Effectiveness of Individual Placement and Support for People With Severe Mental Illness in the Netherlands: A 30-Month Randomized Controlled Trial

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Objective: Whereas in the U.S. and Canada the Individual Placement and Support (IPS) model has proven to be highly effective in enhancing employment perspectives for persons with severe mental illnesses, the evidence base is less abundant in countries with a different socioeconomic climate. The aim of this study was to examine the effectiveness of IPS in the Dutch socioeconomic context.

Method: A multisite randomized controlled trial was performed following 151 persons with severe mental illnesses expressing an explicit wish for regular employment, comparing IPS with traditional vocational rehabilitation (TVR). Primary outcome was the proportion of persons who were competitively employed over a period of 30 months. Secondary outcomes were self-reported quality of life, self-esteem and mental health. Additionally, the impact of being engaged in competitive employment on these secondary outcomes was examined.

Results: In 30 months, 44% of IPS participants found competitive work, compared with 25% of participants supported by TVR. No direct effect of IPS on mental health, self-esteem or quality of life was found. Being competitively employed before follow-up measurements was significantly associated with an increase in mental health, self-esteem and quality of life.

Conclusions and Implications for Practice: This study strongly confirms that IPS is an effective method in helping people with severe mental illnesses find competitive work also in countries characterized by a relatively protective socioeconomic climate putting up unintended barriers to employment. The implementation of IPS on a larger scale seems warranted, and new studies are needed on the mechanisms through which IPS works.

Keywords: vocational rehabilitation, severe mental illnesses, supported employment, randomized controlled trial, long-term follow-up

The Individual Placement and Support (IPS) model offers standardized Supported Employment to improve employment prospects in persons with severe mental illnesses. Some key principles of IPS are: a focus on competitive employment, rapid placement with a minimum of assessment, training on the job instead of prevocational training and integration of vocational services with mental health care (Bond & Drake, 2012). Whereas in the U.S. IPS has proven to be the most effective vocational rehabilitation model...
to improve employment perspectives for persons with severe mental illness (Bond, Drake, & Becker, 2012; Kinoshita et al., 2013), the evidence base is less abundant in European countries with a different socioeconomic climate.

The question arises to what extent this approach, which is characterized by a strong emphasis on the preference of persons with severe mental illness for competitive employment, can be as successful in the West- and North-European countries with a less flexible labor market and a stronger social security system. An indication of how the effectiveness of the IPS model is influenced by socioeconomic contexts was found in the Eqolise study, in which six European countries participated (Burns et al., 2007). While that study confirmed overall IPS effectiveness, it also showed that IPS effectiveness was restrained in countries with a so-called “benefit trap,” where unemployment benefits offer a more secure income than potential jobs. Burns et al. (2007) also demonstrated that macroeconomic developments in the labor market influence IPS outcomes; for example, a higher availability of (new) jobs positively affects employment rates (see also Cook et al., 2006).

Because the Eqolise trial was not powered to test the effectiveness of IPS for the separate countries, new evidence is needed, particularly in countries as the Netherlands, where the benefit trap is a social reality and the employment opportunities are rather limited. In the U.K., with an economy comparable to the Netherlands, a 2-year follow-up pragmatic trial (the SWAN study) yielded ambivalent results. Only in the longer term was IPS more effective than the control intervention (Heslin et al., 2011), and employment rates were rather low in this trial (22% in 95 IPS respondents vs. 11% in 95 control respondents). Thus, the question remains whether long-term substantial positive results are to be generalized with IPS over all countries with a comparable socioeconomic context.

Several studies addressed the relation between IPS participation and relevant “nonvocational outcomes” such as general functioning, psychiatric symptoms, self-esteem and subjective quality of life. Although there were clinical concerns about the possible detrimental impact of job searching attempts and the efforts to hold a competitive job, no such negative effects were found (e.g., Kinoshita et al., 2013; Bond & Drake, 2012). On the other hand, contrary to hypotheses, only a few trials found positive effects on nonvocational outcomes of IPS participation compared with more traditional vocational rehabilitation (Bond, Becker, et al., 2001; Mueser et al., 2004; Latimer et al., 2006; Kinoshita et al., 2013). For example, the Eqolise study reported a significant reduction in hospital admissions (Burns et al., 2007).

