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A Randomized Controlled Investigation of Individual Placement and Support for Severe Mental Disorders, Examining Psychological Well-Being, Daily Functioning, and Employment Outcomes Within a High-Unemployment Environment

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Abstract

The present trial evaluated whether a supported employment approach based on the Individual Placement and Support (IPS) framework produces advantages in psychological well-being, everyday functioning, and labor-market participation for adults with severe mental disorders (SMD) living in an environment marked by widespread unemployment, relative to conventional vocational rehabilitation (VR). From an initial pool of 557 screened candidates diagnosed with ICD-10 conditions F20–F29 or F31–F32.3, 63 individuals met eligibility requirements and agreed to participate. Participants were randomly allocated to either IPS or VR. Outcome data were collected at study entry and after a six-month intervention period. The study protocol was approved by an ethics committee, formally registered, and implemented with blinded outcome assessors.

Those assigned to IPS were significantly more likely to secure competitive employment and demonstrated superior gains in overall functioning compared with participants receiving VR. No statistically meaningful differences emerged between groups on other mental health or functional indicators. However, irrespective of intervention group, individuals who entered employment reported notable improvements in quality of life. No serious adverse events, including psychiatric admissions, occurred during follow-up. The findings indicate that IPS can be implemented successfully even under adverse labor-market conditions and may generate benefits that extend beyond employment itself. While the limited sample size and brief follow-up period constrain interpretation, the results support the potential value of IPS for individuals with SMD in high-unemployment contexts.

Keywords: Schizophrenia, Supported employment, Rehabilitation, Psychosocial functioning, Quality of life

Introduction

Unemployment affects the vast majority of people living with mental health conditions, with global estimates indicating that roughly four out of five are without paid work (World Health Organization (WHO), 2022). Despite this reality, a substantial proportion of individuals with severe mental disorders (SMD)—approximately 60%–70%—express a clear preference for competitive employment [1, 2] rather than participation in sheltered workshops [3] or attendance at day-care programs [4].

Although work may expose individuals to stressors that cannot always be avoided, evidence consistently shows that remaining unemployed carries greater psychological and social costs. Among people with mental illness, unemployment has been associated with deteriorating cognitive performance, the onset or worsening of psychotic symptoms, anxiety surrounding the possible loss of financial benefits [5–8], elevated rates of substance misuse [9], and increased suicidal ideation. Population-level analyses further demonstrate that

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unemployment corresponds to a 20%–30% higher relative risk of suicide [10].

Conversely, engagement in paid employment offers multidimensional benefits, including social integration, financial stability, and psychological purpose, all of which are linked to symptom reduction and enhanced recovery trajectories [11–15]. As a result, employment has emerged as a key outcome of interest within mental health research, prompting a growing body of literature focused on vocational participation among individuals with psychiatric disorders [16].

Historically, numerous interventions have been developed to address the employment gap observed in populations with schizophrenia and related disorders. Among the most extensively studied is Individual Placement and Support (IPS), a supported employment model introduced in the United States by Becker and Drake [17]. IPS prioritizes immediate access to competitive employment based on personal preferences, close coordination between employment specialists and mental health services, continuous individualized support, and an explicit policy of zero exclusion. By enabling individuals with SMD to work under the same conditions as those without psychiatric diagnoses, IPS promotes social inclusion, affirms citizenship, and situates employment as a central component of recovery-oriented care [18].

Robust evidence from both North American and European studies demonstrates that IPS consistently outperforms traditional vocational rehabilitation approaches, including "train-then-place" models, in facilitating access to competitive employment for people with SMD [19]. Beyond job attainment, IPS has been linked to more favorable vocational indicators, such as longer job tenure, increased working hours, and reduced hospitalization rates [20]. In contrast, empirical findings regarding its effects on mental health status and functional capacity remain limited. Within Europe, the multicenter EQOLISE trial [21] represents the most comprehensive investigation of these broader outcomes and served as a conceptual and methodological reference for the present study, conducted in a region characterized by persistently high unemployment in the general population.

Against this backdrop, the current study examined whether individuals with SMD living in a high-unemployment setting, specifically the Canarian population, experience differential mental health, functional, and vocational outcomes when supported through IPS compared with conventional vocational rehabilitation.

Materials and Methods

This study employed an open-label, multicenter, community-based randomized controlled design to compare Individual Placement and Support (IPS) with vocational rehabilitation (VR; train-then-place model) in promoting competitive employment among individuals diagnosed with severe mental disorders (SMD). The methodological framework was informed by prior work described by McGurk, Mueser, and Pascaris [22].

