

# Implementation of Individual Placement and Support for individuals with severe mental illness

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VRIJE UNIVERSITEIT

## **Implementation of Individual Placement and Support for individuals with severe mental illness**

ACADEMISCH PROEFSCHRIFT

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# 1

**General introduction**



## Severe mental illness: employment and impact on society

*Woman, 39 years, employed 20 hours per week: "I just want to lead a life [...]. And work is a part of that for me [...] Well, I feel human again, you could say, I just feel normal [...]. I feel valued again, and people address you for the things you can do; maybe you can't do everything equally well, but you learn new things, and people treat you just like a normal person."*

*Man, 42 years, employed 24 hours per week: "You are simply more stable because you have a job, because of that structure and [...] you also feel stronger because you are more or less earning your own money again, having colleagues, and building a network there. Yes, work is very important."*

The quotes above are from two individuals with a competitive job, diagnosed with a severe mental illness (SMI) and illustrate the importance of employment for the recovery of people with SMI [1-3].

Different definitions of severe mental illness (SMI) are used in the scientific literature [4]. In the Netherlands, a consensus is reached regarding the definition of SMI: a psychiatric disorder that requires care or treatment, for which coordinated care from professional care providers in care networks is indicated to realize the treatment plan. The disorder is accompanied with serious impairments in social and/ or societal functioning and is persistent over time; the impairment is the cause and result of the psychiatric disorder [5]. According to this definition, approximately 2% of the total Dutch population are diagnosed with a SMI [5]. The majority of the individuals with SMI have a psychotic disorder, such as schizophrenia, or a bipolar disorder [4, 5]. Other diagnoses in these people include autism, a severe depression or a personality disorder [4, 5]. Employment contributes to the rehabilitation of people with SMI. Participation in competitive employment does not only provide income, but also offers multiple other advantages, such as improvement of symptoms, self-esteem, quality of life, mental health and global functioning [2, 6-9]. Unemployment, on the other hand, can lead to economic and social deprivation, further reducing the probability of obtaining a job [10]. Although most people with SMI want to work, their employment rates are low and they are about seven times less likely to be employed than individuals without a mental disorder [11-14]. They also earn less and work fewer years over a lifetime than individuals without SMI [15]. In addition, people with SMI often receive social assistance or disability benefits [11]. The total costs of SMI for society are thus significant, and are mainly the result of indirect costs related to loss of potential labor supply, reduced productivity at work, sickness absence and unemployment, rather than direct health care costs [11, 16-18].

## Vocational rehabilitation: traditional vocational rehabilitation versus Individual Placement and Support

In the last decades, many vocational rehabilitation approaches to help individuals with SMI to obtain and maintain employment have been developed and evaluated [19]. For a long time, a stepwise approach was dominant, first training individuals before placing them in sheltered or volunteer work, or competitive employment ('train, then place') [19, 20]. This so-called traditional vocational rehabilitation (TVR) approach often uses training classes, workshops, assessments or counselling [19]. Training is provided in general job skills or focuses on personal development (e.g. assertiveness and stress management), or improvement of social or cognitive skills [21-23]. In the 1980s, a new vocational rehabilitation approach emerged, known as supported employment [24]. Supported employment programs aim to help individuals with SMI obtain regular, competitive jobs quickly, without prevocational training ('place, then train'), and to provide them with ongoing support to maintain employment [25].

Individual Placement and Support (IPS) is the most clearly described model of supported employment and was developed in the 1990s in the United States [26]. IPS includes the following eight principles: 1) focus on competitive employment, 2) zero exclusion and eligibility based on client choice, 3) rapid job search, 4) attention to consumer choice, 5) integration of mental health and employment services, 6) personalized benefits counselling, 7) systematic job development, and 8) time-unlimited and individualized follow-along support [27].

The effectiveness of IPS has been investigated extensively in many systematic reviews and meta-analyses [19, 24, 28-31], and the results are convincing: IPS is more effective in achieving competitive employment for people with SMI than TVR, in different countries across the world. In the Netherlands, a randomized controlled trial found that 44% of IPS participants obtained competitive work compared with 25% in TVR participants [32]. Research also demonstrates that IPS may be more effective at a lower cost compared to TVR in most countries [33-37].

