

**Feasibility and effectiveness of  
„Individual Placement and Support“(IPS) in Germany**

Preliminary Results 2015-2018  
Supported Employment-Team Reichenau

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## **Abstract**

**Background:** “Individual placement and Support” (IPS) refers to specific method of vocational rehabilitation for clients with severe mental illness that seeks for rapid placement on the general labor market and long-term support for clients and employers (place-train approach). Although an overwhelming evidence base has demonstrated its superiority compared to prevocational training in sheltered environments (train-place approach), it has not been established as regular funded rehabilitation form in Germany. In 2015 the Center of Psychiatry Reichenau/Germany established an IPS-project area to explore the potential of IPS in improving vocational rehabilitation in its catchment area. **Aim:** 1.) To explore feasibility, acceptance, safety and efficacy in Germany, 2.) to investigate whether IPS increases employment rates compared to established rehabilitation services in Germany. **Method:** In this preliminary report 80 IPS-clients and 19 controls were followed up to 18 months. Within a controlled trial 21 younger clients with schizophrenia spectrum conditions were compared to 19 controls that received “rehabilitation as usual”. **Results:** Between 67.9% (finding a job) and 76.4% (maintaining a job) attained jobs. In the controlled trial 81.1% of the IPS-group were working compared to 21.1% in the control group. Sustainable jobs were found by 38.1% (finding a job), 76.5% (maintaining a job) and 46.6% vs. 0% (IPS-group vs. controls). There were no differences in illness days and hospital days. Overall dropout rate from IPS was 15.1%. 52% of those who attained employment was below 5000€ in a standardized year. **Conclusions:** IPS proved feasible, accepted and with the same employment rates that are comparable to international studies. The controlled trial demonstrated its superiority compared to rehabilitation as usual in our catchment area.

## **Introduction**

„Individual Placement and Support“ (IPS; Becker & Drake, 1993) is a vocational rehabilitation-approach for patients with severe mental illness. In contrast to most methods of vocational rehabilitation, IPS strives for rapid employment on the general labor market without prevocational training. Instead clients and employers receive ongoing job-related support, e.g. in adapting job demands to personal needs or solving interpersonal conflicts (place-train approach). Even though a vast number of empirical studies have established its superior efficacy relative to train-place approaches in different countries and socio-economic contexts (e.g. Kinoshita et al., 2013; Bond et al., 2012; Burns & Catty, 2008), IPS has not been implemented as a regularly funded method of vocational rehabilitation in Germany. Among the reasons are doubts about to what extent findings from other countries can be generalized to Germany. Germany maintains a highly sophisticated rehabilitation system with numerous services that presumably serve multiple needs and demands. However, with some variation, all vocational services place great emphasis on prevocational training. As the established rehabilitation services have refrained from investigating the efficacy of their methods with rigorous methodology, there is virtually no empirical basis for decision makers to draw from.

In 2015 an IPS-project in Constance/ Germany was initiated and funded by the Center for Psychiatry Reichenau to improve psychiatric rehabilitation within its catchment area. Accordingly, the accompanying evaluation study aimed 1.) to demonstrate the applicability, acceptance, safety of IPS in Germany and 2.) to investigate whether IPS as an add-on to the existing rehabilitation services would improve rehabilitation in the Reichenau catchment area. With respect to the first objective all clients were followed up for 18 months. Service related (e.g. employment rates, worked days, dropout rates) and clinical data (e.g. sick days, hospital days) were compared to those obtained in other countries. To establish IPS-efficacy as an additional rehabilitation service in the Reichenau catchment area, we compared an IPS-group to a control group of “rehabilitation as

usual”, that is, clients that could not be included in the IPS-project, because they lived outside a 30 km radius from the hospital. Instead they were supported locally by available rehabilitation services. For this controlled trial we chose young patients with schizophrenia spectrum conditions, a main target group of vocational services with a particular high risk of disability and poor social and vocational outcome.