Sample

Recruitment was conducted over a two-year period (2021–2023) through outpatient public mental health services on the island of Tenerife, Spain, including Community Mental Health Teams (CMHT) and affiliated primary care catchment areas. Tenerife, situated in southern Europe as part of the Canary Islands archipelago, had a population of 930,570 inhabitants in 2021. During that year, the Canary Islands reported a per capita gross domestic product of €19,021, with employment predominantly concentrated in the service economy [23].

From a labor-market perspective, the study was carried out under conditions of sustained economic disadvantage. The Canary Islands have consistently exhibited some of the highest unemployment levels nationwide, with rates averaging close to 20% throughout the study timeframe. When participant recruitment began in 2021, unemployment exceeded 25%, before progressively declining to approximately 14% by 2023. Despite this reduction, unemployment levels remained higher than the Spanish national average during the same period (around 14%) and clearly exceeded those observed in the European EQOLISE trial (approximately 10%–12%), thereby situating the present study within a markedly high-unemployment environment.

Determination of the required sample size was guided by anticipated changes in psychopathology, operationalized as the total score on the Positive and Negative Syndrome Scale (PANSS), which served as the primary outcome measure. Drawing on estimates reported by Leddy-Stacy and Rosenheck [24], a between-group difference of 8.3 points was deemed clinically meaningful, with an assumed standard deviation of 9.9 points. Power calculations conducted at a 5% significance threshold

and 80% power indicated that a minimum of 24 participants per treatment arm was necessary. To offset expected loss to follow-up, the target enrollment was inflated by 30%, yielding an intended sample of 32 participants per group; one individual withdrew immediately prior to allocation, resulting in 31 participants in the IPS condition.

Overall, 557 individuals were assessed for eligibility. The majority (n = 494) did not enter the trial for a range of reasons detailed in the study flow diagram **(Figure 1)**. Refusal to participate accounted for a substantial proportion of exclusions (n = 250) and was largely attributed to residual consequences of the COVID-19 pandemic, including reluctance to engage in face-to-face activities. Additional deterrents included anticipated stigma, low confidence in work ability, limited interest in employment-focused interventions, and practical obstacles such as competing time demands, transportation limitations, and caregiving responsibilities.

Following eligibility screening, 63 participants were enrolled and randomly assigned, using blinded procedures, to either the Individual Placement and Support (IPS) group (n = 31) or the vocational rehabilitation (VR) group (n = 32). Attrition over the follow-up period resulted in the discontinuation of 7 participants from the IPS arm and 13 from the VR arm, leaving 24 and 19 participants, respectively, available for the final analyses. All participants provided both written and verbal informed consent prior to inclusion.