## IPS implementation: challenges and strategies to improve implementation in the Netherlands

Although IPS is more effective than other programs, implementation of this model has been challenging in all countries [25, 38-42]. The lack of adequate funding and poor cooperation between mental health care and vocational rehabilitation services are major barriers to implement IPS in practice [38, 41-47]. In the Netherlands, when IPS was first introduced in 2002, there were no formal agreements related to the funding of IPS or to the cooperation among the organizations involved in IPS (i.e. mental health agencies, benefits agencies and health insurance companies) [20]. To improve IPS implementation, different, mainly financial strategies have been applied. An important financial strategy included the nationwide reimbursement for IPS, offered by the Dutch Social Security Institute: the Institute for Employee Benefits schemes (UWV) since 2012, to all mental health agencies providing IPS services. Multiple health insurance companies also contributed by funding the intake phase of IPS trajectories [20]. In addition, various national collaborations among stakeholders in mental health care and vocational rehabilitation were initiated [20]. An example of such an initiative – and also the impetus for this thesis – was a collaboration in Amsterdam among stakeholders from two mental health agencies, UWV, the municipality of Amsterdam and a health insurance company. This collaboration consisted of a multifaceted implementation strategy, including an organizational and a financial component. The organizational component consisted of regular meetings among the different stakeholders involved, and the financial component consisted of secured IPS funding.

## Knowledge gaps: factors influencing IPS implementation and employment outcomes of IPS participants with SMI

While the effectiveness of IPS is well established, much less is known about factors that can influence the implementation of IPS and employment outcomes of IPS participants with SMI [48]. Gaining more knowledge on these factors is important, as improving outcomes of IPS, requires improving the quality of its implementation [48-50]. Existing research has focused primarily on examining associations between IPS model fidelity, as a proxy measure for the quality of implementation, and employment outcomes, showing significant positive associations between fidelity and competitive employment [51-53]. It is possible, however, that also other factors, such as funding, influence the implementation of IPS and its outcomes [47, 48, 53]. Another important and widely studied factor

that may influence employment outcomes of people with SMI is work motivation [54-57]. One of the key principles of IPS is that anyone who expresses a desire to work is eligible to participate [27]. However, expressing a desire to work may not be entirely the same as work motivation, as people can have varying levels of motivation and the factors contributing to it may differ among individuals [27, 57, 58]. A better understanding of the complex relation between work motivation and employment outcomes in people with SMI who express a wish to work is important [27, 58], as it can help improve outcomes of IPS.

There is also a need for more insight into the cost-effectiveness and return-on-investment of IPS, as administrators and policy makers are increasingly investing a considerable amount of time and resources in IPS implementation [20, 44, 47]. Although previous economic evaluations of IPS have found that IPS is more effective at a lower cost compared to TVR in most countries [33-37], this was not the case in the Netherlands [36]. However, little is known about effectiveness and cost-effectiveness of IPS when it is implemented on a nationwide scale through a national reimbursement strategy.

## Objectives and outline of this thesis

The intention of this thesis is to improve employment outcomes of people with SMI, by helping relevant stakeholders make better informed decisions about the implementation, funding and organization of IPS. Specifically, the objectives of this thesis are:

1. To obtain insight into the implementation of IPS, employment outcomes of IPS participants with SMI, and factors that influence these employment outcomes.
2. To evaluate the effectiveness and cost-effectiveness of IPS implemented through a reimbursement strategy on a nationwide scale, in terms of obtaining sustainable, competitive employment.

The objectives of this thesis will be addressed according to the following outline:

- Chapter 2 reports on associations between self-reported work motivation and employment outcomes in people with SMI participating in IPS or TVR (objective 1).
- Chapter 3 provides insight into a multifaceted implementation strategy for IPS, by exploring the facilitators and barriers perceived by participating professionals in mental health care and vocational rehabilitation (objective 1).
- Chapter 4 describes the experiences with IPS, implemented using a multifaceted strategy, and competitive employment among IPS clients and employment specialists (objective 1).