Bond, Becker, et al. (2001) explained the lack of clear effects of IPS participation on nonvocational outcomes in trials by stating that employment is the active ingredient for achieving better nonvocational outcomes. Therefore, these authors suggested the analysis of nonvocational outcomes should focus on comparing employed and unemployed persons, rather than on enrollment in a supported employment program. However, other than a study of Bond, Resnick, et al. (2001) already included in the aforementioned publication of Bond, Becker, et al. (2001), only a few trials that were conducted afterward addressed both types of analyses (impact of condition and impact of employment on secondary outcomes) to elaborate on Bonds’ explanations (see Bond & Drake, 2012). One exception is the Eqolise study that showed that finding employment, and not IPS participation alone, correlated with an increase in global functioning, symptoms and social functioning (Burns et al., 2009). Kilian et al. (2012), analyzing data from the same study with more attention to the direction of the relationships between variables, found that, for IPS participants, employment led to less time spent in hospitals.

To establish whether the overall effectiveness of IPS over traditional vocational rehabilitation could be replicated in the Netherlands, a pragmatic, multisite randomized controlled trial was conducted. To shed more light on the long-term effects, a 30-month follow-up period was used, which is the longest trial follow-up period published with regard to IPS. The second aim of the study was to add insight into the possible (adversary or positive) secondary effects of both program participation (i.e., condition) and being employed on three nonvocational outcomes: mental health, self-esteem and subjective quality of life.

Method

The Scion study is designed as a pragmatic, multisite randomized controlled trial.

Participants and Settings

Between November 2005 and November 2007 study participants were recruited at four sites from regional community mental health care divisions specifically targeted at adult persons with severe mental illnesses. These potential participants were eligible if they met the following criteria: 1) age ranging from 18 to 65 years, 2) explicit wish for competitive employment and 3) willingness to give informed consent. Exclusion criteria were: 4) paid work at study entrance, 5) full-time hospitalization, 6) engagement in another professional vocational rehabilitation trajectory and 7) participant in another study with conflicting interests. All participants gave written informed consent before interview engagement in the study.

The mental health agencies operated in different, nonadjacent regions in the Netherlands with various degrees of urbanization. The teams in the study served approximately 2,000 clients in total, ranging from 300 to 800 per site.

Procedure

Clients of the participating mental health teams were informed about the study in various ways, for example, with flyers, and through local kickoff information meetings. To assess eligibility each client interested in participation and expressing a wish for paid employment was interviewed by independent local research coordinators. These professionals were trained to assess eligibility, and to inform those clients about the study requirements as well as the consequences of participation in both intervention arms. Clients who met the study criteria were accepted as participants of the study and referred for baseline assessment. Before the start of the baseline interviews participants were informed again and, only after a second check whether they had a clear notion of study consequences, participants were asked to sign informed consent. Each participant received €10 (approximately $14 U.S.) per completed interview.

After baseline assessment, participants were allocated to the two comparison services. Randomization was performed by an inde-
pended agency that sent the randomization outcomes to the re-
search team and the local research coordinators at once. A strati-
fied block randomization procedure was used, with site and
employment history (having had paid employment in the past 5
years yes or no) as stratification factors. Employment history was
selected for this purpose because this variable strongly predicts
positive employment outcomes in persons with severe mental
illnesses (Michon, Weeghel, Kroon, & Schene, 2005).

Interventions

IPS was implemented according to protocol (Drake, Bond, &
Becker, 2012), with employment specialists (referred to as IPS
workers) added to multidisciplinary community mental health
to teams for persons with severe mental illnesses, with a staff: client
ratio varying from 1:20 to 1:30. The majority of mental health
services and treatment offered by these outpatient teams were
provided in the community, employing assertive outreach. Team
staff consisted of psychiatrists, psychologists, community psychi-
atriac nurses and other personnel, for example, rehabilitation work-
ers.

Two IPS services were trained and monitored on model fidelity
as part of a study on IPS implementation in the Netherlands (Van
Erp et al., 2007), with experienced IPS supervisors and train the
trainers employed by a Dutch knowledge center that collaborates
with the Dartmouth Psychiatric Research Center. The two new
services were trained in the same way as part of the new study. In
every team IPS workers assisted people in getting regular jobs,
offered follow-along support, spent most of the time in the com-
unity and operated in close collaboration with the other commu-
nity mental health team members.

