

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

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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 substantial gains for the treatment group in housing stability, employment, income, and life satisfaction. 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.

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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. 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. 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, 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 yields substantial short-term improvements across several dimensions. In terms of housing, treated participants improved their ETHOS score by 2 points, moving on average from temporary or insecure living arrangements toward more stable forms of accommodation.¹ They also spent 5 more weeks in decent housing (compared to a baseline value of 3.13) 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 effects. Treated participants worked an average of 15 additional days over a six-month period compared to the control group (a 77% increase), and their employment income rose by about €101 per month (almost triple the amount in the control group). They also reported higher job search intensity, indicating stronger engagement with the labor market, as well as higher levels of life satisfaction. Taken together, these results point to the effectiveness of personalized employment interventions in generating both material and subjective improvements, highlighting their potential to accelerate the path toward economic independence and social inclusion for people experiencing homelessness.

We examine medium-term effects exploiting a second endline survey done six months after the end of the intervention. After this period, some of the differences between the personalized (treatment) and traditional (control) groups largely disappeared. This convergence reflects, first, that many participants in the traditional model eventually received additional forms of support that incorporated elements of the personalized program, effectively narrowing the treatment–control gap. Second, attrition patterns were more pronounced among lower-performing participants in the control group, possibly biasing upward their medium-term outcomes. Taken together, these dynamics suggest that while the personalized model produces faster and more pronounced gains, the traditional approach can deliver similar results over a longer horizon, provided that participants remain engaged. This finding underscores the importance of program design in retaining vulnerable individuals and accelerating their integration.

We contribute to the literature on the impact of social programs to address homeless-

¹The ETHOS score goes from 1 (living in the rough) to 13 (living in an over-crowded house). More details in Section 2.3 and Table A2.

ness. While there is an extensive literature in specialized journals (Woodhall-Melnik and Dunn 2016, see), a large majority of these studies use non-experimental methods that cannot always fully correct for endogenous selection into treatment. Moreover, many of these studies focus on a few high-income English-speaking countries (USA, 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.

In line with a recent study by Cohen (2024), we place emphasis on studying the medium-term effects of the intervention. This yields an important insight: the personalized model is faster than the traditional one at improving outcomes. Over time, however, the benefits of the personalized intervention are maintained, but those in the traditional treatment catch up and reach similar levels across the main outcome measures.

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

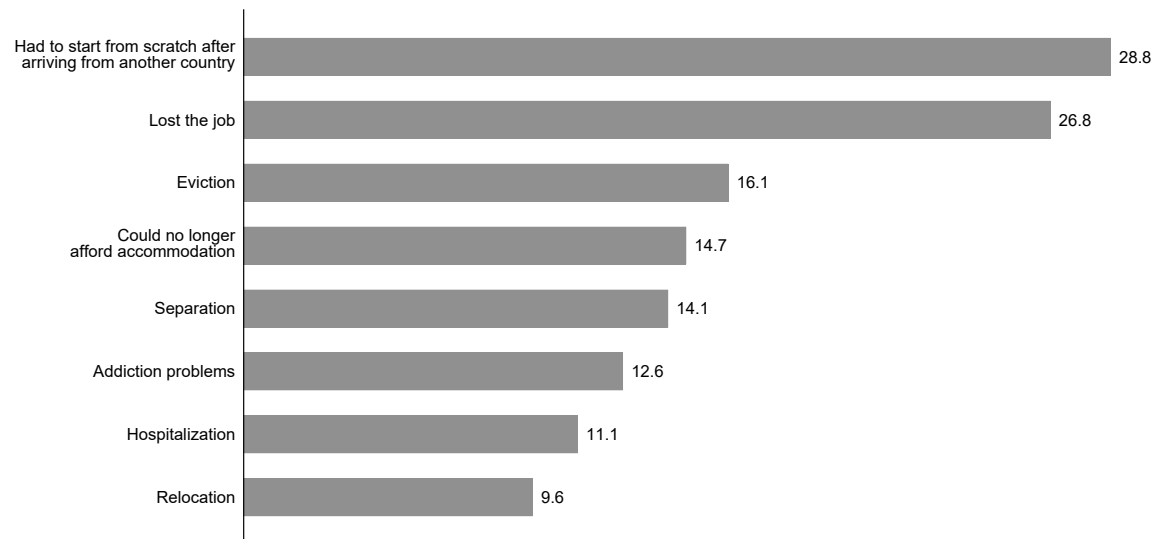
The European Federation of National Organizations Working with the Homeless (FEANTSA) defines homelessness as the inability to access or maintain adequate and stable housing due to economic hardship, social exclusion, or personal difficulties. While measuring the incidence of homelessness is challenging 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).² 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 to 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