- Chapter 5 provides insight into the associations between employment outcomes in people with SMI who participated in IPS, implemented using a multifaceted strategy and 1) the level of experience of mental health agencies with providing IPS, implemented using a multifaceted strategy and 2) the type of IPS funding (objective 1).
- Chapter 6 presents the economic evaluation of IPS implemented through a reimbursement strategy on a nationwide scale, including a cost-effectiveness and return-on-investment analysis (objective 2).
- Chapter 7 closes this thesis with a general discussion of the main findings, methodological considerations and implications for practice and research.

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# 2

## **Work motivation and employment outcomes in people with severe mental illness**

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## Abstract

**Purpose:** To study associations between the level of self-reported work motivation and employment outcomes in people with severe mental illness (SMI) enrolled in a vocational rehabilitation program.

**Methods:** Data of 151 study participants, collected from a randomised controlled trial with a 30-month follow-up period, were used for a secondary data analysis. Multiple logistic regression, linear regression and cox regression analyses were performed to analyse the association between the level of work motivation at baseline and job obtainment, duration of job, and time until job obtainment during the 30-month follow-up period.

**Results:** No statistically significant associations were found between the level of work motivation and job obtainment (OR = 1.83, 95% CI 0.55-6.06,  $p = 0.32$ ), job duration (B = -0.74, 95% CI -2.37-0.89,  $p = 0.37$ , R-squared = 0.03), or time until job obtainment (HR = 1.53, 95% CI 0.64-3.68,  $p = 0.34$ ).

**Conclusions:** The results of this study show no statistically significant associations between the level of work motivation and employment outcomes in people with SMI enrolled in a vocational rehabilitation program. These associations may be underestimated due to range restriction of the work motivation's level. Further research is recommended to increase knowledge on the associations between work motivation and employment outcomes, as it could be relevant for further understanding success in vocational rehabilitation.

## Introduction

The unemployment rates for people with severe mental illness (SMI) are high (1-5), despite the fact they often do have a desire to work (6, 7). There are many vocational rehabilitation approaches to help people with SMI to obtain and maintain employment, such as traditional vocational rehabilitation (TVR), in which a stepwise trajectory is offered with emphasis on assessment and matching procedures prior to job search (4, 5). Another example is supported employment, focusing on a rapid search for competitive employment with ongoing support provided as long as needed to get and keep the job (8). Several studies show that supported employment is more effective than other interventions in obtaining (4, 9, 10) and maintaining (9, 10) employment for people with SMI. Evidence also suggests that participants of supported employment programs need less time to find competitive employment in comparison with participants of TVR programs (4, 5).

The most widely used and researched model of supported employment is Individual Placement and Support (IPS). An important principle of IPS is that any person with SMI who expresses an explicit wish to work is eligible (11). Motivation to work is important in most vocational rehabilitation programs, and is actually the only criterion for participation in IPS (11-13). Expressing a wish to work, however, may not be fully the same as motivation to work, as the level of work motivation and the determinants involved can differ between people. Motivation is a theoretical construct used to explain behaviour, such as behaviours linked to employment, and is included in several psychological theories (14-18). The theory of planned behaviour (14), for example, suggests that the intention (including motivation) to obtain or maintain employment predicts the actual behaviour of obtaining or maintaining employment. This intention consists of three determinants: 1) attitudes (i.e. degree to which an individual has a favourable or unfavourable appraisal of obtaining or maintaining employment), 2) subjective norms (i.e. perceived social pressure to obtain or maintain employment) and 3) perceived behavioural control (i.e. self-efficacy; perceived ease or difficulty of obtaining or maintaining employment) (14).

Previous research on the association between these determinants of motivation and employment outcomes has also found that self-efficacy (19-21), attitudes and social pressure (19, 21) are indeed predictors of return to work in people on long-term sickness absence.