Traditional vocational rehabilitation (TVR) served as the control
condition and was facilitated by the mental health agency in a
separate rehabilitation center or by public services aimed at voca-
tional rehabilitation. In general these services offer a stepwise
vocational trajectory, putting much stronger emphasis on lengthy
assessment of individual competencies and on connecting to pre-
vocational activities such as voluntary jobs before placement in
regular jobs. These program characteristics are in contrast with the
rapid job search, very short assessment and minimum of prevoca-
tional training in IPS. Contrary to IPS workers the TVR staff did
not participate in the mental health teams. Often these differences
between IPS and TVR in mental health are being summarized as
an integrated place-then-train model as opposed to a separated
train-then-place model (Corrigan, Mueser, Bond, Drake, & Solo-

Model fidelity of IPS was evaluated at three time points using
the Quality of Supported Employment Implementation Scale
(QSEIS; Bond et al., 2002). The QSEIS consists of 33 items to be
scored on a five point scale. Several research team members were
trained in IPS fidelity assessment at Dartmouth Center. Each
assessment was done by two researchers according to protocol; all
scores were based on consensus. Fidelity quality was labeled as
low for scores ranged 1–3, moderate for 3–4 and good if above 4
(McHugo et al., 2007). Two of the four participating agencies
scored “good-high” on fidelity in every assessment, and two
scored “moderate.”

To monitor the expected contrast with the IPS services, the
control services were assessed once with the QSEIS during the
middle of the data collection phase. One of the centers with
moderate IPS fidelity also showed a minimal contrast with the
control condition: a 0.2 difference in QSEIS score. The three other
sites showed adequate fidelity contrasts in the two conditions: a
difference of one scale point or higher.

Measures

All outcome measures were prospectively assessed during a
30-month follow-up period at baseline and at time points after 6,
18 and 30 months. Interviewers were trained by the research team
and were blind for the conditions.

The main outcome in this study was the proportion of persons
who were competitively employed during the study follow-up.
This was dichotomously measured as having worked in a com-
petitive job yes or no for one day or more, replicating the main
publications on IPS effectiveness (Bond et al., 2012). Following
early RCTs on IPS, competitive employment was defined as
having a paid job in a company or organization in the regular
labor market, against prevailing wages, not set aside for persons
with a disability, that is, in an integrated work setting (e.g.,
Bond et al., 2012). Information was derived from interviews as
well as from employment records developed for the study, filled
out by the employment specialists. If no information was avail-
able from one or both of these two sources, the central case
manager was interviewed by telephone for employment infor-
mation.

Through the aforementioned employment records further infor-
mation was gathered about the amount of time spent by the
employment specialists to talk to the participants and to contact
relevant other actors (mental health practitioners, employers). This
information was used to gain insight in direct costs of both ser-
VICES, as part of a detailed economic evaluation conducted along-
side the trial, to assess the cost-effectiveness of IPS compared with
traditional vocational rehabilitation (to be published elsewhere).
Information was also gathered on the total number of days worked
in competitive employment and the average amount of days and
hours worked per week while employed.

For secondary outcomes standardized self-report questionnaires
were used: for quality of life the MANSA (Priebe, Huxley, Knight,
& Evans, 1999), for self-esteem the Rosenberg Self Esteem scale
(Rosenberg, 1969) and for mental health the Mental Health
Inventory-5 (Ware, Kosinski, & Gandek, 2000).

Sample Size and Power

Power analysis revealed that around 150 respondents were
needed to be able to detect a 20% difference in proportion of
participants finding competitive employment (Stata, pp. 0.05,
power .80), taking into account a sample attrition of 25%. This
difference estimation was based on the smallest difference mea-
sured in a randomized trial yielding a positive effect of IPS
(Lehman et al., 2002).

Analysis

Statistical analyses were performed using SPSS version 16 and
STATA version 11.1 (StataCorp, 2009). Overall an intention to
treat analysis was used, that is, participants were treated as allo-
cated to the study arms and kept included in the analysis regardless of whether they had received the allocated intervention or not. To evaluate randomization $T$ tests and $\chi^2$ tests were used. To replicate effectiveness in employment outcomes $\chi^2$ tests were used and a series of logistic regression analyses was applied to control for site and for differences between groups at baseline. Because of the differences between the sites in model fidelity and fidelity score contrast, the main outcome was also assessed controlling for the potential effects of these variables, coded as 0 (moderate fidelity) - 1 (good fidelity) and 0 (low contrast) - 1 (high contrast) respectively (site was left out in this analysis because of overlap with these two variables).