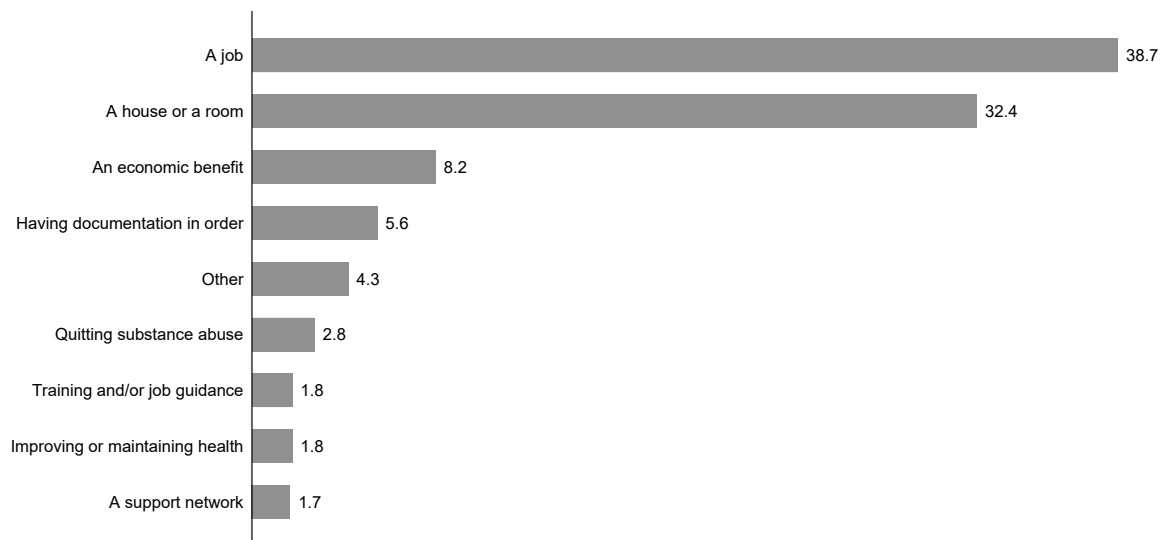
² This figure likely underestimates the total number of people experiencing homelessness in Spain, as it only includes individuals using care system centers. Based on *HOGAR SÍ* estimates, the actual number could be around 30% higher.

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.

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



(a) Main reasons for entering homelessness



(b) Main factors identified to exit homelessness

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

2.2 A Personalized Employment Intervention

The evidence in Section 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 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 an *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, with lower attention ratios and broader assistance addressing employment and related needs such as housing, health, or administrative issues. Third, financial support is broader, covering 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 does not only provide support to 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. It 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 are collected both during and after the intervention, including two endline surveys.

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 three main channels: public or private organizations that support people experiencing homelessness, and individuals who approached *HOGAR SÍ* directly and were then offered participation.

To participate in the intervention, individuals had to meet a set of eligibility criteria: they must be adults that had experienced homelessness³ during the last nine months, had no regular income and 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, as described in more detail in Subsection 3.2. This process was sequential, as the recruitment period lasted several months. 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.

³Defined as sleeping in public spaces or shelters and spending the rest of the day in public areas.

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 (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 assesses general self-worth.

In parallel, the caseworker responsible for implementation also completed a professional assessment employability 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.

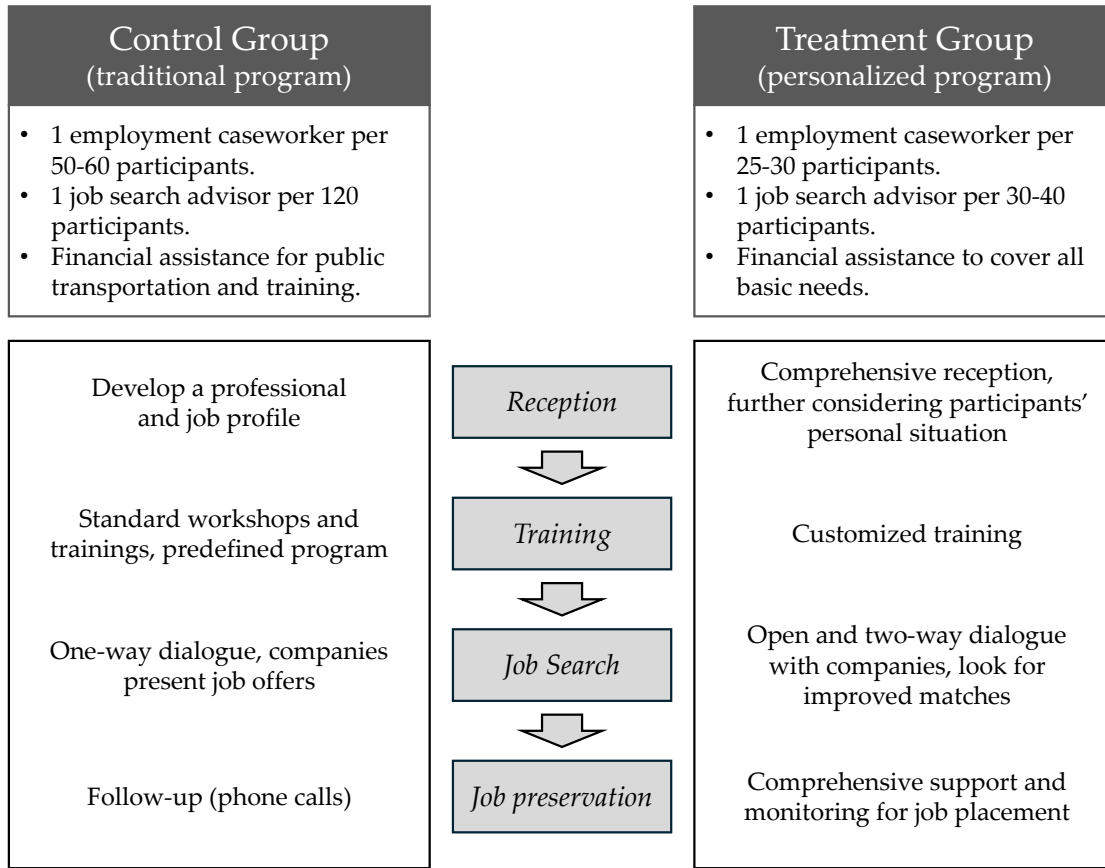
Intervention. Each participant's intervention began immediately upon entry and continued until the earliest of three conditions: reaching the maximum period of 18 months, the implementation deadline (September 30, 2023), or a successful exit from the program. A successful exit is defined as securing employment, expressing no further need for the program or no longer requiring assistance, or 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 endline surveys were conducted: the first, the endline survey, immediately after the intervention to assess short-term outcomes, and the second, the follow-up survey, six months later to capture medium-term effects.⁴ The four types of questionnaires used in the baseline survey were answered again in each of these two