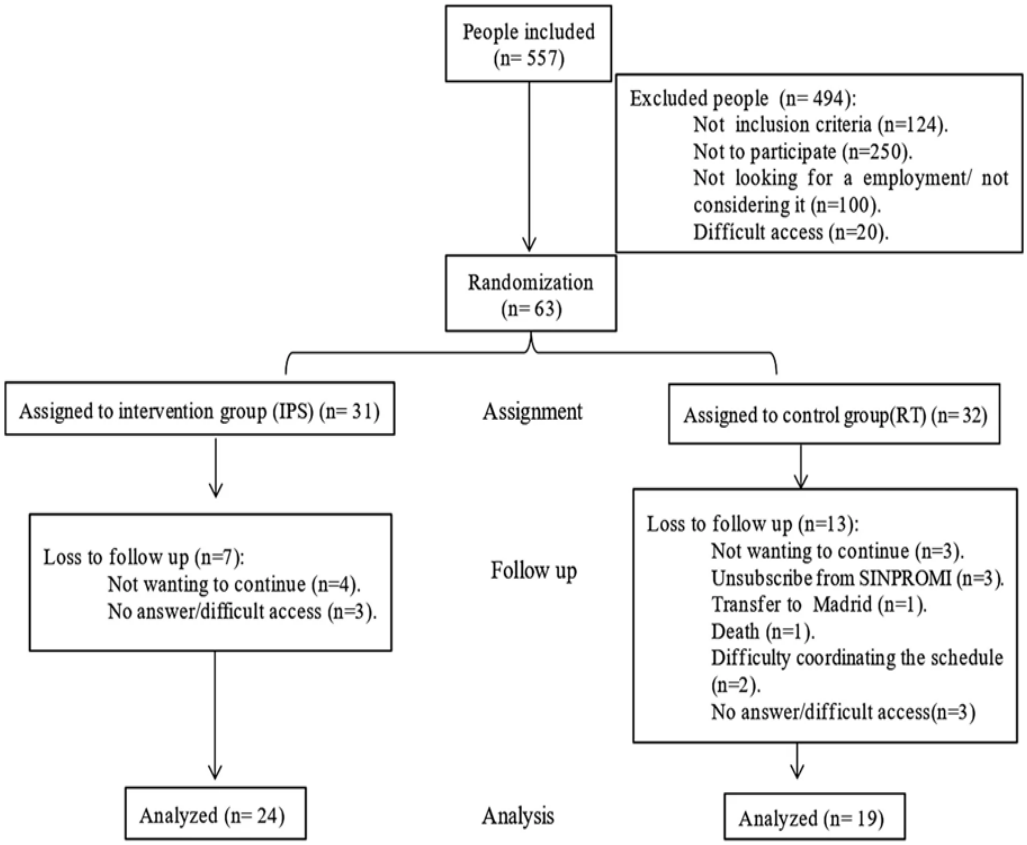

Figure 1. Study recruitment and allocation process (Canary Islands, Spain, 2024).

Eligibility framework

Participant eligibility was determined using a multistep screening process combining demographic, diagnostic, clinical stability, and motivational criteria. Individuals were considered for inclusion if they were adults (18–65 years), had a diagnosis of schizophrenia in accordance with ICD-10 classification, and demonstrated sufficient decisional capacity to provide informed consent. Clinical eligibility additionally required symptom stability, operationalized as the absence of acute psychotic episodes and no psychiatric hospitalization during the months preceding enrollment. Continuous follow-up

within the public Community Mental Health Team system during the study period was mandatory, and candidates were required to express an explicit intention to pursue competitive employment.

Exclusion criteria were applied to minimize confounding clinical factors and included the presence of common mental disorders or organic pathologies, a documented history of traumatic brain injury involving loss of consciousness, and pregnancy or lactation at the time of recruitment.

Study withdrawal conditions were predefined and included voluntary discontinuation at the participant's request, inability to attend assessment visits due to transportation or mobility limitations, persistent scheduling conflicts, relocation outside the autonomous region in which the study was conducted, or death.

IPS service context and model integrity

The Individual Placement and Support (IPS) service evaluated in this trial represents a mature, long-standing implementation. The program was introduced in Tenerife in 2004, following evidence-based guidance disseminated by the Dartmouth IPS Center. Governance and delivery have since been jointly managed by the Insular Council of Psychosocial Rehabilitation and Community Action of the Canary Health Service and Simpromi S.L., with academic collaboration from the University of La Laguna. The service operates with stable public funding, maintains formal integration with mental health care structures, and has been documented in earlier evaluations [25, 26].

Institutional consolidation of the program was further reinforced when Tenerife hosted the first national IPS Spain meeting, an event that facilitated subsequent inclusion within the IPS International Learning Community (IPS Europe, 2023) [27].

Model fidelity was systematically safeguarded through sustained adherence to core IPS principles, including unrestricted access (zero exclusion), prioritization of competitive employment, close integration of employment and clinical teams, rapid initiation of job searches, and provision of individualized, time-unlimited support. Fidelity monitoring conducted in 2015 using the Supported Employment Fidelity Scale (IPS-15) yielded a score of 66/75, reflecting good implementation quality [26]. Prior to initiation of the present study, a further fidelity evaluation was undertaken in 2020 using the expanded IPS-25 scale developed by Becker *et al*. [28]. This assessment was completed by an external psychologist independent of the IPS team and resulted in a score of 106/125, consistent with good fidelity (unpublished data).

Outcome assessment strategy

All clinical, functional, and psychosocial evaluations were conducted by the principal investigator, who remained blinded to treatment allocation throughout the study. Assessments were performed at two time points: baseline and six months post-enrollment. A multimodal battery of standardized instruments was used to capture symptom severity, functioning, quality of life, emotional distress, social participation, and self-perception:

Global assessment of functioning (GAF) [29]

A clinician-rated index summarizing psychological, social, and occupational functioning on a continuum from 0 to 100, with higher scores indicating superior functioning.