Research examining motivation in people with SMI, who expressed a wish to work and were enrolled in a vocational rehabilitation program, also supports the role of motivation as a predictor of employment outcomes (22-26). Motivated people seem to link their motivation to a higher level of self-efficacy and control

in their job search, a higher level of importance of work compared to other activities, and a higher level of social encouragement to find employment (24). When not only people with an explicit wish to work, but all people with SMI who are enrolled in a vocational rehabilitation program are considered, the relation between expressing a wish to work or work motivation and employment outcomes becomes complex (12, 23, 27). A study among people with SMI who expressed a wish to work has found a significant variability in the work motivation scores, and a positive relation between the level of work motivation and employment outcomes (23). Other studies have also suggested that people who do not explicitly express interest in working have comparable employment outcomes to those who do express an initial interest (12, 27).

A better understanding of the complex relation between work motivation and employment outcomes in people with SMI who express a wish to work is important (11, 12), as it will help improve vocational rehabilitation outcomes. The aim of the present study was to study associations between the level of self-reported work motivation and (time until) job obtainment and job duration in people with SMI who were enrolled in IPS supported employment or a TVR program.

## Methods

### Study design

Data collected from a Dutch randomised controlled trial (a study of cost-effectiveness of IPS on open employment in the Netherlands (SCION) (4)) were used for a secondary data analysis. The SCION study was registered in the Netherlands Trial Register (Trial ID NTR292; ISRCTN87339610), and approved by the National Medical Ethical Board in Mental Health ('METIGG, kamer Zuid', decision nr. 522) (4, 5).

### Sample, setting, and procedure

The SCION (4) study was conducted between 2005 and 2011, and designed as a multi-site randomised controlled trial, comparing IPS with TVR. Participants were recruited at four sites from regional community mental health care divisions targeted at adults with SMI. Inclusion criteria were: age between 18 and 65 years, explicit wish for competitive employment, and willingness to give informed consent. Exclusion criteria were: paid work at study entrance, full-time hospitalisation, engagement in another vocational rehabilitation program or another study with conflicting interest.

Data were prospectively collected during a 30-month follow-up period through self-report questionnaires and interviews with participants, complemented with information from vocational and mental health workers.

After baseline assessment, participants were allocated to IPS (n=71) or TVR (n=80). Randomization was performed by an independent agency and stratified by site and employment history (with or without some time in paid employment in the past 5 years).

## Measures

### Competitive employment and employment outcomes

In the SCION study (4), competitive employment was defined as having a paid job against prevailing wages, in a company or organization in the regular labour market, not set aside for persons with a disability, that is, in an integrated work setting. Information was derived from interviews with participants at baseline and after 6, 18 and 30 months, and from employment records filled out every two months by employment specialists. If no information was available from one or both of these two sources, the central case manager was interviewed by telephone for employment information.

In the current study, the employment outcomes were: 1) job obtainment, defined as having worked in a competitive job yes or no for one day or more, 2) job duration, measured as the total number of days worked in the first competitive job obtained and 3) time until job obtainment, measured as the total number of days until first competitive job obtainment during the 30-month follow-up period.

### Work motivation

Work motivation was measured at baseline with a self-reported work motivation questionnaire (5), based on a questionnaire developed by Knispel and Schoemaker (28) for vocational rehabilitation clients. The aim of the original questionnaire was to understand the determinants of work motivation, by exploring clients' ideas about competitive employment. This questionnaire was inspired by the aforementioned psychological theories (14-18), and contained 101 items. For the SCION study (5), the original questionnaire was adjusted by the SCION research team, by selecting 27 from the 101 items. The 27 items were rated on a four-point Likert scale; answer categories were: strongly agree (1), agree (2), disagree (3) and strongly disagree (4); 'not applicable' was also an option for items regarding social pressure.