⁴Additional 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 whenever the participant was still reachable.

Figure 2: Phases of the intervention



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 administrative register of the Social Security working lives, to obtain objective measures of labor market integration for the participants. All indicators used are detailed in Subsection 3.4.

3 Data and Randomization

3.1 Final analysis sample

We work with a final sample of 322 individuals experiencing homelessness who live in the cities of A Coruña, Cartagena, Madrid, Murcia, Palma de Mallorca and Valencia. This sample is 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 entry requirements (they had an ETHOS score

> 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.⁵ 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 sociodemographic characteristics and outcome indicators of the different dimensions tested in the evaluation.

Sociodemographic Characteristics. Participants are, on average, about 42 years old, and 77% are men. Two-thirds have EU nationality, of whom 55% are Spanish, while one-third hold non-EU nationality. One third reports to experience 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, and 44% non-EU nationals.

Regarding education, participants have an average of 7.6 years of formal schooling. Around 2% are illiterate, 27% did not complete primary education, and only 8% completed university studies. In terms of labor market activity, individuals report an average of 57 months of work experience and 25 months of unemployment. Finally, the geographic distribution of participants across the six cities was 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).⁶ On average, they spent just 3 weeks in decent housing over the prior six months. Average total monthly income is 167.40 euros, of which only 32.96 euros come from employment, and just 5% of participants are employed. Details on subjective measures are available in Table A4.

⁵These 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.

⁶Among these, 69.6% of the sample lived roofless, 10.9% houseless, and 19.6% in insecure conditions.

3.2 Randomization and Balance Checks

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, over 49 years), 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 section, 118 were randomized but did not complete the process, so they are not included in our final sample. Table A5 displays the results of the random allocation for the final sample of 322 individuals that we use in our analysis, by stratification variables.⁷

Appendix Figure B1 reports tests of balance for stratification variables and baseline characteristics. For each variable, we report standardized mean differences between treatment and control group, and the corresponding 95% confidence interval, from a simple regression

$$X_i = \alpha + \beta T_i + \varepsilon_i \quad (1)$$

Overall, results show that the treatment and control groups are statistically similar across most observed variables. First, the variables used for stratification are well balanced between groups, confirming the validity of the randomization. Second, only 4 out of 13 sociodemographic baseline characteristics—Spanish nationality, years of education, and the shares of participants who have not completed or have completed primary school—show statistically significant differences. Finally, among the 13 outcomes used to evaluate the intervention, only 3—residential stability (in weeks), total revenue, and employability (assessed by professionals)—differ significantly across groups at baseline.

While these differences point to some imbalances, this is not unexpected in relatively small samples, where randomization cannot ensure perfect comparability across all variables. To address these concerns, we control 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.

⁷Table A6 shows equivalent results over the initial sample of 462 individuals that were randomized.

3.3 Degree of participation and attrition

In this section, we show that the results we estimate are a lower bound of the actual impact of the intervention activities, as participation in the intervention activities was voluntary. Moreover, we find that attrition is unrelated to treatment status, but varies with observable baseline characteristics like nationality and education level, highlighting the need to control for baseline characteristics in our analysis.

Program participation. 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 A7 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 A8 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.