Lancashire quality of life profile and satisfaction with life scale (ESV) [30]

A structured interview assessing subjective wellbeing in individuals with mental disorders. Life satisfaction is rated on a 7-point visual analog scale (1 = worst; 7 = best), alongside interviewer-rated global quality of life and response reliability.

Positive and negative syndrome scale (PANSS) [31]

A 30-item interview-based instrument measuring psychiatric symptomatology across three domains: positive symptoms (7 items), negative symptoms (7 items), and general psychopathology (16 items). Items are rated on a 7-point Likert scale ranging from symptom absence (1) to extreme severity (7).

Hospital anxiety and depression scale (HADS) [32]

A self-report measure comprising 14 items, evenly divided into anxiety and depression subscales, assessing symptom frequency over the preceding week on a 4-point Likert scale (0–3).

Groningen social disabilities schedule (GSDS) [33]

A role-based assessment of social functioning covering domains such as self-care, family and marital roles, parenting, citizenship, social engagement, and employment-related functioning.

AF5 self-concept scale [34]

A 30-item instrument evaluating self-concept across five domains—academic/work, social, family, emotional, and physical—using a response continuum from 1 (strongly disagree) to 99 (strongly agree).

In addition to scale-derived outcomes, clinical history variables were extracted from medical records, including the number of psychiatric hospital admissions (short- or medium-stay units within the previous six months, as determined by the treating psychiatrist) and relapse events, defined as symptom exacerbations quantified using PANSS scores.

Procedure

Ethical authorization for the study was granted by the relevant institutional review board (approval code CI 2024-669). All study activities were conducted in compliance with the Declaration of Helsinki as well as applicable European Union and Spanish regulatory frameworks. Prior to enrollment, each participant provided written informed consent, with procedures in place to ensure confidentiality, anonymization, and protection of personal data.

Participant identification and referral occurred through public Community Mental Health Teams (CMHTs). Individuals meeting preliminary eligibility criteria were directed to IPS services staffed by employment specialists employed by SINPROMI (Sociedad Insular para la Promoción con Discapacidad). The principal investigator (PI) operated independently from both the IPS and vocational rehabilitation services and remained blinded to intervention allocation during recruitment and baseline data collection. Allocation to study groups was performed only after informed consent had been obtained and baseline assessments completed, thereby reducing the potential for selection bias.

At study entry, structured interviews were conducted to document sociodemographic variables, educational attainment, prior employment experience, and the presence of comorbid conditions. Participants were explicitly informed that access to employment could occur at any point during the study period, either through IPS participation or following engagement in vocational rehabilitation. Additional baseline information included employment history, income status, and psychiatric hospitalizations preceding enrollment. Standardized instruments assessing mental health and functional status were administered at baseline and again after six months, alongside the collection of employment outcomes and hospitalization data.

Statistical analysis

All questionnaire and assessment data were entered into an electronic database using Microsoft Excel, followed by statistical processing with the Statistical Package for the Social Sciences (SPSS, version 25; 2017) and GraphPad Prism 9.

Descriptive analyses were conducted by calculating frequencies and percentages for categorical variables and means with standard deviations for continuous variables. Baseline comparisons of continuous measures between groups were performed using independent-samples Student's t tests, contingent upon confirmation of normal distribution via the Kolmogorov–Smirnov test. Categorical variables were analyzed using the chi-square test; when expected cell counts in 2 × 2 contingency tables were below five, Fisher's exact test was applied.

Longitudinal changes in quantitative outcomes from baseline to six-month follow-up were examined using repeated-measures analysis of variance (RM-ANOVA), incorporating group membership and the group-by-time interaction as factors. To complement significance testing, effect sizes were calculated using Cohen's d to estimate the magnitude of both within-group and between-group changes across time points.

For categorical outcomes derived from the Groningen Social Disabilities Schedule (GSDS), agreement between baseline and follow-up assessments was evaluated using Cohen's kappa coefficient. In instances where GSDS outcomes were dichotomized into two categories ("excellent" and "satisfactory"), McNemar's test was additionally employed.

Employment-related outcomes were further explored using multivariate logistic regression analysis, with predictor variables selected through the Backward Wald elimination procedure. All statistical tests were two-sided, and statistical significance was defined as $p < 0.05$. Given the exploratory design and limited sample size, adjustments for multiple comparisons were not applied; results should therefore be interpreted as preliminary.

Results and Discussion

Of the 557 individuals initially screened, 63 were ultimately enrolled in the study. At the six-month assessment point, outcome data were available for 43 participants, comprising 24 individuals in the IPS group and 19 in the vocational rehabilitation group; attrition affecting 20 participants is detailed in **Figure 1**.