## **Method**

**IPS-Project Reichenau** includes 3 job coaches (2.3 full-time jobs). The IPS-fidelity scale (Bond et al., 1997) was monthly assessed with values between 65-67/ 70 indicating good to excellent fidelity.

## **Participants**

There were no exclusion criteria beyond the availability of places. Clients were recruited from the psychiatric hospital, through psychiatrists in residence or by self-referral. Clients in the controlled trial had to meet the following requirements: Primary diagnosis of a schizophrenic psychoses (ICD-10: F2), age < 30 *or* first admission. Clients from other districts were assigned to the control group. The time in vocational training service was not part of the 18-month study period.

For this preliminary report we had data of 80 clients and 19 control persons available. 50% had already finished 18-month study period, 75% were more than 12 months into the program. Participants were clustered into various groups of interest: Finding a job ( $n = 64$ ), maintaining a job ( $n = 17$ ); for the controlled trial (young patients with schizophrenia) there were 21 patients in the IPS-group and 19 in the control group. Table 1 contains relevant demographic and clinical data for the total sample. More than 50% of the participants were diagnosed with a schizophrenia spectrum diagnoses (ICD-10: F2), 15% were active substance users. The age range was between 18 and 56 years, 20% had a disability status, 30% had not completed an apprenticeship, 40% were not living

independently. The demographic and clinical data of the controlled trial can be found in table 2.

There were no significant differences between IPS and control group.

**Table 1:** Clinical and demographic data of all IPS-clients ( $N = 80$ )

Male gender	46 (57.5%)
Age	33.44 (10.23) [18-56]
Diagnosis	
<i>Psychosis (ICD-10: F2)</i>	43 (53.8%)
<i>Bipolar (F31.2)</i>	6 (7.5%)
<i>Depression (F32/F33)</i>	28 (34%)
<i>Personality disorder (F6)</i>	3 (3.8%)
Current substance abuse (F1)	13 (16.3%)
Additional comorbidity (F)	8 (10%)
Duration of illness	
< 1 year	3 (3.8%)
1-2 years	13 (16.3%)
2-5 years	12 (15.0%)
5-10 years	33 (41.3%)
10-15 years	18 (22.5%)
> 15 years	1 (1.3%)
School education	
<i>College prep</i>	30 (37.5%)
<i>High school graduate</i>	3 (3.8%)
<i>middle school</i>	34 (42.5%)
<i>Secondary school</i>	12 (15.0%)
Professional status	
<i>College education</i>	10 (12.5%)
<i>Apprenticeship</i>	39 (48.8%)
<i>Nothing</i>	31 (38.8%)
Legal guardian	16 (20.0%)
Disability Status	15 (18.8%)
Income	
<i>No income/ Parents</i>	15 (18.8%)
<i>Unemployment Benefits</i>	24 (30.0%)
<i>Healthcare Benefit</i>	27 (33.8%)
<i>Pension/ Social Security</i>	11 (13.8%)
<i>own financial assets</i>	2 (2.5%)
<b>Unemployment</b> > 1 year	13 (20.3%)
Living	
<i>Independent living</i>	49 (61.3%)
<i>Parents</i>	21 (26.3%)
<i>Assisted living</i>	10 (12.5%)

**Note:** Depicted are means (SD) or frequencies (%)

**Table 2:** Clinical and demographic data of the controlled trial of younger clients with schizophrenia spectrum conditions