Attrition. The comparability of the treatment and control groups after the intervention would be reduced if the likelihood of completing the endline survey varies by treatment assignment. To test whether attrition differs significantly between groups, we regress a binary indicator for non-completion on treatment assignment, using the following specification

$$\text{Attrition}_i = \alpha + \beta^{\text{Attrition}} T_i + \varepsilon_i \quad (2)$$

Column 1 in Table A9 shows the results: the estimated coefficient is -0.05 and is

not statistically significant, indicating that, though attrition is higher in the control group, is not systematically related to treatment status.⁸

Because program attrition may also vary with individual characteristics—particularly in vulnerable populations facing unstable conditions—we examine whether baseline characteristics predict early dropout. In Columns 2 to 6 of Table A9, we replicate the regression in equation (2), replacing treatment assignment with each control variable used in the analysis, as follows:

$$\text{Attrition}_i = \alpha + \beta^{\text{Attrition}} X_i + \varepsilon_i \quad (3)$$

Where X_i is each of the different controls included: gender, nationality, educational level, and an indicator for having mental health issues. Early dropout is not significantly correlated with gender or mental health status. However, two 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 one percentage point, significant at the 10% level. These differences in the dropout rate support the inclusion of these variables as controls in the main regressions used to evaluate the results of the intervention.

3.4 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 (including both objective and subjective measures), as well as from administrative records. Table A11 describes in detail their definition and sources.

Housing situation. We use four indicators from the endline 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

⁸ Additionally, Table A10 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 SÍ 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.

values 11 to 13 indicating inadequate housing),⁹ 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 surveys, we construct four indicators: a *dummy for employment status* (binary indicator for whether the respondent is currently employed), *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). From Social Security records, we replicate the *dummy for employment status* and *total days worked*, and additionally compute *full-time equivalent days worked* and *work intensity indices* (ranging from 0 to 1, based on the share of days employed over the reference period).

Economic situation. We use three indicators from the endline survey. 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. 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 subjective well-being* using responses to several questions from the endline surveys. The index 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.

⁹The complete scale is described in Table A2. Individuals not experiencing homelessness are assigned a value of 14.

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 Section 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. 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:

$$Y_{i,t=1} = \alpha + \beta T_i + \gamma Y_{i,t=0} + \delta X_{i,t=0} + \varepsilon_{i,t} \quad (4)$$

where $Y_{i,t=1}$ denotes the outcome of interest for individual i immediately after the intervention, and T_i is an indicator for treatment assignment. When available, we include the value of the dependent variable before the intervention ($Y_{i,t=0}$). 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. Standard errors are clustered at the level of the randomization strata—defined by gender, age group (under 35 years, between 35 and 49 years, over 49 years), residential status (1 to 2, and 3 to 7, based on ETHOS scale), and location (six cities).

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 at medium term, we estimate a cross-sectional model analogous to the one used for short-term outcomes:

$$Y_{i,t=2} = \alpha + \beta T_i + \gamma Y_{i,t=0} + \delta X_{i,t=0} + \varepsilon_{i,t} \quad (5)$$

where $Y_{i,t=2}$ denotes the outcome of interest for individual i six months after the intervention. T_i , $Y_{i,t=0}$, and $X_{i,t=0}$ are defined as in equation (4). 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 three reasons. First, as discussed in Section 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 equation (4) does not capture the total effect of the personalized model, but its differential effect relative to the traditional one. Second, as mentioned in Section 2.3, between the endline survey (immediately after the intervention) and the follow-up survey (six months later), many control group participants received extended support that incorporated elements of the personalized model. Third, attrition in the medium term is more likely among individuals who received fewer benefits from the intervention.¹⁰ These factors may bias the cross-sectional estimates comparing both groups at 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:

$$Y_{i,t} = \alpha T_i + \lambda_t + \beta_1 (T_i \times \mathbf{1}\{t = 1\}) + \beta_2 (T_i \times \mathbf{1}\{t = 2\}) + \varepsilon_{i,t} \quad (6)$$

where $Y_{i,t}$ denotes the outcome of interest for individual i at time t . T_i is an indicator for treatment status, and λ_t are a set of 3 time fixed effects. 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 (4), controlling for the pre-intervention value of the outcome variable (when available), both with and without additional baseline covariates.

Before turning to the five dimensions of interest, it is worth noting the stark contrast in successful exits¹¹ achieved within the maximum implementation period. While

¹⁰As described in Subsection 3.3 attrition rates are higher in the control group, although the difference is not statistically significant.

¹¹ As described in Subsection 2.3, a successful exit was defined as securing employment, expressing no further need for the program or no longer requiring assistance, or achieving an ETHOS scale score above 7 (which corresponds to being neither roofless nor houseless and not receiving long-term housing support).

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.

Housing situation. Table 1 reports the short-term effects on participants' housing situation. Columns (1) and (2) present results for the ETHOS scale,¹² while columns (3) and (4) do so for housing stability (number of weeks spent in decent housing during the prior six months). Columns (5)-(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 13]		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
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 4. 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 substantial improvements in housing conditions. First, treated individuals scored more than two points higher on the ETHOS scale than the control group, 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. Finally, treated participants reported significantly higher satisfaction with both their accommodation (0.33 standard deviations) and their sense

¹² See Table A2 for a full description of the ETHOS scale.

of residential security (0.34 standard deviations). Taken together, the evidence shows that the personalized intervention led to clear improvements in housing conditions.

Labor market integration. Table 2 reports the short-term effects of the intervention on labor market outcomes using administrative records.¹³ Columns (1) and (2) show the effect on the probability of being employed. 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) to (10) present the effect on work intensity, again expressed in raw days and in full-time equivalents as a share of the period.

