0.08 (7.66)	2.38 (7.31)	0.16 (0.16)	0.30 (0.16)*	0.21 (0.14)	0.28 (0.15)*
Observations	309	287	310	289	265	248	173	162
Num. of clusters	59	59	58	58	58	58	50	50
Controls	No	Yes	No	Yes	No	Yes	No	Yes
$\bar{Y}_{t=0}$	0.05	0.06	8.81	9.44	-0.32	-0.31	-0.47	-0.47

Note: This table reports results for the short-term effects of the personalized intervention on the labor market integration of the participants using self-reported data, estimated by OLS using Equation (5). Columns (1) and (2) report results for a dummy taking value one if the respondent is employed at the time of the endline survey; Columns (3) and (4) use as an outcome the number of days worked in the previous six months; Columns (5) and (6) using a standardized index of employment quality; finally, Columns (7) and (8) for a standardized index of satisfaction with the job situation. Control variables include gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A19: Short-term effects of the intervention, estimated excluding the lagged dependent variable

	Housing Situation								Labor market integration (Social Security data)							
	ETHOS scale [1 to 14]		Residential Stability (Weeks)		Satisfaction with accomm. (std.)		Residential Security (std.)		Employed (binary)		Work activity (days)		Work activ. (days FTE)		Work intensity (% days)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Treatment	1.94 (0.52)***	2.12 (0.43)***	5.53 (1.1)***	5.96 (1.07)***	0.31 (0.13)**	0.33 (0.13)**	0.24 (0.13)*	0.33 (0.16)**	0.11 (0.06)*	0.11 (0.06)*	7.77 (8.34)	14.00 (7.64)*	7.27 (7.37)	11.56 (6.93)*	0.04 (0.05)	0.08 (0.04)*
Observations	312	289	317	292	175	164	176	165	322	295	322	295	322	295	322	295
Num. of clusters	59	59	59	59	50	50	50	50	59	59	59	59	59	59	59	59
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
$\bar{Y}_{t=0}$	2.84	2.75	3.02	3.13	-0.39	-0.40	-0.42	-0.42	0.09	0.09	19.48	20.20	14.23	14.85	0.11	0.11

Table A19: (continues) - Short-term effects of the intervention, estimated excluding the lagged dependent variable

	Labor market integration (Self-reported data)								Economic Situation						Life Satisfaction	
	Employed (binary)		Work activity (days)		Employment Status (std.)		Job satisfaction (std.)		Total Income		Employment Income		Economic Satisfaction (Std.)		Quality of life (std.)	
	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
Treatment	0.08 (0.05)	0.11 (0.06)*	0.75 (8.34)	3.87 (7.59)	0.21 (0.17)	0.35 (0.17)**	0.22 (0.15)	0.29 (0.15)*	67.69 (62.3)	61.55 (63.27)	63.1 (59.04)	88.87 (60.24)	0.30 (0.16)*	0.33 (0.17)*	0.34 (0.17)*	0.30 (0.18)*
Observations	311	288	314	290	275	256	175	164	296	274	302	279	175	164	170	160
Num. of clusters	59	59	58	58	59	59	50	50	57	57	59	59	50	50	50	50
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
$\bar{Y}_{t=0}$	0.05	0.06	8.81	9.44	-0.32	-0.31	-0.47	-0.47	167.40	178.63	32.96	35.86	-0.48	-0.48	-0.18	-0.15

Note: This table reports results for the short-term effects of the personalized intervention, estimated by OLS using a simplified version of Equation (5) that excludes from the controls the value of the dependent variable before the intervention. Specifically, $Y_{i,t=1} = \alpha + \beta T_i + \delta X_{i,t=0} + \varepsilon_{i,t}$, where i denotes the individual, and t the time period. $Y_{i,t=1}$ is the outcome of interest immediately after the intervention ($t = 1$), and T_i is an indicator for treatment assignment. For every outcome, we estimate one version of the regression excluding $X_{i,t=0}$ and one version including $X_{i,t=0}$, a vector of baseline characteristics that includes gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems. Columns (1) to (8) show results on the housing situation: Columns (1) and (2) report results using as an outcome the ETHOS scale; Columns (3) and (4) for the number of weeks spent in decent housing in the previous six months; Columns (5) and (6) using the standardized self-reported index of satisfaction with accommodation; Columns (7) and (8) for the standardized self-reported measure of residential security. Columns (9) to (16) report results on labor market integration (using Social Security data): Columns (9) and (10) display results using as an outcome a dummy taking value one if the respondent is employed at the end of the intervention; Columns (11) and (12) for the number of days worked in the previous six months; Columns (13) and (14) using the number of full-time equivalent days worked in the previous six months; finally, Columns (15) and (16) use the same outcomes as in Columns (11) and (12), but as a share of the period. Columns (17) to (24) report results on labor market integration (using self-reported data): Columns (17) and (18) for a dummy taking value one if the respondent is employed at the time of the endline survey; Columns (19) and (20) report results using as an outcome the number of days worked in the previous six months; Columns (21) and (22) using a standardized index of employment quality; finally, Columns (23) and (24) for a standardized index of satisfaction with the job situation. Columns (25) to (30) show results on the economic situation: Columns (25) and (26) report results using as an outcome total monthly income (in euros); Columns (27) and (28) for employment monthly income (in euros); Columns (29) and (30) using a standardized measure of economic satisfaction. Finally, Columns (31) and (32) show results on life satisfaction, using as an outcome a standardized self-reported measure of quality of life. Standard errors, clustered by randomization strata, are reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A20: Short-term effects of the intervention, estimated using strata fixed effects