	Controls ( <i>n</i> = 19)	IPS ( <i>n</i> = 22)	
Male Gender	14 (73,7%)	15 (68,2%)	$\chi^2(1) = 0,15; p = ,70$
Age	24,89 (4,97)	27,41 (5,52)	$t(39) = 1,52; p = ,14$
Diagnosis (ICD-10)			
<i>F2</i>	12	18	$\chi^2(2) = 3,11; p = ,21$
<i>F25</i>	5	4	
<i>F31</i>	2	0	
Comorbidity	1 (5.3%)	1 (4.5%)	$\chi^2(1) = 0,01; p = ,92$
Current substance abuse	4 (21.1%)	6 (27.3%)	$\chi^2(1) = 1,42; p = ,70$
Illness duration			
0-2 years	6 (31.5%)	9 (40.1%)	$\chi^2(2) = 4,22; p = ,23$
2-5 years	9 (47.4%)	6 (27.3%)	
5-10 years	4 (21.1%)	7 (31.8%)	
Completed apprenticeship	5 (26.3%)	11 (50%)	
School			
<i>College prep</i>	4 (21.1%)	9 (40.9%)	$\chi^2(3) = 1,86; p = ,60$
<i>High school graduate</i>	1 (5.3%)	1 (4.5%)	
<i>middle school</i>	7 (38.8%)	6 (27.3%)	
<i>Secondary school</i>	7 (38.8%)	6 (27.3%)	
Living			
Assisted living	1 (5.3%)	0 (0%)	$\chi^2(2) = 2,50; p = ,28$
Parents	13 (68.4%)	12 (54.5%)	
Independent	5 (26.3%)	10 (45.5%)	

**Notes:** Cells contain means (SD) or frequencies (%)

### Data Collection and Statistical Analysis

Demographic and clinical data were obtained through a structured interview. Vocational and IPS-data were (e.g. worked hours and days, loan, frequency and duration of IPS-support) were collected on a monthly basis. Because duration of IPS support varied, raw data were annualized, i.e. transformed into a standard year. Several outcome criteria were calculated: Frequency of participant that 1.) were employed for at least one day (Burns et al., 2008), 2.) were employed for at least two months with more than 20 hours per week (Bond et al., 2012). In addition, we calculated the proportion of those attained *sustainable* employment. A job was deemed sustainable, when it included regular social security fees (health care and unemployment fees) within a contract for at least a year that extended beyond the study period.

Employment related outcome variables were compared to results from international studies. As a benchmark we used the studies of Bond et al (2012), which summarizes results mainly from

the US and English speaking countries, and the EQOLIZE-study (Burns et al., 2008) with data from European countries, among them Germany, Switzerland and the Netherlands. Within the controlled trial statistical comparisons were made using *t*-tests and  $\chi^2$ -tests with Alpha = .05.

## Results

We will first report employment frequencies for the total group stratified for the conditions *finding a job* and *maintaining a job* as well as for the controlled trial *IPS vs. controls* involving younger participants with schizophrenia spectrum diagnosis. After that additional quality criteria, such as frequency and duration of IPS-support, sick days, hospital days will be reviewed.

### 1.) Employment rates on the general labor market

Table 3 provides an overview of the employment rates in different conditions, table 4 contains information about the employment rates given from the benchmark studies of Bond, Drake and Becker (2012) as well of Burns and Catty (2008).

**Table 3:** Employment rates by condition

	Finding a job ( <i>n</i> = 64)	Maintaining a job ( <i>n</i> = 17)	IPS for Young Patients with Schizophrenia Spectrum Disorders		
			IPS <sup>1</sup> ( <i>n</i> = 21)	CG ( <i>n</i> = 19)	IPS vs. CG
<i>Quantity of employed work</i>					
Days on the job	59.6 (67.9)	120.3 (104.1)	75.5 (69.9)	7.3 (21.8)	<i>t</i> (25,5) = 4.08***
Hours on the job	342.6 (434.9)	608.7 (582.4)	386.9 (448.1)	58.9 (176.0)	<i>t</i> (28,2) = 3.16**
<i>Employment rates</i>					
> 1 day on the job	35 (54.7%)	13 (76.4%)	18 (81.8%)	4 (21.1%)	$\chi^2(1) = 15.20$ ***
> 2 months; > 20h/ week	25 (39.1%)	10 (58.8%)	12 (54%)	4 (21.1%)	$\chi^2(1) = 4.80$ *
< 2 months; < 20h/ week	10 (15.6%)	3 (17.6%)	6 (27.3%)	0	$\chi^2(1) = 6.10$ *
Sustained employed <sup>2</sup>	24 (38.1%)	13 (76.4%)	10 (47.6%)	0	$\chi^2(1) = 12.62$ **