Internal consistency (Cronbach's  $\alpha$ ) of the adjusted work motivation questionnaire and four subscales was evaluated in the study sample of 151 participants at baseline. The four subscales were: self-consciousness regarding work, drive to work, seeing opportunities and action readiness. The total work motivation

scale of 27 items had good internal consistency ( $\alpha = 0.82$ ). The internal consistency of the total scale could only be assessed in a small subsample of 27 patients due to a considerable amount of missing data or the answer 'not applicable' on the five items regarding social pressure. When the item that was most frequently missing (i.e. 'For my partner, it is important that I work) or all five items regarding social pressure were omitted, the total work motivation scale still showed acceptable internal consistency (resp.  $\alpha = 0.78$  in a subsample of 103 participants, and  $\alpha = 0.76$  in a subsample of 134 participants). Cronbach's  $\alpha$  showed good internal consistency for the subscale self-consciousness regarding work (e.g., 'I know what type of work I want to do') ( $\alpha = 0.82$  in a subsample of 150 participants), questionable internal consistency for the subscale drive to work (e.g. 'It is very important for me to start working again') ( $\alpha = 0.65$  in a subsample of 149 participants) and poor internal consistency for the subscales seeing opportunities (e.g. 'I think I have a good chance to start working again') and action readiness (e.g. 'I am willing to do a short course or training to increase my chances of finding a job') (resp.,  $\alpha = 0.58$  in a subsample of 140 participants and  $\alpha = 0.57$  in a subsample of 146 participants).

In the present study, the baseline work motivation and the subscale self-consciousness regarding work (i.e. subscale showing good consistency) score served as independent variables. The mean of all non-missing items of the adjusted work motivation questionnaire was used, where it was required that the participants completed at least 80% of the items; participants with more than 20% of items missing were excluded from the analyses. The subscale self-consciousness regarding work score was based on the mean of 4 of the 27 items. Appendix A provides the adjusted work motivation questionnaire and an overview of the internal consistency for the total scale and the subscales of this questionnaire, including corresponding items (Appendix A).

### Covariates

The following covariates were considered as candidate confounders for the relation between work motivation and employment outcomes: gender, age, education, work history, clinical diagnosis (yes/ no psychotic disorder; derived from mental health care professionals), self-esteem (RSE (29)), mental health (MHI-5 (30)) and vocational rehabilitation program (IPS/ TVR). Candidate confounders were chosen based on the literature (4, 31-33).

### Statistical analyses

To evaluate whether work motivation was associated with job obtainment, logistic regression analysis was used with job obtainment as the dependent and work motivation as the independent variable. Association between the participants'

score on the self-consciousness regarding work subscale and job obtainment was assessed in a similar way.

To evaluate whether work motivation was associated with job duration, linear regression analysis was used with total number of days worked as the dependent variable. This analysis was based on participants that obtained employment within 30 months; participants who did not start a competitive job or for whom specific data on number of days in employment was missing, were excluded from this analysis. Association between the participants' score on the self-consciousness regarding work subscale and job duration was assessed in a similar way. Because job duration was skewed to the right, a log transformation was used before analysis.

To evaluate whether work motivation was associated with time (total number of days) until job obtainment, Cox regression analysis was used, where the event was defined as starting a competitive job and maintaining it for at least one day. Participants who did not start a competitive job within the 30-month follow-up period were censored at the end of the follow-up period. Participants who were lost to follow-up before starting a competitive job, were censored at the end of the period over which accurate information was available. Association between the participants' score on the self-consciousness regarding work subscale and time until job obtainment was assessed in a similar way.

For all research questions, both a crude (adjusted for vocational rehabilitation program only) and an adjusted analysis (adjusted for all predefined confounders) were performed. For all analyses, a two-sided significance level of 5% was used and 95%-confidence intervals (CIs) for odds ratios (ORs), regression coefficients and hazard ratios (HRs) were calculated. All statistical analyses were performed using SPSS 22.0 (SPSS, Chicago, IL, USA).

## Results

### Baseline characteristics and employment outcomes

A total of 151 participants were included in this study. The baseline characteristics and employment outcomes of the participants who did not obtain competitive employment ( $n = 100$ ) and who did obtain competitive employment ( $n = 51$ ) within the 30-month follow-up period are shown in Table 1. The mean work motivation score was 2.9 with a standard deviation of 0.3, in a subsample of 149 participants. A total of 71 participants (47%) were enrolled in IPS and 44 of the 51 participants with competitive employment (86%) obtained the job within 18 months. The median number of days until competitive job obtainment was 198, and the median of the number of days worked in the first, competitive job was 138.