	Housing Situation								Labor market integration (Social Security data)							
	ETHOS scale [1 to 14]		Residential Stability (Weeks)		Satisfaction with accomm. (std.)		Residential Security (std.)		Employed (binary)		Work activity (days)		Work activ. (days FTE)		Work intensity (% days)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Treatment	2.06 (0.61)***	1.84 (0.56)***	5.30 (1.30)***	5.09 (1.34)***	0.30 (0.15)**	0.25 (0.14)*	0.23 (0.14)	0.24 (0.16)	0.16 (0.05)***	0.14 (0.06)**	15.69 (7.92)*	14.92 (8.73)*	12.98 (7.16)*	12.19 (7.90)	0.09 (0.04)*	0.08 (0.05)*
Observations	299	273	295	273	158	145	159	146	310	280	310	280	310	280	310	280
Num. of clusters	46	43	47	44	35	33	35	33	47	44	47	44	47	44	47	44
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
$\bar{Y}_{t=0}$	2.77	2.67	2.83	2.97	-0.24	-0.24	-0.21	-0.21	0.09	0.10	20.22	21.27	14.78	15.64	0.11	0.12

Table A20: (continues) - Short-term effects of the intervention, estimated using strata fixed effects

	Economic Situation						Employability				Life Satisfaction	
	Total Income		Employment Income		Economic Satisfaction (std.)		Job Applications		Selection Processes		Quality of life (std.)	
	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
Treatment	84.00 (63.02)	63.31 (66.90)	107.58 (56.34)*	105.25 (63.17)	0.39 (0.20)*	0.35 (0.21)*	7.41 (1.63)***	7.09 (1.84)***	2.05 (0.48)***	1.86 (0.48)***	0.18 (0.22)	0.07 (0.23)
Observations	286	261	288	262	158	145	310	280	310	280	151	139
Num. of clusters	47	44	45	42	35	33	47	44	47	44	34	32
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
$\bar{Y}_{t=0}$	172.48	185.66	31.53	34.66	-0.35	-0.32	n.a.	n.a.	n.a.	n.a.	-0.14	-0.1

Note: This table reports results for the short-term effects of the personalized intervention, estimated by OLS using an augmented version of Equation (5) that includes strata fixed effects. Specifically, $Y_{i,t=1} = \alpha + \beta T_i + \lambda_{s\{i\}} + \gamma Y_{i,t=0} + \delta X_{i,t=0} + \varepsilon_{i,t}$, where i denotes the individual, t the time period, and $s\{i\}$ the strata. $Y_{i,t=1}$ is the outcome of interest immediately after the intervention ($t = 1$), and T_i is an indicator for treatment assignment. All specifications include strata fixed effects, with strata defined by gender, age group (under 35 years, between 35 and 49 years, 50 years and over), residential status (ETHOS scale between 1 and 2—roofless—and between 3 and 7—houseless or receiving long-term support) and location (6 cities). Except in Columns (23) to (26)—where it is not available—we include the value of the dependent variable before the intervention ($Y_{i,t=0}$). For every outcome, we estimate one version of the regression excluding $X_{i,t=0}$ and one version including $X_{i,t=0}$, a vector of baseline characteristics that includes gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems. Columns (1) to (8) show results on the housing situation: Columns (1) and (2) report results using as an outcome the ETHOS scale; Columns (3) and (4) for the number of weeks spent in decent housing in the previous six months; Columns (5) and (6) using the standardized self-reported index of satisfaction with accommodation; Columns (7) and (8) for the standardized self-reported measure of residential security. Columns (9) to (16) report results on labor market integration (using Social Security data): Columns (9) and (10) display results using as an outcome a dummy taking value one if the respondent is employed at the end of the intervention; Columns (11) and (12) for the number of days worked in the previous six months; Columns (13) and (14) using the number of full-time equivalent days worked in the previous six months; finally, Columns (15) and (16) use the same outcomes as in Columns (11) and (12), but as a share of the period. Columns (17) to (22) show results on the economic situation: Columns (17) and (18) report results using as an outcome total monthly income (in euros); Columns (19) and (20) for employment monthly income (in euros); Columns (21) and (22) using a standardized measure of economic satisfaction. Columns (23) to (26) report results on employability: Columns (23) and (24) report results for the number of job applications submitted by the participant, whereas Columns (25) and (26) do so for the number of selection processes in which the individual participated in. Finally, Columns (27) and (28) show results on life satisfaction, using as an outcome a standardized self-reported measure of quality of life. Standard errors, clustered by randomization strata, are reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A21: Medium-term effects on the housing situation (cross-sectional estimates)