For the analysis over 30 months the main outcome was available for 150 of 151 participants. The missing value was coded as zero. To gain insight in the additional effects on mental health, self-esteem, and quality of life a series of mixed models linear regression analyses were applied to 1) evaluate time effects, a general effect of the condition and the interaction (condition x time) effects, and 2) evaluate whether an independent effect of being engaged in competitive employment on these secondary outcomes could be detected.

In this paper, information about the direct costs of the interventions involved will be provided. These direct costs will only be presented on a descriptive level, as the current study was not sufficiently powered for inferential statistics aimed at costs. Detailed information on overall societal costs and the balance between costs and effects will be presented elsewhere.

### Results

#### Participants

Figure 1 presents the flow of participants congruent with the consort diagram criteria (Schulz, Altman, & Moher, 2010). At baseline 151 participants were included: 71 in the IPS arm and 80 in the comparison arm. Response at the subsequent time points was 85%, 77% and 57% for T6, T18 and T30 months. IPS and TVR arms did neither differ in response/nonresponse ratio nor in nonresponse reasons.

TVR and IPS arms did not differ in sociodemographic or clinical aspects (see Table 1, for a selection of measured characteristics), except for a significant lower mean score on mental health at baseline in the IPS group compared with the TVR group.

#### Main Outcome

At 30 months significantly more participants in the IPS group had found competitive work compared with those in TVR: in IPS 44% participants had been engaged in competitive employment, in contrast to 25% in TVR ($\chi^2(1) = 5.61, p < .05$; see Table 2 for employment characteristics by condition). Logistic regression analysis revealed that the supremacy of IPS results remained significant after controlling for site and mental health at baseline ($OR = 2.5; CI 1.23–5.08$). IPS results also remained significant after specifically controlling for fidelity qualification (moderate vs. good) and contrast (low vs. high) and mental health at baseline ($OR = 2.38; CI 1.18–4.80$). There were no independent effects of fidelity qualification and fidelity contrast.

The additional effect of IPS was gained in the T6-T18 period, which is shown by the nonsignificant results at time point T6 (21% vs. 13%; $\chi^2(1) = 2.03, ns$) and the significant results at T18 (39% against 20%; $\chi^2(1) = 6.96, p < .01$).

On average participants in IPS worked for significantly more hours in competitive jobs as compared with clients in TVR (M 422 ± 920 vs. 237 ± 648, $t = 1.43, df = 146, p < .05$). Between the two subgroups of employed participants no differences were detected in average weekly hours (the workers had contracts of on average 22 hours per week) or the total amount of hours worked (291 days work on average in all workers - all separate different working periods summed up in case a person had found more than one job). In the IPS group, employed participants worked 287 days on average in total measured during follow-up.

#### Secondary Outcomes

This study did not find any relevant differences between the conditions alone in terms of changes in mental health, self-esteem, and quality of life, neither in a positive, nor in a negative direction. Both groups showed positive changes, with a stronger, but not significantly stronger, increase in mental health and quality of life in the IPS group.

Significant effects were found for being competitively employed on all three secondary outcomes. Being competitively employed at, or before the follow-up time points was significantly associated with an increase throughout follow-up in self-reported mental health, self-reported self-esteem and subjective quality of life concurrently measured at those follow-up points ($F$ values: 4.47; 6.0; 3.79; all $p$ values <.05; see Table 3).

#### Direct Costs of Vocational Rehabilitation

Mean costs of IPS versus TVR were €1,705 and €1,176, respectively ($SD$ ns: 1,781; 1,361). Restricted to participants who actually used the type of vocational services mean costs were €1,834 ($n = 66$) and €1,542 ($n = 61$) for IPS and TVR respectively. Inspection of the data revealed that the higher costs were mainly because of more contacts between IPS workers and mental health practitioners as a logical result of differences in model principles.