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

	Employed (binary)		Work activity (days)		Work activ. (days FTE)		Work intensity (% days)		Work intensity (% days FTE)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treatment	0.07 (0.05)	0.07 (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)	0.05 (0.04)	0.07* (0.04)
Observations	322	295	322	295	322	295	322	295	322	295
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
$\bar{Y}_{t=0}$	0.34	0.34	19.48	19.48	14.23	14.85	0.11	0.11	0.08	0.08

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 4. Columns (1) and (2) report results using as an outcome a dummy taking value one if the respondent is currently employed; Columns (3) and (4) for the number of days worked in the previous six months; Columns (5) and (6) using the number of full-time equivalent days worked in the previous six months; finally, Columns (7) to (10) use the same outcomes as in Columns (3) to (6), 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 also improved participants' labor market integration. First, while the effects on employment status are not statistically significant, the coefficients in columns (1) and (2) are positive at around 0.07, consistent with a possible increase in the likelihood of employment.¹⁴ Second, the intervention raised work activity across all four measures: treated participants worked about 15 more days over a period of six months—an increase of 8% relative to the

¹³ Table A12 presents analogous results based on self-reported measures.

¹⁴The average value at baseline of the Employed dummy in Table 2 refers to whether participants were ever employed in the 6-month period prior to enrolling in the program. This explains why the share, 34%, is substantially higher than the self-reported employment rate recorded in the baseline survey conducted upon registration, which is only 5% as shown in the summary statistics Table A4.

control group—with similar effects in the full-time equivalent measures. These gains nearly double pre-intervention levels of work activity and intensity. Finally, results in Table A12, based on self-reported data, also show positive effects on employment status, employment quality, and job satisfaction. 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
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 4. 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: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Results indicate that the economic situation of treated individuals improved in the short term. First, they report significantly higher employment income: the estimated increase is economically meaningful at €101.55 per month, amounting to nearly three times their pre-intervention level. Second, the coefficient for total income is also positive and of comparable magnitude, although not statistically significant—likely due to the limited sample size.¹⁵ Finally, treated participants report an increase of 0.35 standard deviations in economic satisfaction relative to the control group. The evidence suggests that the intervention strengthened participants’ economic situation

¹⁵ This may also reflect 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.

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
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 4. 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 that the participant 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 3.5 and 2, 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 life satisfaction

	Quality of life (std.)	
	(1)	(2)
Treatment	0.29* (0.16)	0.26 (0.17)
Observations	165	155
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 4. 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: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Results indicate 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 and marginally insignificant once controls are included, likely due to the limited sample size (only about half the participants responded to this question in the endline survey). The estimated impact is about one-quarter of a standard deviation and, despite the lack of precision, points to a meaningful gain in quality of life.

5.2 Medium-term Results

In the short term, the personalized employment intervention generated significant improvements across all five dimensions relative to the traditional model. These results, however, 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 A13 to A17 in the Appendix report medium-term cross-sectional estimates from equation (5) for the five dimensions of interest: housing situation, labor market integration, economic situation, employability, and quality

of life.¹⁶ 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, between the endline survey (short-term outcomes) and the follow-up survey six months later (medium-term outcomes), many participants in the traditional intervention benefited from activities and support that had originally been exclusive to the personalized intervention, effectively contaminating the control group. Second, follow-up rates are lower among participants with weaker performance, who are more prevalent in the traditional intervention. Both factors 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 (6) for four dimensions.¹⁷ Panel (a) reports results for housing situation, measured with the ETHOS scale. Panel (b) shows estimates for labor market integration using the employment quality index.¹⁸ 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 A18 in the appendix reports the detailed regression estimates for the four dimensions.