	ETHOS scale [1 to 14]		Residential Stability (Weeks)		Satisfaction with Accomm. (std.)		Residential Security (std.)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	0.17 (0.54)	-0.17 (0.67)	2.59 (1.79)	2.55 (1.85)	-0.03 (0.18)	0.08 (0.19)	-0.17 (0.15)	-0.06 (0.15)
Observations	155	146	151	142	76	71	76	71
Controls	No	Yes	No	Yes	No	Yes	No	Yes
$\bar{Y}_{t=0}$	2.84	2.75	3.02	3.13	-0.39	-0.40	-0.42	-0.42

Note: This table reports results for the medium-term effects of the personalized intervention on the housing situation of the participants, estimated by OLS using Equation (6). Columns (1) and (2) report results using as an outcome the ETHOS scale; Columns (3) and (4) for the number of weeks spent in decent housing in the previous six months; Columns (5) and (6) using the standardized self-reported index of satisfaction with accommodation; finally, Columns (7) and (8) for the standardized self-reported measure of residential security. Control variables include gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A22: Medium-term effects on labor market integration (based on self-reported data, cross-sectional estimates)

	Work activity (days)		Employed at follow-up (binary)		Employment Quality (std.)		Job satisfaction (std.)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	1.55 (15.66)	-0.15 (16.97)	0.02 (0.07)	0.03 (0.08)	-0.09 (0.24)	-0.02 (0.25)	-0.06 (0.28)	-0.13 (0.31)
Observations	148	139	153	144	122	115	76	71
Controls	No	Yes	No	Yes	No	Yes	No	Yes
$\bar{Y}_{t=0}$	8.81	9.44	0.05	0.06	-0.32	-0.31	-0.47	-0.47

Note: This table reports results for the medium-term effects of the personalized intervention on the labor market integration of the participants using self-reported data, estimated by OLS using Equation (6). Columns (1) and (2) report results using as an outcome the number of days worked in the previous six months; Columns (3) and (4) for a dummy taking value one if the respondent is employed at the time of the follow-up survey; Columns (5) and (6) using a standardized index of employment quality; finally, Columns (7) and (8) for a standardized index of satisfaction with the job situation. Control variables include gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A23: Medium-term effects on the economic situation (cross-sectional estimates)

	Total Income		Employment Income		Economic Satisfaction (std.)	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	8.94 (56.74)	-20.16 (50.00)	-11.45 (78.58)	-16.60 (82.56)	0.09 (0.27)	0.07 (0.33)
Observations	318	293	152	143	76	71
Controls	No	Yes	No	Yes	No	Yes
$\bar{Y}_{t=0}$	167.40	178.63	32.96	35.86	-0.48	-0.48

Note: This table reports results for the medium-term effects of the personalized intervention on the economic situation of the participants, estimated by OLS using Equation (6). Columns (1) and (2) report results using as an outcome total monthly income (in euros); Columns (3) and (4) for the employment monthly income (in euros); Columns (5) and (6) using a standardized measure of economic satisfaction. Control variables include gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A24: Medium-term effects on employability (cross-sectional estimates)

	Employability - caseworker eval. (std.)		Employability - self-reported (std.)	
	(1)	(2)	(3)	(4)
Treatment	0.33 (0.33)	-0.09 (0.37)	0.23 (0.19)	0.00 (0.19)
Observations	50	47	74	69
Controls	No	Yes	No	Yes
$\bar{Y}_{t=0}$	-0.29	-0.27	-0.07	-0.06

Note: This table reports results for the medium-term effects of the personalized intervention on the employability of the participants, estimated by OLS using Equation (6). Columns (1) and (2) report results for a standardized measure of employability based on caseworker answers; Columns (3) and (4) do so for a standardized measure of employability reported by participants. Control variables include gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A25: Medium-term effects on quality of life (cross-sectional estimates)

	Quality of life (std.)	
	(1)	(2)
Treatment	-0.05 (0.19)	-0.01 (0.21)
Observations	72	67
Controls	No	Yes
$\bar{Y}_{t=0}$	-0.18	-0.15

Note: This table reports results for the medium-term effects of the personalized intervention on the quality of life of the participants, estimated by OLS using Equation (6). Results are reported using as an outcome a standardized self-reported measure of quality of life. Control variables include gender, nationality, years of education, prior work experience, unemployment duration, and a dummy for the presence of mental health problems. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A26: Difference-in-differences estimates in the medium-term