Baseline comparisons revealed no statistically significant differences between intervention groups in sociodemographic or clinical characteristics **(Table 1)**, indicating comparability at study entry. The sample was predominantly male, most participants fell within the 36–45-year age range, and vocational training represented the most common educational level (43%). Diagnostically, schizophrenia and bipolar disorder accounted for the majority of cases.

Table 1. Baseline characteristics of the study population and comparison between completers and dropouts by intervention group, n (%) (Canary Islands, Spain, 2024)

Characteristic	Baseline cohort				VR arm			IPS arm		
	IPS (n = 31)	VR (n = 32)	Total (n = 63)	*p* value	Dropouts (n = 13)	Completers (n = 19)	*p* value	Dropouts (n = 7)	Completers (n = 24)	*p* value
Sex distribution				0.250			1.000			0.191
Male	18 (58)	23 (72)	41 (65.1)		9 (69.2)	14 (73.7)		6 (85.7)	12 (50.0)	
Female	13 (42)	9 (28)	22 (34.9)		4 (30.8)	5 (26.3)		1 (14.3)	12 (50.0)	
Age category (years)				0.186			0.310			0.856
18–25	3 (10)	–	3 (4.8)		0	–		0	3 (12.4)	
26–35	7 (23)	11 (34)	18 (28.6)		5 (38.5)	6 (31.6)		1 (14.3)	6 (25.0)	
36–45	15 (48)	12 (38)	27 (42.9)		5 (38.5)	7 (36.8)		4 (57.1)	11 (45.8)	
46–55	6 (19)	9 (28)	15 (23.8)		3 (23.0)	6 (31.6)		2 (28.6)	4 (16.7)	
History of paid employment	30 (97)	29 (91)	59 (93.7)	0.317	12 (92.3)	17 (89.5)	1.000	7 (100)	23 (95.8)	1.000

Personality disorder	Bipolar disorder	Schizophrenia	**Primary psychiatric diagnosis**	**Absence of medical comorbidity**	**Psychiatric admission in previous 6 months**	University degree	Vocational training (FP)	Baccalaureate	Secondary education	Primary education	**Educational attainment**
3 (10)	6 (19)	13 (42)		15 (48)	1 (3)	2 (7)	15 (48)	1 (3)	1 (3)	12 (39)	
2 (6)	5 (16)	20 (62)		14 (44)	–	1 (3)	12 (38)	3 (9)	7 (22)	9 (28)	
5 (7.9)	11 (17.5)	33 (52.4)		29 (43.0)	1 (1.6)	3 (4.8)	27 (42.9)	4 (6.4)	8 (12.7)	21 (33.3)	
			0.556	0.712	0.492						0.160
1 (7.7)	1 (7.7)	10 (79.9)			0	–	5 (38.5)	2 (15.5)	4 (30.8)	2 (23.2)	
1 (5.3)	4 (21.1)	10 (52.6)			0	1 (5.3)	7 (36.8)	1 (5.3)	3 (15.8)	7 (36.8)	
			0.538		1.000						0.465
2 (28.6)	0	4 (57.1)			0	1 (14.2)	3 (42.9)	0	0	3 (42.9)	
1 (4.2)	7 (29.2)	9 (37.5)			1 (4.2)	1 (4.2)	12 (50.0)	1 (4.2)	1 (4.2)	9 (37.5)	
			0.078		1.000						0.819

Recurrent depressive disorder	1 (3)	–	1 (1.6)	0	0	0	1 (4.2)
Delusional disorder	2 (6)	2 (6)	4 (6.4)	0	2 (10.5)	1 (14.3)	0
Schizoaffective disorder	4 (13)	3 (9)	7 (11.1)	1 (7.7)	2 (10.5)	0	4 (16.7)
Other diagnoses	2 (6)	–	2 (3.2)	0	0	0	2 (8.3)

Abbreviations: VR = vocational rehabilitation (train-then-place); IPS = Individual Placement and Support.

The baseline sociodemographic profile of individuals who withdrew from the study **(Table 1)** showed no meaningful differences when compared to those who remained until completion. This indicates that dropout was unlikely to be influenced by initial participant features, such as the specific type of diagnosis.