**Note:** Cells contain means (SD) or frequencies (%); \* *p* < .05; \*\**p* < .01; \*\*\**p* < .001

**Table 4:** Employment rates from international IPS- studies

	<b>Bond et al. (2012)<sup>1</sup></b>	<b>EQOLIZE<sup>2</sup></b>
	EG/KG	EG/KG
>1 day on the job	58.9% / 23.2%	54.5%/27.6%
> 20h/week; > 2 months	43 % / 14.2%	-
Hours/ Year	284.3/ 86.1	285.7/ 79.3
Days/ Year	100 / 96.5	86.7/20.3
Days missing from work	-	20.1 /31.3

**Notes:**

<sup>1</sup>Bond, G. R., Drake, R. E., & Becker, D. R. (2012). Generalizability of the Individual Placement and Support (IPS) model of supported employment outside the US. *World Psychiatry: Official Journal of the World Psychiatric Association (WPA)*, *11*, 32–39. <sup>2</sup>Burns, T., & Catty, J. (2008). IPS in Europe: the EQOLISE trial. *Psychiatric rehabilitation journal*, *31*(4), 313–7.

Between 57,4% (*finding a job*) und 76% (*maintaining a job*) were employed for at least one day. Within the controlled trial the respective rates were 81,8% (IPS) and 21,1% (CG). All employment measures were roughly comparable to those reported in the benchmark studies. In the controlled study (*young patients with schizophrenia spectrum diagnosis*) the IPS- group was superior on all indicators. The IPS-group worked on more days ( $p < 001$ ), more hours ( $p < .01$ ). In addition, the proportion of clients working for at least 20 hours per week for more than two months was higher ( $p < .05$ ). Likewise, sustainable employment was more frequently achieved ( $p = .001$ ).

**2.) Additional work related outcome variables**

For the total group we found that 72% were employed 1-2 times within the study period (table 4). There was an average of 15 sick days within the standardized year which is lower than in the EQOLIZE-study. 55.8% of those attaining employment did not miss a single day, while 20% had more than 18 sick days. In comparison, the average number of sick days in the general population 2017 was 18 per year. Overall psychiatric hospital treatment occurred in 42.7 % ( $M = 20.4$  days). There was no significant difference between those who attained work and those who did not. Likewise, hospital treatment days did not differ between IPS-clients and controls in the controlled trial.

Those who attained employment started working after an average of 152 days; 40% had

achieved employment within the first 100 days.

The average frequency of contact with the IPS-coach was 30 within the standardized year. Average duration was 24.9 hours, but with considerable variation.

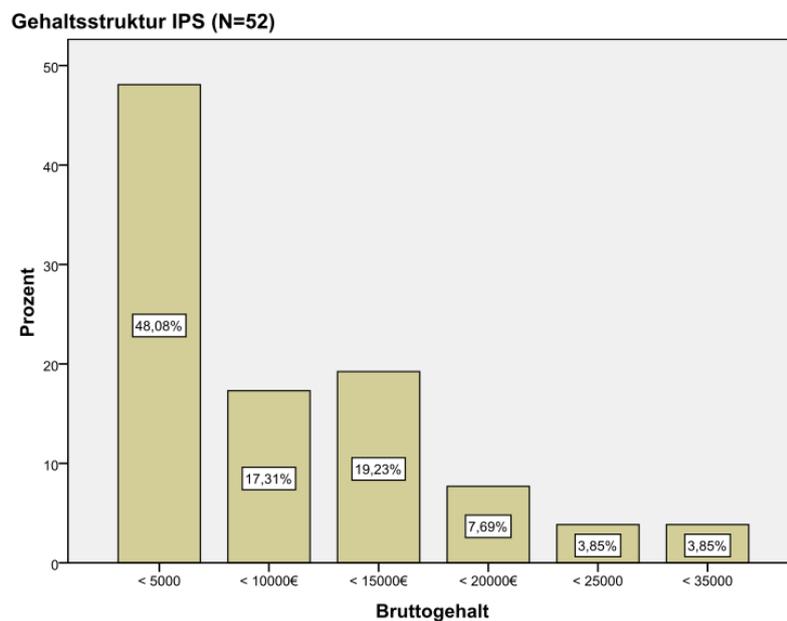
45% of the IPS-processes ended regularly. 15.1% of the clients can be considered as dropouts in a strict sense, that is a termination for reasons directly related to IPS. However, when including premature termination for other reasons, such as moving to a different area or pregnancy, then dropout rate increases to 26.4%. Still these numbers are substantially lower than in most other forms of vocational rehabilitation in Germany.