	(1) ETHOS scale	(2) Employment quality (std.)	(3) Employment income (euros)	(4) Quality of life (std.)
Treatment (θ)	-0.30 (0.26)	0.04 (0.06)	-4.07 (17.72)	0.27 (0.15)
Time $t=0$ (λ_0)	2.99 (0.40)***	-0.34 (0.03)***	34.91 (14.03)***	-0.31 (0.12)
Time $t=1$ (λ_1)	3.48 (0.39)***	0.44 (0.10)***	259.44 (37.56)***	0.34 (0.13)
Time $t=2$ (λ_2)	5.78 (0.57)***	0.81 (0.16)***	371.09 (62.18)***	0.33 (0.14)
$T \times t=1$ (β_1)	2.24 (0.47)***	0.18 (0.15)	67.16 (52.05)	0.07 (0.18)
$T \times t=2$ (β_2)	0.47 (0.57)	-0.21 (0.22)	-11.91 (79.78)	-0.30 (0.21)
Observations ($t = 0$)	168/154	160/143	167/154	146/138
Observations ($t = 1$)	162/150	144/131	155/147	79/91
Observations ($t = 2$)	78/77	67/62	77/75	36/37
Controls	No	No	No	No
$\bar{Y}_{t=0}$	2.84	-0.32	32.96	-0.18

Note: This table reports results for the difference-in-differences estimates of the personalized intervention on different dimensions of interest, estimated using Equation (7). Column (1) reports results for the housing situation, using as an outcome the ETHOS scale; Column (2) provides estimates for the labor market integration of participants, using the standardized index of employment quality; Column (3) reports results for the economic situation, using as an outcome the employment monthly income (in euros); finally, Column (4) provides results for the quality of life, using the standardized self-reported measure of quality of life. Standard errors, clustered by randomization strata, reported in parentheses. The number of observations is reported separately for the treatment and control groups. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A27: Heterogeneous effects by gender

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ETHOS scale	Resid. Stab.	Empl. Income	Employa- bil. (std.)	Work act. (days)	Employed (binary)	Qual. of life (std.)
Treat. \times Woman	-0.23 (1.14)	-1.62 (2.66)	-39.58 (132.71)	0.25 (0.25)	15.46 (17.28)	0.03 (0.12)	0.32 (0.36)
Treatment	2.14 (0.56)***	5.49 (1.35)***	85.06 (53.75)	-0.07 (0.12)	-3.50 (8.94)	0.08 (0.05)	0.22 (0.19)
Woman	0.84 (0.82)	0.82 (1.71)	48.22 (105.39)	-0.36 (0.19)*	-9.54 (13.04)	0.08 (0.10)	-0.34 (0.23)
Observations	312	307	302	279	310	309	165
Num. clusters	59	59	59	57	58	59	48
Controls	No	No	No	No	No	No	No
$\bar{Y}_{t=0}$	2.84	3.02	32.96	-0.29	8.81	0.05	-0.18

Note: This table reports results for the short-term effects of the personalized intervention on the five dimensions of interest, allowing for heterogeneous effects by gender. These estimates are obtained using Equation (8). Column (1) and (2) report results for the housing situation. In Column (1), we use as an outcome the ETHOS scale. In Column (2), the number of weeks spent in decent housing in the previous six months. Column (3) reports results for the economic situation, using as an outcome employment monthly income (in euros). Column (4) shows results for employability, using as an outcome a standardized measure of employability reported by the caseworkers. Columns (5) and (6) report estimates for labor market integration, using self-reported data. In Column (5), we use the number of days worked in the previous six months. In Column (6), the outcome is a dummy taking value one if the respondent reports being employed at the endline survey. Finally, Column (7) reports results for quality of life, using a standardized measure of self-reported quality of life. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A28: Heterogeneous effects by age

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ETHOS scale	Resid. Stab.	Empl. Income	Employa- bil. (std.)	Work act. (days)	Employed (binary)	Qual. of life (std.)
Treat. $\times \geq 50$	0.69 (0.96)	-1.74 (2.05)	48.50 (103.56)	0.10 (0.20)	16.85 (15.68)	0.09 (0.09)	-0.20 (0.34)
Treatment	1.85 (0.65)***	5.68 (1.58)***	58.79 (63.03)	-0.05 (0.14)	-5.86 (9.22)	0.05 (0.06)	0.36 (0.19)*
≥ 50	-0.32 (0.71)	-0.22 (1.35)	-57.67 (73.03)	-0.04 (0.17)	-21.29 (12.49)*	-0.05 (0.08)	-0.14 (0.25)
Observations	312	307	302	279	310	309	165
Num. clusters	59	59	59	57	58	59	48
Controls	No	No	No	No	No	No	No
$\bar{Y}_{t=0}$	2.84	3.02	32.96	-0.29	8.81	0.05	-0.18