**Table 1.** Baseline characteristics and employment outcomes of the participants within the 30-month follow-up period

	All participants (n = 151)	Participants without a competitive job (n = 100)	Participants with a competitive job (n = 51)
Socio-demographic characteristics			
Gender male (%)	112 (74)	78 (78)	34 (67)
Mean age in years (SD)	34.9 (10.5)	35.7 (10.2)	33.4 (10.9)
Married (%)	13 (9)	7 (7)	6 (12)
Low and medium level of education (%)	130 (87)	85 (85)	45 (88)
Employment in past 5 years (%)	92 (61)	55 (55)	37 (73)
Worked competitively in past 5 years (%)	79 (86)	44 (44)	35 (69)
Disability benefits (%)	81 (60)	58 (58)	23 (45)
Clinical characteristics			
Admission to mental hospital in past 6 months (%)	38 (34)	23 (23)	15 (29)
Psychotic disorders (%)	90 (63)	59 (59)	31 (61)
Self-report measures			
Mean work motivation score (SD), range 1-4	2.9 (0.3)	2.8 (0.3)	2.9 (0.2)
Mean score RSE (self-esteem) (SD), range 0-3	1.8 (0.5)	1.8 (0.5)	1.9 (0.5)
Mean score MHI-5 (mental health) (SD), range 0-100	59.9 (18.7)	59.4 (18.9)	60.9 (18.4)
Vocational rehabilitation program			
Individual Placement and Support (%)	71 (47)	40 (40)	31 (61)
Employment outcomes			
Found competitive employment between baseline and 18 months (%)	44 (29)	0 (0)	44 (86)
Found competitive employment between 18 months and 30 months (%)	7 (5)	0 (0)	7 (14)
Median of number of days until job obtainment [IQR] <sup>a</sup>			198.0 [107.0-455.0]
Median of number of days worked in first job [IQR] <sup>b</sup>			138.0 [61.0-302.5]

<sup>a</sup>Subsample of people competitively employed, n = 51

<sup>b</sup>Subsample of people competitively employed, n = 49

### Relation between work motivation and the employment outcomes

The logistic regression analysis on job obtainment was based on 149 participants; two participants who had filled in less than 80% of the items of the work motivation questionnaire were excluded from analyses. No statistically significant association was found between work motivation and job obtainment (OR = 1.83, 95% CI 0.55-6.06, p = 0.32). This association remained non-significant after adjustment for all covariates. There was also no significant association between the self-consciousness regarding work score and job obtainment (OR = 0.99, 95% CI 0.55-6.06, p = 0.32).

The linear regression analysis on job duration was based on 49 participants who had obtained employment within 30 months; two participants were excluded from the analyses due to missing specific data on number of days in employment. No statistically significant association was found between work motivation and time in the first job obtained (B = -0.74, 95% CI -2.37-0.89, p = 0.37, R-squared = 0.03). This association remained non-significant after adjustment for all covariates. There was also no significant association between the self-consciousness regarding work score and time in the first job obtained (B = -0.37, 95% CI -1.08-0.34, p = 0.30, R-squared = 0.04); the association remained non-significant after adjustment.

The Cox-regression analysis on the time until job obtainment was based on 148 participants; one participant had missing data regarding both employment and follow-up period, and two participants had filled in less than 80% of the items of the work motivation questionnaire. All three were excluded from the analyses. No statistically significant association was found between work motivation and the time until job obtainment (HR = 1.53, 95% CI 0.64-3.68, p = 0.34). This association remained non-significant after adjustment for all covariates. There was also no significant association between the self-consciousness regarding work score and the time until job obtainment (HR = 0.98, 95% CI 0.63-1.52, p = 0.91); the adjusted HR remained non-significant.