Finally, information about the income were available for 52 clients (graph 2). Of those 40 had a regular employment including social security fees (20 had full time jobs), 12 had mini jobs (usually restricted for 450€/month and with less social security fees included). 48% earned less than € 5.000 in the standardized year, 15% earned more than 15%.

**Table 4:** Additional work related outcome variables for the total group

<i>Number of jobs per client (n=80)</i>	
0	18 (22.5%)
1	44 (55.0%)
2	14 (17.5%)
>2	4 (5.1%)
<i>Sick days (n=43)</i>	
Sick days	15.02 (36.71)
No sick days	24 (55.8%)
Sick days < 18	35 (81.4%)
<i>Inpatient treatment (n=80)</i>	
Treatment days	20.64 (36,16)
No inpatient treatment	44 (57.1%)
< 30 treatment days	61 (76.2%)
<i>Employment (n= 43)</i>	
Days till first employment	152.93 (36.71)
< 100 days till first employment	18 (39.5%)
<i>IPS-coaching (n= 80)</i>	
Frequency	30,09 (10,96) / range: 9,0 - 61,7
Duration (h)	24,79 (8,79) / range: 3,7 - 44,6
<i>Terminations (n=80)</i>	
Regular	36 (45.0%)
College	1 (1.2%)
transferred into another form of rehabilitation	3 (3.80%)
Moved away	5 (6.3%)
Overchallenged	7 (8.8%)
Unclear reasons	5 (6.3%)

**Note:** Cells contain mean (SD) or frequencies (%).



**Graph 2:** Average standardized income of those clients who attained work (N = 52)

## Discussion

This report summarizes the main preliminary results about the feasibility and effectivity of IPS in Constance/ Germany. A total of 80 clients and 19 controls were included in the analysis. Between 54.7-81.8% attained employment within the 18-month study period. The proportion of those who worked at least 20h/ week for at least 2 months varied between 39.1% (*finding a job*), 58.5% (*maintaining a job*) and 54% (young clients with schizophrenia spectrum conditions;  $n = 21$ ). These numbers appear roughly comparable with the results obtained in the US and other English speaking countries (Bond et al., 2012) and in Europe (Burns & Catty, 2008). More clinically relevant, the frequency of IPS-clients attaining a sustainable job, roughly a regular job with full social security coverage, with a contract for at least 12 months and extending beyond the end of the study period, was 38.1% (*finding a job*), 76.4% (*maintaining a job*) and 46.6% (*IPS for young patients with schizophrenia spectrum conditions*) vs. 0% (*controls*). This underlines the feasibility of IPS in Germany. In addition, sick days were low with 42% not missing a single day. Moreover, IPS did not seem to intensify hospital inpatient treatment, again refuting the frequent belief that the general labor market may overstrain those with severe mental illness. Furthermore, IPS was well accepted by the clients with (depending on definition) 15.1-26.4% dropping out of the IPS-service prematurely. In comparison, common train-place rehabilitation services in Germany report dropout rates from 38% (“Unterstützte Beschäftigung”<sup>1</sup>) to 83% (RPK) (Gühne & Riedel-Heller, 2015).