Note: This table reports results for the short-term effects of the personalized intervention on the five dimensions of interest, allowing for heterogeneous effects by age (above and below 50 years old). These estimates are obtained using Equation (8). Column (1) and (2) report results for the housing situation. In Column (1), we use as an outcome the ETHOS scale. In Column (2), the number of weeks spent in decent housing in the previous six months. Column (3) reports results for the economic situation, using as an outcome employment monthly income (in euros). Column (4) shows results for employability, using as an outcome a standardized measure of employability reported by the caseworkers. Columns (5) and (6) report estimates for labor market integration, using self-reported data. In Column (5), we use the number of days worked in the previous six months. In Column (6), the outcome is a dummy taking value one if the respondent reports being employed at the endline survey. Finally, Column (7) reports results for quality of life, using a standardized measure of self-reported quality of life. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A29: Heterogeneous effects by level of education

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ETHOS scale	Resid. Stab.	Empl. Income	Employa- bil. (std.)	Work act. (days)	Employed (binary)	Qual. of life (std.)
Treat. $\times \leq$ Prim.	-0.84 (0.95)	-4.64 (1.78)**	18.30 (121.92)	-0.00 (0.19)	-25.54 (15.72)	-0.06 (0.11)	-0.04 (0.29)
Treatment	2.37 (0.74)***	7.52 (1.50)***	58.18 (75.39)	-0.08 (0.15)	12.01 (11.77)	0.10 (0.07)	0.32 (0.21)
\leq Primary	-0.39 (0.76)	1.74 (1.26)	-56.59 (84.04)	-0.27 (0.15)*	4.63 (11.94)	-0.03 (0.07)	0.08 (0.22)
Observations	309	307	300	279	310	308	165
Num. clusters	59	59	59	57	58	59	48
Controls	No	No	No	No	No	No	No
$\bar{Y}_{t=0}$	2.84	3.02	32.96	-0.29	8.81	0.05	-0.18

Note: This table reports results for the short-term effects of the personalized intervention on the five dimensions of interest, allowing for heterogeneous effects by education level (Primary or lower, and above Primary). These estimates are obtained using Equation (8). Column (1) and (2) report results for the housing situation. In Column (1), we use as an outcome the ETHOS scale. In Column (2), the number of weeks spent in decent housing in the previous six months. Column (3) reports results for the economic situation, using as an outcome employment monthly income (in euros). Column (4) shows results for employability, using as an outcome a standardized measure of employability reported by the caseworkers. Columns (5) and (6) report estimates for labor market integration, using self-reported data. In Column (5), we use the number of days worked in the previous six months. In Column (6), the outcome is a dummy taking value one if the respondent reports being employed at the endline survey. Finally, Column (7) reports results for quality of life, using a standardized measure of self-reported quality of life. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A30: Heterogeneous effects by nationality

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ETHOS scale	Resid. Stab.	Empl. Income	Employa- bil. (std.)	Work act. (days)	Employed (binary)	Qual. of life (std.)
<i>Panel A: Spanish nationality vs. non-Spanish nationality</i>							
Treat. × Non-Spa.	-1.68 (1.12)	-1.33 (2.36)	140.81 (111.43)	-0.21 (0.21)	17.88 (18.02)	0.20 (0.10)*	0.31 (0.29)
Treatment	2.84 (0.69)***	5.65 (1.73)***	10.26 (71.97)	0.08 (0.14)	-8.57 (10.10)	-0.01 (0.06)	0.14 (0.23)
Non-Spanish	1.25 (0.75)	2.01 (1.41)	-11.59 (74.82)	0.05 (0.16)	20.78 (12.48)	-0.01 (0.08)	0.07 (0.23)
Observations	312	307	302	279	310	309	165
Num. clusters	59	59	59	57	58	59	48
Controls	No	No	No	No	No	No	No
$\bar{Y}_{t=0}$	2.84	3.02	32.96	-0.29	8.81	0.05	-0.18
<i>Panel B: EU nationality vs. non-EU nationality</i>							
Treat. × Non-EU	-1.35 (1.15)	-2.41 (2.40)	240.99 (115.70)**	-0.04 (0.21)	27.82 (15.79)*	0.28 (0.11)***	0.52 (0.29)*
Treatment	2.57 (0.63)***	5.97 (1.47)***	0.78 (61.97)	-0.00 (0.13)	-7.51 (8.50)	-0.01 (0.06)	0.10 (0.19)
Non-EU	1.79 (0.76)**	3.20 (1.52)**	78.32 (78.01)	-0.01 (0.16)	28.15 (10.44)***	0.08 (0.08)	0.03 (0.22)
Observations	312	307	302	279	310	309	165
Num. clusters	59	59	59	57	58	59	48
Controls	No	No	No	No	No	No	No
$\bar{Y}_{t=0}$	2.84	3.02	32.96	-0.29	8.81	0.05	-0.18