### Discussion

#### Main Findings

This study had two major aims: 1) examining evidence for effectiveness of IPS in countries with other socioeconomic characteristics than the VS, particularly in the longer term; and 2) exploring the influence of IPS, directly or through employment on other outcomes as mental health, self-esteem and quality of life.

First, the results confirm the overall effectiveness of IPS in terms of helping persons with severe mental illness find competitive paid employment, specifically in the Netherlands. In 30 months, 44% of IPS participants found competitive work, compared with 25% in participants supported by traditional vocational services. Second, participants in the IPS group reported neither a significant improvement nor worsening of mental health, self-esteem or quality of life, as compared with those involved in the traditional vocational services. However, being engaged in regular employment was asso-
associated with a positive impact over time considering self-reported mental health, self-esteem and quality of life.

**Limitations**

It appeared to be difficult for the programs involved to meet the IPS standards to a high degree. This finding corresponds with earlier results of an implementation study in the Netherlands (Van Erp et al., 2007). Nevertheless, two programs scored good fidelity and a third showed an adequate contrast between IPS and TVR. We found no evidence that differences in fidelity were associated with better outcomes. However, it could be expected that outcomes would have even been better and more clear-cut if all sites would have reached good to high fidelity as studies with more appropriate power in this respect indicate a strong relationship between high fidelity and better employment outcomes (Becker, Xie, McHugo, Halliday, & Martinez, 2006).

Following Consort recommendations we carried out intention to treat analyses. In case of the primary outcome we also followed the accompanying recommendation to make considerable efforts to gather data on the outcome, even for persons who dropped out. Henceforth there was only one missing value on the primary outcome variable (employment) regarding the 30-month period.
Table 1  
Participants: Socio demographic, Clinical Characteristics and Self-Report Measures at Baseline

<table>
<thead>
<tr>
<th></th>
<th>IPS</th>
<th>TVR</th>
</tr>
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<tbody>
<tr>
<td>Male (%)</td>
<td>73</td>
<td>75</td>
</tr>
<tr>
<td>Mean Age ± SD</td>
<td>34.1 ± 9.9</td>
<td>35.6 ± 11</td>
</tr>
<tr>
<td>Married/registered partners (%)</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Paid employment in past 5 years (%)</td>
<td>61</td>
<td>61</td>
</tr>
<tr>
<td>Worked competitively in past 5 years (%)</td>
<td>51</td>
<td>54</td>
</tr>
<tr>
<td>Mean # months worked in past 5 years ±SD</td>
<td>19.1 ± 15.2</td>
<td>19.6 ± 18.5</td>
</tr>
<tr>
<td>Ever admitted to mental health hospital (%)</td>
<td>72</td>
<td>76</td>
</tr>
<tr>
<td>Use of psychotropic medication in past 6 months (y/n)</td>
<td>79</td>
<td>80</td>
</tr>
<tr>
<td>Psychotic disorder (%)</td>
<td>55</td>
<td>64</td>
</tr>
<tr>
<td>Mean score MANSA (self-reported Quality of Life) ±SD</td>
<td>4.1 ± .86</td>
<td>4.3 ± .86</td>
</tr>
<tr>
<td>Mean score RSE (self-reported self-esteem) ±SD</td>
<td>1.8 ± .51</td>
<td>1.9 ± .47</td>
</tr>
<tr>
<td>Mean score MHI-5 (self-reported mental health) ±SD</td>
<td>56.0 ± 18.5</td>
<td>63.4 ± 18.3</td>
</tr>
</tbody>
</table>

Note. IPS = Individual Placement & Support; TVR = Traditional Vocational Rehabilitation. 

Dropout during the first two waves (6 and 18 months) was higher than in some IPS trials but comparable to other IPS trials (Lehman et al., 2002) or the RCT on various Supported Employment models (Cook et al., 2005). Differences in dropout are probably partly because of variations in study recruitment procedures (Cook et al., 2005). Compared with the exemplary New Hampshire study (Drake et al., 1999) that used obligatory induction groups to inform potential participants in two group sessions about IPS and topics as social benefit consequences, in our study participants enrolled relatively easily. Maybe partly for this reason, in the Scion study a considerable dropout occurred in the fourth wave (43%). As far as we could monitor, dropout was not associated with the IPS program. Closer inspection of the answers that were given by participants who refused did not reveal particular dominant explanations; rather a variety of reasons emerged. For instance, motivation to stop being a research participant pointed to good functioning according to some (“I’m doing fine, and I don’t want to be identified as a mental health client anymore”) as well as it did to poor functioning as experienced by others.