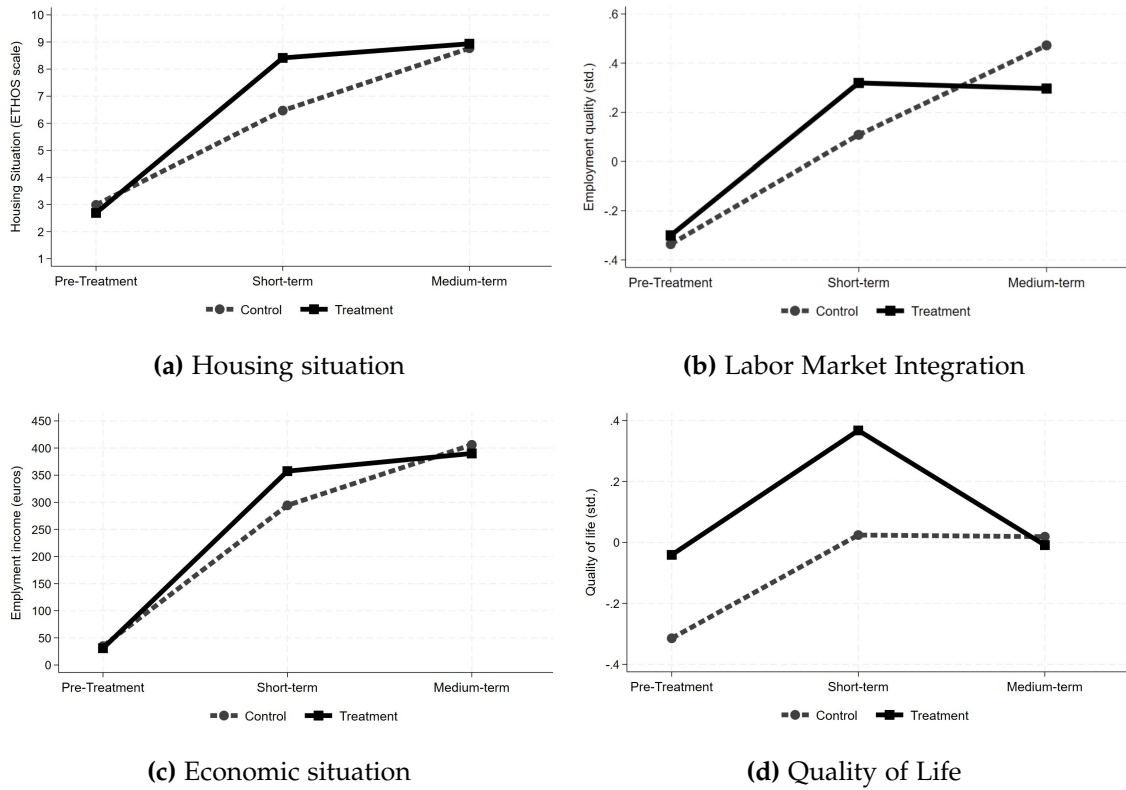
The difference-in-differences estimates reveal three main findings. First, the differential effect between the treatment and control groups identified in the short-term analysis represents only about 20 to 40% of the total impact of the personalized intervention across the different dimensions. This 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 remains at least as high as in the 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

¹⁶ 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.

¹⁷ We do not include estimates for employability because outcome measures are not consistently available in both the short and medium term.

¹⁸ 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 6. 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), employment monthly income (in euros); in Subfigure (d), a standardized self-reported measure of quality of life. Table A18 in the appendix reports the detailed regression estimates for the four dimensions.

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 substantial gains, with effects that persist into the medium term and materialize faster than under the traditional model. The later additional gains observed among control group participants—which only emerged once they accessed elements of the personalized intervention in the medium term—further underscore its effectiveness. These results stress the value of the personalized model: achieving early gains is essential, given the difficulties of retaining people experiencing homelessness in insertion programs, and may be decisive in helping participants overcome the barriers to exiting homelessness.

5.3 Heterogeneity Analysis

This subsection explores whether the effects of the intervention vary with participants' sociodemographic characteristics—specifically gender, age, and education. We focus on short-term outcomes and extend equation (4) by adding an interaction term between the treatment indicator and group indicators, as follows:

$$Y_{i,t=1} = \alpha + \beta T_i + \theta(T_i \times D_i) + \gamma Y_{i,t=0} + \varepsilon_{i,t} \quad (7)$$

where D_i denotes the relevant group indicator. T_i , $Y_{i,t=0}$, and $Y_{i,t=1}$ are defined as in equation (4).

Tables A19, A20, and A21 report short-term estimates by gender, age (above and below 50 years), and education (Primary or lower vs. above Primary), respectively. Across these dimensions, we find no significant heterogeneity in the effects of the personalized intervention. The only exception arises in the case of education: 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. All in all, the short-term impacts of the personalized intervention do not vary across sociodemographic groups.

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, economic situation, employability, and quality of life relative to the traditional model. Comparing trajectories, the extra benefits of the personalized model emerge early and persist into the medium term. However, the control group narrows the gap six months later, after receiving elements and support originally exclusive to the personalized model. 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.

These findings suggest a clear direction for practice. Governments and organizations aiming to reduce homelessness can adapt existing programs by making support more personalized and flexible. Participants should be offered tailored itineraries with

broader forms of assistance, while caseworkers should be assigned fewer cases to handle. 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. Such adjustments can be made within current structures, reorienting existing programs and, where needed, increasing resources. The latter should be assessed through a careful cost-benefit analysis, which is beyond the scope of this paper.

While we show that personalized programs improve outcomes relative to traditional models, further research is needed to identify which components drive these effects. Larger trials with broader samples and longer follow-up would help assess the full potential and scalability of personalized employment interventions.

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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

A Appendix Tables

Table A1: Detailed 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, and 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.
	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.
Houseless	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.
Inadequate	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.
	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	Standard deviat.	Minimal	Maximum
Treatment	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 (std.)	296	2.50	1.37	1	5
Residential Security (std.)	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 (std.)	296	1.61	0.92	1	5
Employed (binary)	317	0.05	0.23	0	1
Work Activity (days)	315	8.81	23.77	0	170
Employment Status (std.)	303	2.07	1.04	1	10
Job Satisfaction (std.)	296	1.65	0.94	1	5
Employability (caseworker eval. - std.)	303	-0.29	0.79	-2.88	2.42
Employability (self-perceived - std.)	290	-0.07	0.96	-3.54	2.74
Quality of life (std.)	284	3.64	1.02	0.83	6.26

Table A5: Randomization results for final sample participants (those who started the program)

		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		
Ethos	Group	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 entered in the insertion programs.