Non-vocational mental health and functioning results

In general, individuals assigned to Individual Placement and Support (IPS) demonstrated more substantial gains in overall functioning (as measured by the Global Assessment of Functioning, GAF) relative to those in vocational rehabilitation (VR). However, no notable between-group differences emerged for other secondary outcomes, including quality of life, symptom severity (PANSS), levels of anxiety and depression (HADS), social functioning (GSDS), or self-concept (AF). Both intervention arms exhibited positive changes over the study period, especially in global functioning and quality of life, implying that engagement in either approach could yield broader benefits beyond employment.

Results from repeated-measures ANOVA, based on participants who provided follow-up data **(Table 2)**, revealed reductions in PANSS scores at the 6-month mark across both arms, corresponding to lessened psychotic symptoms, anxiety, and depressive features. A notable time-by-group interaction emerged for the social domain of self-concept ($p = 0.014$), with the IPS arm displaying progressive improvement and the VR arm showing a slight worsening. For the remaining secondary measures—such as quality of life, additional aspects of self-concept, and social functioning—no significant differences between groups were detected, suggesting comparable trajectories of improvement in both IPS and VR conditions.

In line with the statistical findings, moderate to large effects favored IPS for enhancements in global functioning (GAF) and social self-concept. Large within-group effects were also evident for symptom reduction in psychotic features, observed similarly in both intervention groups.

Table 2. Evaluation of Individual Placement and Support (IPS)/Vocational Rehabilitation (VR) strategies on evolution of mental health and functional outcomes (means and standard deviations), using repeated measures analysis of variance (RM-ANOVA) (Canary, Spain, 2024).

	Control group (VR) (n = 19)		Intervention group (IPS) (n = 24)		p -value		
	Basal	6 months	Basal	6 months	Time	Group	Time x group
Quality of life	4.8 (0.9)	5.0 (1.0)	5.2 (0.8)	5.5 (0.8)	0.034	0.108	0.438
GAF	57.74 (8.32)	59.2 (8.3)	63.8 (10.8)	68.0 (9.0)	0.002	0.009	0.114

PANSS	Positive	15.16 (5.1)	10.8 (3.7)	14.9 (7.3)	11.9 (5.1)	<0.001	0.804	0.308
	Negative	18.7 (6.4)	13.83 (5.2)	19.4 (7.9)	13.2 (5.7)	<0.001	0.704	0.985
	General	37.8 (11.1)	29.4 (9.1)	36.0 (12.3)	28.7 (8.3)	<0.001	0.659	0.740
HADS	Anxiety	5.0 (3.7)	4.2 (2.8)	4.5 (3.7)	4.1 (2.7)	0.244	0.704	0.676
	Depression	4.3 (3.4)	4.1 (4.0)	4.3 (3.5)	3.5 (3.6)	0.231	0.793	0.485
	Global	9.3 (6.4)	8.3 (6.3)	8.8 (6.6)	7.63 (5.8)	0.176	0.731	0.916
Self-concept	Academic	7.1 (1.3)	6.7 (1.0)	7.4 (1.8)	7 (1.54)	0.042	0.460	0.911
	Social	6.5 (1.9)	5.8 (1.5)	6.5 (2.1)	6.7 (2)	0.287	0.403	0.014
	Emotional	5.9 (2.4)	6.0 (1.6)	6.1 (2.5)	5.8 (1.63)	0.673	0.961	0.612
	Family	7.6 (1.8)	7.8 (1.7)	7.4 (2.2)	7.4 (2.1)	0.606	0.589	0.064
	Physicist	5.3 (2.6)	4.7 (1.8)	5.6 (2.5)	5.4 (2.47)	0.108	0.486	0.268
GSDS total		10.3 (4.0)	9.9 (3.7)	9.2 (4.6)	9.3 (4.6)	0.647	0.501	0.400

Correlations between baseline and six-month assessments on various measures were notably stronger in the Individual Placement and Support (IPS) group than in the vocational rehabilitation (VR) group (GAF: r = 0.855 vs. 0.772; PANSS positive symptoms: r = 0.897 vs. 0.518; PANSS negative symptoms: r = 0.658 vs. 0.488; PANSS general psychopathology: r = 0.761 vs. 0.668; HADS total: r = 0.798 vs. 0.603). This pattern points to a closer link between participants' initial status and their later progress in the IPS condition.

Strong agreement (coefficients approaching 1) was evident between initial and follow-up scores on the GSDS domains, suggesting that neither employment intervention led to deterioration or substantial shifts in patients' conditions. No meaningful between-group differences emerged in this regard.