Note: This table reports results for the short-term effects of the personalized intervention on the five dimensions of interest, allowing for heterogeneous effects by nationality. Panel A shows heterogeneous results for participants with and without Spanish nationality, whereas Panel B does so for individuals with and without EU nationality. These estimates are obtained using Equation (8). Column (1) and (2) report results for the housing situation. In Column (1), we use as an outcome the ETHOS scale. In Column (2), the number of weeks spent in decent housing in the previous six months. Column (3) reports results for the economic situation, using as an outcome employment monthly income (in euros). Column (4) shows results for employability, using as an outcome a standardized measure of employability reported by the caseworkers. Columns (5) and (6) report estimates for labor market integration, using self-reported data. In Column (5), we use the number of days worked in the previous six months. In Column (6), the outcome is a dummy taking value one if the respondent reports being employed at the endline survey. Finally, Column (7) reports results for quality of life, using a standardized measure of self-reported quality of life. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A31: Heterogeneous effects by the duration of unemployment prior to enrollment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ETHOS scale	Resid. Stab.	Empl. Income	Employa- bil. (std.)	Work act. (days)	Employed (binary)	Qual. of life (std.)
T. × Un. ≥ 12m.	0.09 (1.00)	-1.43 (1.85)	-227.60 (106.07)**	0.12 (0.20)	-19.41 (17.15)	-0.17 (0.10)*	-0.76 (0.34)**
Treatment	2.46 (0.67)***	6.54 (1.65)***	221.01 (76.89)***	-0.08 (0.16)	14.88 (13.93)	0.18 (0.07)**	0.62 (0.21)***
Unemp. ≥ 12m.	-1.20 (0.70)*	-1.99 (1.17)*	-91.80 (67.10)	-0.03 (0.15)	-24.56 (9.85)**	-0.09 (0.06)	0.33 (0.24)
Observations	289	288	279	259	289	287	155
Num clusters	59	59	59	57	58	59	48
Controls	No	No	No	No	No	No	No
$\bar{Y}_{t=0}$	2.84	3.02	32.96	-0.29	8.81	0.05	-0.18

Note: This table reports results for the short-term effects of the personalized intervention on the five dimensions of interest, allowing for heterogeneous effects by the duration of unemployment prior to enrollment (less than a year vs. a year or more). These estimates are obtained using Equation (8). Column (1) and (2) report results for the housing situation. In Column (1), we use as an outcome the ETHOS scale. In Column (2), the number of weeks spent in decent housing in the previous six months. Column (3) reports results for the economic situation, using as an outcome employment monthly income (in euros). Column (4) shows results for employability, using as an outcome a standardized measure of employability reported by the caseworkers. Columns (5) and (6) report estimates for labor market integration, using self-reported data. In Column (5), we use the number of days worked in the previous six months. In Column (6), the outcome is a dummy taking value one if the respondent reports being employed at the endline survey. Finally, Column (7) reports results for quality of life, using a standardized measure of self-reported quality of life. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

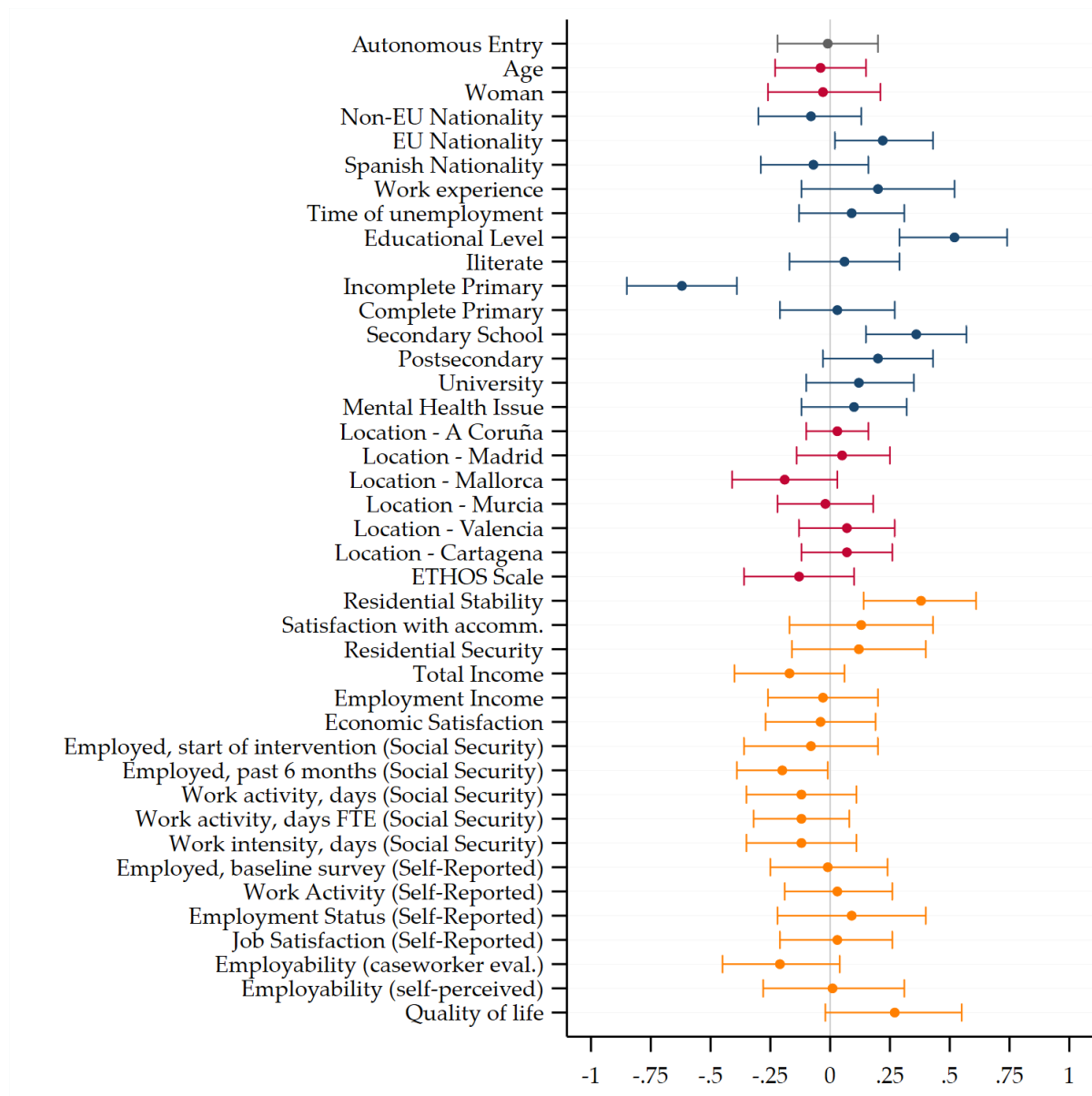
Table A32: Heterogeneous effects by recruitment channel