Table A6: Randomization results before the project started (immediately after randomization)

		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		
Ethos	Group	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	1	2	1	9	2	0	0	4	0	29
	TG	2	0	5	0	1	1	8	2	2	0	3	3	27
Cartagena	CG	1	1	4	0	4	0	2	1	1	1	3	0	18
	TG	0	1	3	2	0	5	1	1	1	0	7	1	24
Madrid	CG	4	1	11	9	4	3	11	5	3	7	14	8	80
	TG	1	2	8	10	2	7	9	6	3	9	13	6	76
Mallorca	CG	0	0	7	1	2	0	8	2	2	2	9	7	40
	TG	1	0	5	2	4	0	9	1	2	0	3	5	32
Murcia	CG	1	3	7	10	3	1	10	2	1	0	5	1	44
	TG	1	3	5	7	2	0	7	2	1	0	8	1	37
Valencia	CG	0	1	5	1	3	2	11	0	1	0	3	0	27
	TG	2	3	6	2	1	1	9	1	0	0	4	0	28
Total		16	15	73	43	32	16	98	25	17	19	76	32	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 started the program.

Table A7: 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 A8: 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 A9: Correlation between sample attrition and treatment status/baseline characteristics

Independent variable						
	Treatment	Woman	Spanish Nationality	EU Nationality	Educational Level (years)	Mental Health Issue
	(1)	(2)	(3)	(4)	(5)	(6)
$\beta^{Attrition}$	-0.05 (0.05)	0.05 (0.08)	0.14*** (0.05)	0.11 (0.08)	-0.01* (0.01)	0.10 (0.07)
Observations	322	322	322	322	316	322

Note: This table reports correlation estimates for sample attrition and treatment status (column (1)) and baseline characteristics (columns (2) to (6)). For the first column, we report the β coefficient for Equation 2. For the rest of columns, we report the β coefficient for Equation 3. Standard errors, clustered by randomization strata, reported in parentheses.

Table A10: Early dropout 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 early dropout rates by treatment status. It includes dropouts before the end of the intervention and in the answer of the endline survey. Dropouts do not include successful exits.

Table A11: 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 - survey data		
Employment status dummy	Dummy taking value one if the respondent is currently employed.	Baseline, endline & follow-up surveys
Number of days worked	Number of days worked in the previous six months.	Baseline, endline & follow-up surveys
Index of employment quality	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 situation	Self-reported measure of satisfaction with the job situation, from 1 to 5 (standardized in the regression estimates).	Baseline, endline & follow-up surveys
Labor market integration - admin data		
Employment status dummy	Dummy taking value one if the respondent is currently employed.	Admin data: baseline and endline
Number of days worked	Number of days worked in the previous six months (both raw, and in full-time equivalent days).	Admin data: baseline and endline
Work intensity index	Share of days worked, in the previous six months (both raw, and in full-time equivalent days).	Admin data: baseline and endline
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		
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 - self-reported		
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, from 1 to 5 (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 A12: Short-term effects on labor market integration (based on self-reported data)

	Work activity (days)		Employed (binary)		Employment Status (std.)		Job satisfaction (std.)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	0.08 (7.66)	2.38 (7.31)	0.08* (0.05)	0.10** (0.05)	0.16 (0.16)	0.30* (0.16)	0.21 (0.14)	0.28* (0.15)
Observations	310	289	309	287	265	248	173	162
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 short-term effects of the personalized intervention on the labor market integration of the participants using self-reported data, estimated by OLS using Equation 4. 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 currently employed; 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 A13: Medium-term effects on the housing situation (cross-sectional estimates)

	ETHOS scale [1 to 5]		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 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: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A14: Medium-term effects on labor market integration (based on self-reported data, cross-sectional estimates)

	Work activity (days)		Employed (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 5. 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 currently employed; 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 A15: Medium-term effects on the economics 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 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: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A16: Medium-term effects on employability (based on self-reported data, 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 using self-reported data, estimated by OLS using Equation 5. 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 A17: 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 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. 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 A18: Difference-in-differences estimates in the medium-term

	ETHOS scale (1)	Employment quality (std.) (2)	Employment income (euros) (3)	Quality of life (std.) (4)
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
$\bar{Y}_{t=0}$	5.83	0.15	218.40	-0.03

Note: This table reports results for the difference-in-differences estimates of the personalized intervention on different dimensions of interest, estimated using Equation 6. 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 A19: Heterogeneous effects by gender

	ETHOS scale (1)	Resid. Stab. (2)	Empl. Income (3)	Employ- abil. (std.) (4)	Work act. (days) (5)	Employ. (bin.) (6)	Qual. of life (std.) (7)
Treat. × 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
Controls	No	No	No	No	No	No	No
$\bar{Y}_{t=0}$	7.40	6.29	325.06	0.05	47.62	0.33	0.21

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 7. 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. In Column (5), we use the number of days worked in the previous six months. In Column (6), a dummy taking value one if the respondent is currently employed. 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 A20: Heterogeneous effects by age