The controlled trial compared IPS for clients with schizophrenia spectrum conditions ( $n = 21$ ) with a control group ( $n = 19$ ) from neighboring districts who were supported by the locally available services. IPS-clients scored significantly better on all outcome variables. They were more frequently employed (81.8% vs. 7.3%), more frequently employed with a workload of at least 20 hours/week over at least 2 months (54% vs. 21%) and attained more frequently a sustainable job (47%

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<sup>1</sup> “Unterstützte Beschäftigung” refers to a form of supported employment increasingly prevalent in Germany. Although it contains elements of IPS, namely need-based support on the general labor market, it is not comparable to IPS, e.g. work on the general labor market is conceptualized as an long-term unpaid internship that is not necessarily based on the clients preference.

vs. 0%). The IPS-group worked significantly more days (75.5 vs. 7.3) and hours (386.9 vs. 176.0), while not causing more sick days or hospital days.

Importantly, we did not contrast IPS with a specific other form of rehabilitation, rather we compared IPS with “rehabilitation as usual”, that is with the services that are usually offered young patients with schizophrenia. Therefore, a glimpse at the fate of the control group provides at least some insight into the reality of vocational rehabilitation: 9 clients began a sophisticated full-time train-place rehabilitation in a specialized center, 1 client chose voluntary work in a Cafe for patients with mental disability, 1 client started an apprenticeship in a specialized sheltered workshop. Depressingly, 9 did not even start a vocational rehabilitation, but dropped out from the specialized rehabilitation agencies out of frustration about the long and seemingly non-transparent application and funding process. Of those who received a form of rehabilitation, no one had attained any form of employment 18 months later. Ironically, the four jobs in the control group were exclusively obtained by those that had dropped out of the official services that are meant to provide vocational rehabilitation. While our observations are not representative, they nonetheless do point to a number of potential obstacles that need to be overcome when planning vocational rehabilitation. One is the lengthy and often non-transparent application process which does regularly require help by social workers as well as ongoing motivation on behalf of the client. The second barrier that clients often reported was the lack of support after the rehabilitation had ended. Several clients reported the wish for ongoing support in application and maintenance of a job.

Even though IPS seems to rectify some of these inherent problems, it is important to note that many jobs yielded only a limited salary, clearly insufficient to afford independent living. Although a substantial proportion of clients attained a sustainable job (which offers the potential for positive future job developments), many of those with more severe levels of disability may be confined to simple jobs and additional funding from social security services. That integration is possible even with severe disability is good news, but also points to the necessity to provide long-

term need-based support (akin to IPS) to maintain jobs and secure a rich life within the community.

In summary, our results underscore the applicability, effectiveness, acceptance and safety of IPS in Germany. Our preliminary results are in support with national and international guidelines that advocate the implementation of IPS-services in Germany.

**Limitations:** Apart from the results being preliminary, there are several cautionary comments in order: 1.) The group assignment was not fully randomized and not blinded, introducing the potential for bias. However, we found no evidence for confounding, because both groups did not differ significantly on clinical or demographic variables. Furthermore, the neighboring districts are roughly comparable on demographic factors such as population, unemployment rate and rehabilitation services. 2.) As we did not choose a specific other rehabilitation method for comparison, this precludes any conjecture about the relative effectiveness of IPS in relation to other specific forms of rehabilitation, more often as not, all controls completed alternative rehabilitation services. However, there is little empirical reason to believe that the different train-place services that are available for the control group differ regarding their effectiveness. Moreover, assignment to different forms of vocational rehabilitation does usually not happen on the grounds of certain objective indicators but on availability, preference or intuition. Finally, the fact that our results are in line with other studies, adds to the validity of our results and our conclusions.

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