Analyses comparing study completers to those who withdrew revealed that dropouts displayed lower baseline scores on the PANSS negative symptoms and general psychopathology subscales, along with lower HADS depression scores. These results imply that participants with milder symptomatology were more prone to leaving the study early, while those with greater symptom severity were more likely to continue participation.

Employment results

Rates of competitive employment were substantially greater in the IPS arm, with 18 out of 24 participants (75.0%) securing jobs, versus only 3 out of 19 (15.8%) in the VR arm ($\chi^2 = 14.880$, $p < 0.001$). Logistic regression analysis showed that individuals in the IPS group had 16 times higher odds of achieving competitive employment compared to the VR group (95% CI 3.43–74.70; $p < 0.001$).

To examine the potential impact of employment attainment on mental health and functioning, additional repeated-measures ANOVA was performed **(Table 3)**. Gaining employment was linked to more pronounced gains in overall functioning (GAF) and quality of life across the follow-up period. Quality of life improved significantly in both employed and unemployed participants ($p = 0.026$), but the enhancement was markedly larger among those who became employed ($p = 0.043$). Likewise, GAF scores demonstrated significant overall improvement over time ($p = 0.001$) and clear differences between employed and unemployed subgroups ($p = 0.001$), with the most substantial progress occurring in participants who obtained jobs.

Table 3. Evaluation of Individual Placement and Support (IPS)/Vocational Rehabilitation (VR) strategies on evolution of mental health and functional outcomes (means and standard deviations), using repeated measures analysis of variance (RM-ANOVA) (Canary, Spain, 2024).

	Employment (n = 21)		**Non-employment (n = 22)**		**p -value**		
	Baseline	**6 months**	**Baseline**	**6 months**	**Time**	**Group**	**Time × group**
Quality of life	5.29 (0.78)	5.62 (0.74)	4.86 (0.94)	5.05 (0.95)	0.026	0.043	0.501
GAF	65.62 (10.89)	69.10 (8.84)	56.86 (7.25)	59.41 (8.05)	0.001	0.001	0.593
PANSS 14.7 (5)	11.1 (4.3)	15.3 (7.5)	11.7 (4.9)	<0.001	0.718	0.316	0.308

	19.7 (7)	13.9 (4.5)	18.5 (7.6)	13.2 (6.3)	<0.001	0.601	0.801	0.985
	36.4 (9.9)	29.2 (7.2)	37.2 (13.4)	28.8 (9.9)	<0.001	0.933	0.682	0.740
HADS	4.57 (3.37)	4.19 (2.66)	4.82 (4.02)	4.09 (2.84)	0.265	0.933	0.726	0.676
	4.62 (3.83)	3.62 (3.83)	4.05 (3.51)	3.95 (4.12)	0.186	0.908	0.269	0.485
	9.2 (6.1)	7.81 (5.4)	8.9 (6.9)	8.05 (6.6)	0.167	0.979	0.720	0.916
Self-concept	7.5 (1.5)	7.20 (1.3)	7 (1.7)	6.6 (1.33)	0.042	0.15	0.885	0.911
	6.5 (2.1)	6.5 (1.9)	6.4 (1.9)	6.1 (1.9)	0.401	0.632	0.511	0.014
	5.9 (2.3)	5.6 (1.5)	6.2 (2.6)	6.1 (1.7)	0.623	0.444	0.751	0.612
	7.6 (2.4)	7.6 (2.1)	7.4 (1.6)	7.5 (1.7)	0.636	0.795	0.851	0.064
	5.3 (2.3)	5.2 (2.4)	5.7 (2.7)	5.1 (2.1)	0.143	0.847	0.316	0.268
GSDS total		8.2 (4.9)	8.2 (4.8)	11.1 (3.4)	10.8 (3.2)	0.725	0.033	0.725

Regarding symptom changes, decreases were noted in PANSS subscale scores (positive, negative, and general psychopathology) over the follow-up period among participants both with and without jobs (all $p < 0.001$). No meaningful differences emerged between employed and unemployed individuals on these subscales ($p = 0.718$, $p = 0.601$, $p = 0.933$, respectively), suggesting that gaining employment did not provoke worsening of symptoms or lead to more hospital admissions.