Implications

The study adds to the evidence of IPS being an effective method to help people with severe mental illness find competitive jobs in European countries with a socioeconomical climate that differs from the United States. The main outcome percentages for IPS found here are also congruent with the overall findings in similar countries, as Bond et al. (2012) report employment percentages around 47% for Canadian and European countries. Because of the relatively long follow-up period, this study also mounts to the evidence indicating sustainability of the IPS effects on the medium-longer term.

The findings of this study warrant improvement of the current situation by implementation of IPS. Today, none of the mental health agencies in the Netherlands have implemented the model on a comprehensive scale, that is, with a capacity that meets IPS standards as well as needs in the complete group of participants involved, for example, having well-trained IPS workers in all multidisciplinary community mental health teams in sufficient Full-Time Equivalents. The study justifies actions currently undertaken in the Netherlands to substantially improve the extent to which IPS is implemented in this country, for example, by taking part in the Dartmouth Johnson & Johnson supported employment learning collaborative (Becker, Lynde, & Swanson, 2008).

As in many other studies, no indication was found for a direct positive relationship between participation in IPS and increased self-esteem, quality of life and perceived mental health (Burns et al., 2009; Kinoshita et al., 2013). It may well be that substantial and sustaining positive changes in self-evaluative aspects such as considered in this study only occur in participants who can rely on adequate coaching at the proper time and who keep steady or continue to grow concerning their employability. The findings of this study do suggest, however, that IPS has beneficial side effects on nonvocational outcomes as self-esteem, through employment, that is, only in participants who actually found competitive work. In general the association between well-being or “self-evaluations” and work functioning was already well established (e.g., Judge & Bono, 2001) and confirmed by longitudinal studies on psychiatric vocational rehabilitation exploring this relationship (e.g., Kukla, Bond, & Xie, 2012). To conclude, this study mounts to the evidence for the existence of the mechanism suspected here, that is, that through providing employment experiences Supported Employment does have clear beneficial effects on well-being and quality of life. Therefore, the study seems to warrant incorporating and implementing IPS as part of the regular (mental) health package offered to clients with severe psychiatric conditions.

Conclusion

This study strongly confirms that the IPS model of Supported Employment is an effective method in helping people with severe...
mental illnesses find competitive work. The study provides extra evidence that IPS also yields positive outcomes in European countries characterized by a relatively protective socioeconomic climate putting up unintended barriers to employment. It further suggests that the better outcomes in IPS come with beneficial effects on nonvocational outcomes as mental health, self-esteem and quality of life, specifically for participants who find employment. New studies are needed, especially on the effects of employment on self-evaluative aspects and the efficient and effective implementation of IPS within regular mental health systems.

References


Notes. N = Number in analysis (response), M = Mean, SD = Standard Deviation; IPS = Individual Placement & Support; TVR = Traditional Vocational Rehabilitation.

* i.e., competitively employed (or not) within the follow-up period preceding or at the specific time point.

* exact p = .047

### Table 3

**Effect of Competitive Employment on Secondary Outcomes**

<table>
<thead>
<tr>
<th>Scale (range)</th>
<th>Comp. Employed&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Not Comp. Employed&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
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<tbody>
<tr>
<td><strong>Mental health (MH; 0–100)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>—</td>
<td>151</td>
</tr>
<tr>
<td>At 6 months</td>
<td>21</td>
<td>60.8 (11.6)</td>
</tr>
<tr>
<td>At 18 months</td>
<td>27</td>
<td>64.0 (17.9)</td>
</tr>
<tr>
<td>At 30 months</td>
<td>19</td>
<td>66.7 (19.4)</td>
</tr>
<tr>
<td><strong>Self-esteem (RSE; 1–4)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>—</td>
<td>150</td>
</tr>
<tr>
<td>At 6 months</td>
<td>21</td>
<td>1.91 (0.5)</td>
</tr>
<tr>
<td>At 18 months</td>
<td>27</td>
<td>2.05 (0.5)</td>
</tr>
<tr>
<td>At 30 months</td>
<td>19</td>
<td>2.27 (0.5)</td>
</tr>
<tr>
<td><strong>Quality of life (MANSA; 1–7)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>—</td>
<td>151</td>
</tr>
<tr>
<td>At 6 months</td>
<td>21</td>
<td>4.36 (0.7)</td>
</tr>
<tr>
<td>At 18 months</td>
<td>27</td>
<td>4.61 (0.8)</td>
</tr>
<tr>
<td>At 30 months</td>
<td>19</td>
<td>4.77 (0.9)</td>
</tr>
</tbody>
</table>