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ETHOS scale	Resid. Stab.	Empl. Income	Employa- bil. (std.)	Work act. (days)	Employed (binary)	Qual. of life (std.)
Treat. × Auton.	1.40 (1.04)	2.19 (2.41)	58.59 (123.53)	0.48 (0.19)**	10.68 (16.19)	0.06 (0.11)	0.08 (0.29)
Treatment	1.67 (0.57)***	4.56 (1.24)***	58.66 (61.71)	-0.15 (0.11)	-3.00 (10.32)	0.06 (0.06)	0.26 (0.19)
Auton. Entry	-0.35 (0.76)	0.58 (1.48)	-85.58 (89.24)	-0.33 (0.15)**	-12.76 (10.51)	-0.12 (0.07)*	0.04 (0.22)
Observations	312	307	302	279	310	309	165
Num. clusters	59	59	59	57	58	59	48
Controls	No	No	No	No	No	No	No
$\bar{Y}_{t=0}$	2.84	3.02	32.96	-0.29	8.81	0.05	-0.18

Note: This table reports results for the short-term effects of the personalized intervention on the five dimensions of interest, allowing for heterogeneous effects by recruitment channel (autonomous entry vs. referral by a public or private support organization). These estimates are obtained using Equation (8). Column (1) and (2) report results for the housing situation. In Column (1), we use as an outcome the ETHOS scale. In Column (2), the number of weeks spent in decent housing in the previous six months. Column (3) reports results for the economic situation, using as an outcome employment monthly income (in euros). Column (4) shows results for employability, using as an outcome a standardized measure of employability reported by the caseworkers. Columns (5) and (6) report estimates for labor market integration, using self-reported data. In Column (5), we use the number of days worked in the previous six months. In Column (6), the outcome is a dummy taking value one if the respondent reports being employed at the endline survey. Finally, Column (7) reports results for quality of life, using a standardized measure of self-reported quality of life. All specifications control for pre-intervention levels of the outcome variable. Standard errors, clustered by randomization strata, reported in parentheses. Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