Vocational rehabilitation approaches play a critical role in supporting recovery for individuals with severe mental disorders (SMD). Having a job promotes a sense of identity, independence, and social involvement, and from a human rights viewpoint, efforts must focus on dismantling systemic obstacles to enable equitable choices. Despite 60%–70% of individuals with SMD expressing a desire to be employed, rates of unemployment hover at 80%–90% [1, 35]. This gap stems not from diminished drive but from concerns over benefit loss, reduced self-efficacy, inadequate assistance from mental health systems [36, 37], discrimination, bureaucratic resistance, and insufficient policy investment.

The present randomized controlled trial demonstrated the effectiveness of the Individual Placement and Support (IPS) approach within a region marked by elevated unemployment. Those in the IPS arm secured competitive jobs at much higher rates (75% versus 16% in the traditional vocational rehabilitation [VR] group), in line with global research findings. These results mirror those reported by Drake *et al*. [38], who found IPS yielding 44% employment in European settings against 20% for conventional services, with superior performance in the United States and Australia. The wide-reaching utility of IPS is additionally supported by Brinchmann *et al*. [39].

The notable employment success here likely reflects robust partnerships among public mental health providers, SIMPROMI employment experts, and organizations advancing inclusion for people with disabilities. With reliable governmental funding and embedding within mental health frameworks, the Tenerife IPS initiative possesses key elements that probably drove its positive outcomes.

On clinical and functional measures, individuals receiving IPS exhibited more pronounced gains in overall functioning (GAF) and the social aspect of self-concept relative to the VR group, whereas improvements in symptom severity, anxiety, depression, and other self-concept areas were comparable across groups during the 6-month period. The GAF assessment encompasses various life areas, including work, which could explain the observed differences. Notably, those who attained competitive jobs—irrespective of assigned group—experienced larger enhancements in quality of life, aligning with observations from Wallström *et al*. [40]. In their randomized trial, Kukla and Bond [41] determined that mere involvement in supported employment does not broadly influence most non-work-related outcomes in SMD populations.

Assessing non-vocational results continues to pose difficulties owing to varying measurement tools in the literature. The current work drew from the EQOLISE study design [21], though outcomes can fluctuate based on regional economic factors [42]. Self-concept was included as a central measure here, distinguished from self-esteem. Stigma-related negative self-views, common in SMD, often undermine drive and community engagement [43]. Burns *et al*. [21] found no clinical

advantages for IPS over standard vocational services, whereas Frederick and VanderWeele [44] documented notable IPS impacts on non-vocational domains in randomized trials.

Job attainment further correlated with improved subjective well-being [11, 45, 46]. In this trial, within 6 months of starting employment, participants noted advances in social performance, daily activities, and overall quality of life. Moreover, working was tied to lower symptom levels, evidenced by declining PANSS scores without rises in hospital stays. Such patterns accord with work by Mueser *et al*. [47] and McGurk and Mueser [48], highlighting employment's role in alleviating negative symptoms and boosting function. Prior studies [21, 49] indicate that those in jobs display greater clinical steadiness and reduced admissions. Competitive work also elevates quality of life and self-esteem [50].

Job retention matters significantly. Ongoing employment beyond 90 days is associated with diminished symptoms and better functioning [21]. Here, gains in GAF, PANSS, and self-concept emerged across time in both arms but were more substantial among the employed. IPS supports enduring advantages, underscoring the value of extended monitoring. Extended competitive work, as shown by Drake *et al*. [51], helps maintain IPS's positive influences on mental health and functioning.

Certain study constraints warrant mention. The modest participant numbers limited power, particularly for non-primary endpoints. Analyses involved numerous variables without rigorous multiplicity adjustments, raising type I error potential. The 6-month observation window offered only initial insights, leaving longer-term job durability and effects unclear. A 31.7% attrition rate could introduce selection effects, despite minimal baseline disparities between retainers and dropouts. The unique service coordination in Tenerife may restrict applicability elsewhere. Concerns also arise from the short-term job contracts, meriting additional investigation. Incorporating qualitative methods like user interviews or group discussions could illuminate individual perspectives and experienced gains.

Conclusion

The IPS model proves practical and markedly successful in boosting competitive job placement for individuals with SMD, including in areas with substantial unemployment. Securing employment offers clear advantages for this population, improving clinical status, social performance, self-concept, and life quality, while avoiding symptom aggravation or heightened relapse. Public strategies ought to emphasize tailored assistance and ongoing resources to expand IPS adoption. Upcoming research involving multiple sites, bigger cohorts, prolonged tracking, and uniform assessment methods would better elucidate mental health and functional changes and verify employment's intermediary contribution to clinical and societal recovery.

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