**Notes**

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- * i.e., competitively employed (or not) within the follow-up period preceding or at the specific time point.
- * exact p = .047

**Effectiveness IPS – 30-MONTH RCT**


Heslin, M., Howard, L., Leese, M., McCrone, P., Rice, C., Jarrett, M.,…
Thornicroft, G. (2011). Randomised controlled trial of supported em-
ployment in England: 2 year follow-up of the Supported Work And
Needs (SWAN) study. World Psychiatry, 10, 132–137.
traits—self-esteem, generalized self-efficacy, locus of control, and emo-
tional stability—with job satisfaction and job performance: A meta-
Kilian, R., Lauber, C., Kalkan, R., Dorn, W., Rössler, W., Wiersma, D.,…
Becker, T. (2012). The relationships between employment, clinical
status, and psychiatric hospitalisation in patients with schizophrenia
receiving either IPS or a conventional vocational rehabilitation pro-
doi:10.1007/s00127-011-0451-z
Kinoshita, Y., Furukawa, T. A., Kinoshita, K., Honyashiki, M., Omori,
adults with severe mental illness. Cochrane Database of Systematic
.CD008297.pub2
Kukla, M., Bond, G. R., & Xie, H. (2012). A prospective investigation of
work and nonvocational outcomes in adults with severe mental illness.
Journal of Nervous and Mental Disease, 200, 214–222. doi:10.1097/
NMD.0b013e318247cb29
Latimer, E. A., Lecomte, T., Becker, D. R., Drake, R. E., Duclos, I., Piat,
M.,… Xie, H. (2006). Generalisability of the individual placement and
support model of supported employment: Results of a Canadian ran-
doi:10.1192/bjp.bp.105.012641
Lehman, A. F., Goldberg, R., Dixon, L. B., McNary, S., Postrado, L.,
Hackman, A., & McDonnell, K. (2002). Improving employment out-
comes for persons with severe mental illnesses. Archives of General
McHugo, G. J., Drake, R. E., Whitley, R., Bond, G. R., Campbell, K.,
Rapp, C. A.,… Finnerty, M. T. (2007). Fidelity outcomes in the
national implementing evidence-based practices project. Psychiatric
Services, 58, 1279–1284. doi:10.1176/appi.ps.58.10.1279
related predictors of employment outcomes after participation in psychi-
atria vocational rehabilitation programmes; a systematic review. Social
Psychiatry & Psychiatric Epidemiology, 40, 408–416. doi:10.1007/
so0127-805-0910-5
Mueser, K. T., Clark, R. E., Haines, M., Drake, R. E., McHugo, G. J.,
Bond, G. R.,… Swain, K. (2004). The Hartford study of supported
employment for persons with severe mental illness. Journal of Consult-
ing and Clinical Psychology, 72, 479–490. doi:10.1037/0022-006X.72
.3.479
Priebe, S., Huxley, P., Knight, S., & Evans, S. (1999). Application and
results of the Manchester Short Assessment of Quality of Life (MANS).
International Journal of Social Psychiatry, 45, 7–12. doi:
10.1177/002076409904500102
CONSORT 2010 Statement: Updated guidelines for reporting parallel
group randomised trials. British Medical Journal, 340, c332. doi:
10.1136/bmj.c332
StataCorp. (2009). Stata Statistical Software: Release 11. College Station,
TX: StataCorp LP.
Van Erp, N. H. J., Giesen, F. B. M., Van Weeghel, J., Kroon, H., Michon,
implementing supported employment in the Netherlands. Psychiatric
Services, 58, 1421–1426. doi:10.1176/appi.ps.58.11.1421
Ware, J., Kosinski, M., & Gandek, B. (2000). SF-36 health survey:

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