	ETHOS scale (1)	Resid. Stab. (2)	Empl. Income (3)	Employ- abil. (std.) (4)	Work act. (days) (5)	Employ. (bin.) (6)	Qual. of life (std.) (7)
Treat. × Over 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)
Over 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
Controls	No	No	No	No	No	No	No
$\bar{Y}_{t=0}$	7.40	6.29	325.06	0.05	47.62	0.33	0.21

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 7. 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. In Column (5), we use the number of days worked in the previous six months. In Column (6), a dummy taking value one if the respondent is currently employed. 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: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

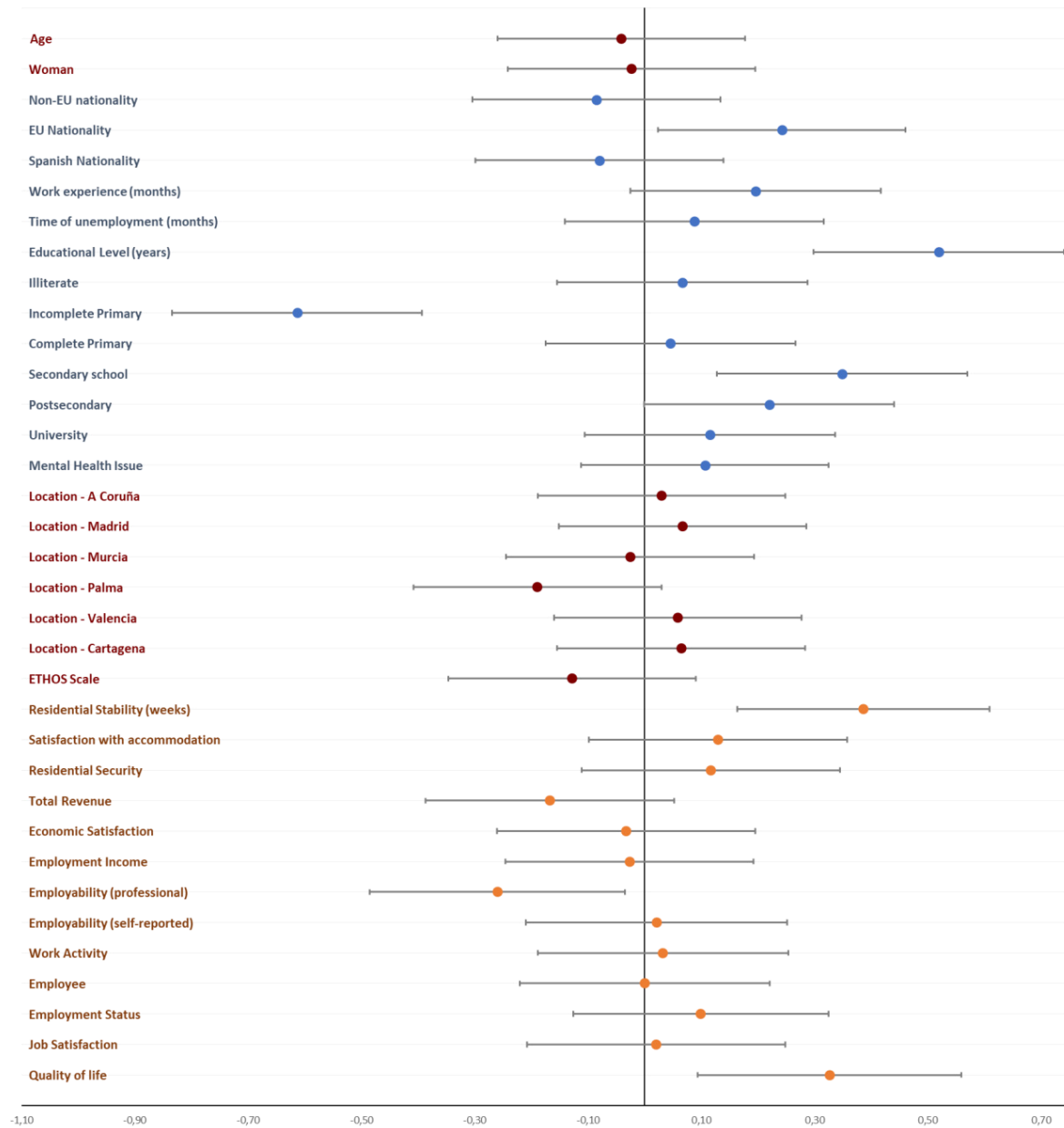
Table A21: Heterogeneous effects by level of education

	ETHOS scale (1)	Resid. Stab. (2)	Empl. Income (3)	Employ- abil. (std.) (4)	Work act. (days) (5)	Employ. (bin.) (6)	Qual. of life (std.) (7)
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
Controls	No	No	No	No	No	No	No
$\bar{Y}_{t=0}$	7.44	6.29	327.23	0.05	47.62	0.33	0.21

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 7. 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. In Column (5), we use the number of days worked in the previous six months. In Column (6), a dummy taking value one if the respondent is currently employed. 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 balance for stratification variables and baseline characteristics. For each variable, we report standardized mean differences between treatment and control groups, and the corresponding 95% confidence interval, from a simple regression, using Equation 1.