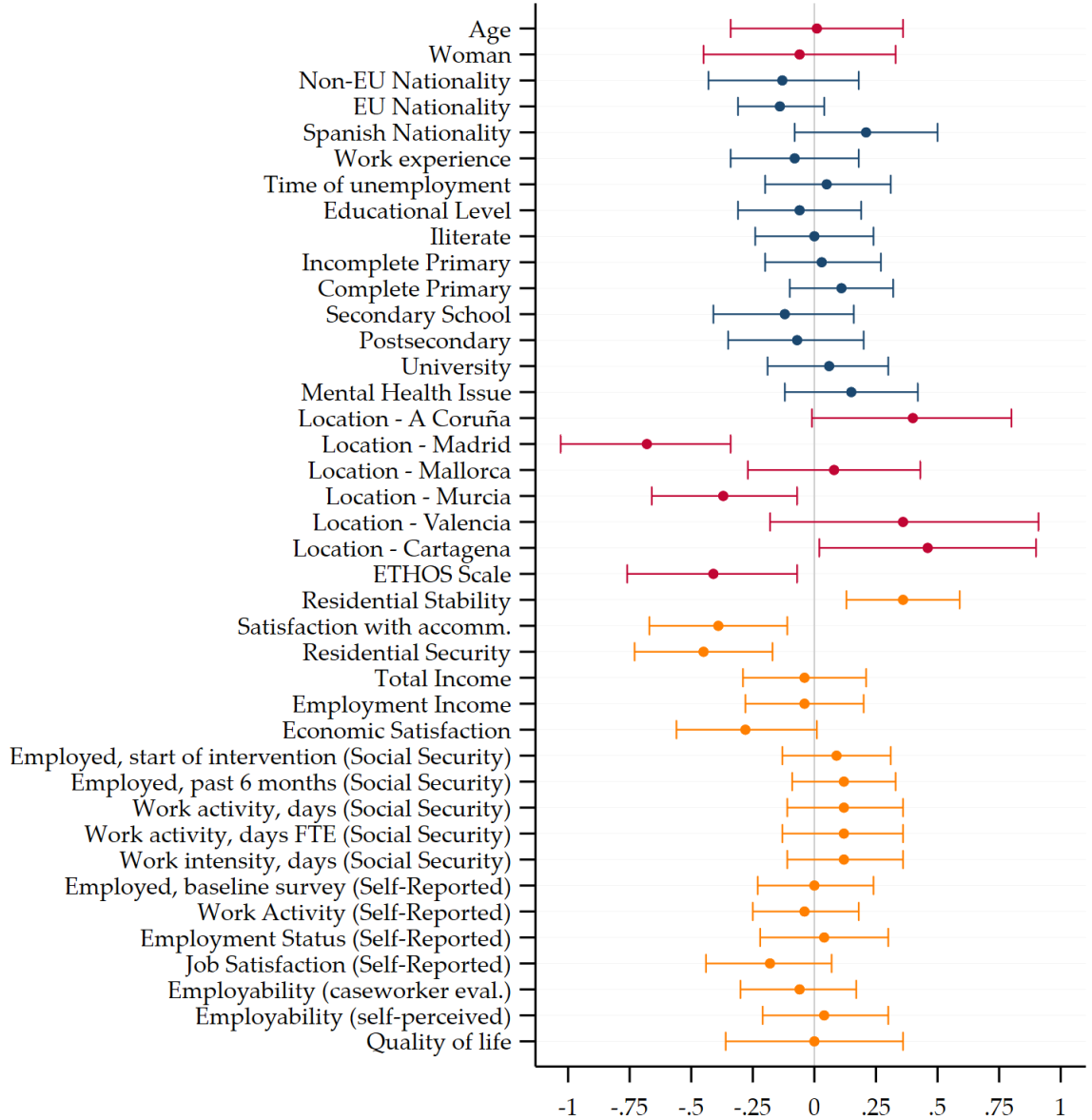
B Appendix Figures

Figure B1: Test of randomization balance



Note: This figure reports tests of randomization balance for stratification variables and baseline characteristics by treatment status. For each variable, we report standardized differences in means between treatment and control groups and the corresponding 95% confidence interval from a simple regression, using Equation (1) with standard errors clustered at the randomization strata level: $X_i = \alpha + \beta T_i + \varepsilon_i$, where X_i is the corresponding variable. Standardized differences in means are constructed as $\hat{\beta}^{std} = \hat{\beta} / \sigma_0^x$, where $\hat{\beta}$ denotes the treatment-control difference in means and σ_0^x the baseline standard deviation of the corresponding variable, and the 95% confidence intervals are computed as $\hat{\beta}^{std} \pm 1.96 \times \widehat{SE}(\hat{\beta}) / \sigma_0^x$. Positive values indicate higher values among treated individuals.

Figure B2: Balance test across recruitment channels



Note: This figure reports tests of balance for stratification variables and baseline characteristics by entry channels; specifically, between individuals that were recruited for the intervention because they approached *Hogar Sí* directly, and those that were recruited through public or private organizations that support people experiencing homelessness. For each variable, we report standardized differences in means and the corresponding 95% confidence interval from a simple regression, using a modified version of Equation (1) with standard errors clustered at the randomization strata level: $X_i = \alpha + \beta C_i + \varepsilon_i$, where C_i is an indicator variable equal to 1 for individuals with autonomous entry (those that approached *Hogar Sí* directly). Standardized differences in means are constructed as $\hat{\beta}^{std} = \hat{\beta} / \sigma_0^x$, where $\hat{\beta}$ denotes the autonomous-referred entry difference in means and σ_0^x the baseline standard deviation of the corresponding variable, and the 95% confidence intervals are computed as $\hat{\beta}^{std} \pm 1.96 \times \widehat{SE}(\hat{\beta}) / \sigma_0^x$. Positive values indicate higher values among individuals with autonomous entry.