### Discussion

The purpose of this study was to study associations between the level of self-reported work motivation at baseline and (the time until) job obtainment and job duration during a 30-month follow-up period in people with SMI who had expressed a wish to work and were enrolled in a vocational rehabilitation program. The results of this study showed no statistically significant associations between the level of work motivation at baseline and the employment outcomes, independent of vocational program type.

### Comparison with other studies

In contrast to previous research examining motivation in people with SMI enrolled in vocational rehabilitation programs (22-26), the present study did not find a significant association between the level of work motivation at baseline and employment outcomes. The present study, however, assessed other determinants of motivation, used a different assessment for motivation and employment outcomes, and had a much longer follow-up period. Differences in both labour market dynamics and welfare systems may also have played a role, as this study was conducted in the Netherlands, whereas previous studies were conducted outside of Europe. The labour market in the Netherlands is characterized by restrictive regulations regarding temporary employment and relatively high minimum wages. The Netherlands also has a generous welfare system, which seems to be associated with the so-called 'benefit trap' (financial disincentives to return to work); this 'benefit trap' seems to be an impediment to successful vocational rehabilitation (34). All these differences make it difficult to compare the results of the present study with previous research. In the present study, a limited variability in the work motivation scores was found. One explanation could be that the explicit wish to work was one of the inclusion criteria in the Scion study [4], as this is the only criterion for participation in IPS [11]. Another explanation could be that participants who were less motivated dropped out before entering the study, as participants were interviewed several times during the 30-month follow-up period and had to consent to research procedures such as the randomisation [4]. In contrast to this finding, Reddy et al [23] did find a significant variability in the work motivation scores in a comparable study sample of people with SMI who had also expressed a wish to work. This limited variability in the work motivation score may also explain not finding a significant association between the level of work motivation at baseline and employment outcomes in this study. Another explanation could be the small sample size and the small number of participants that had obtained competitive employment within 30 months (only 34%).

### Strengths and limitations

This is the first study in Europe on the complex relation between work motivation and employment outcomes in people with SMI who are enrolled in a vocational rehabilitation program. One of its strengths is the long follow-up period in comparison to other studies on motivation and employment outcomes in people with SMI (22-26). The use of a work motivation questionnaire, inspired by several theoretical frameworks (14-18), is also a strength. The main limitation of this study is that there may be a selection bias of highly motivated participants in the SCION study (4), as one of the inclusion criteria was an explicit wish for

competitive employment. Therefore the association between work motivation and employment outcomes may be underestimated due to range restriction of the work motivation's level. The work motivation questionnaire was originally not designed and validated for people with SMI (28). Furthermore, a considerable amount of data was missing on five items of this questionnaire regarding social pressure. Social pressure, however, is an important factor to take into consideration when exploring grounds for motivation to obtain and maintain employment (32). Missing items were replaced by the mean score of the participants' score on the completed items, assuming that responses on the completed items are representative for the items regarding social pressure. This may not be the case in general or more specific for people with SMI. Although internal consistency for the total work motivation scale was adequate, it was not sufficient for most of the subscales. Analyses were therefore only performed for the total scale and the subscale self-consciousness regarding work. Another limitation may be the small sample size; of the total sample only 34% of the participants (n = 51) obtained employment within 30 months. The Scion study (4), which was used for this secondary data analysis, was not powered to answer the research questions of the present study. Furthermore, the data used for the present study might be outdated, as these data were collected for another study (4, 5), conducted between 2005 and 2011, a period in which the labour market situation fluctuated due to the 2008 financial crisis. Although this may have influenced employment outcomes, it is uncertain whether this would also have influenced the relation between work motivation and employment outcomes. In addition, the analyses for job duration were restricted to participants which worked in a competitive job for at least one day, which limits generalizability to the whole group of people with SMI.

### Implications for research and practice

Policy makers and professionals in mental health care and vocational rehabilitation have been increasingly investing a considerable amount of time and funding in helping people with SMI to obtain and maintain competitive employment, by aiming to improve implementation of vocational rehabilitation programs (35-37). Therefore, it is important to conduct more research on potentially changeable predictors of employment outcomes in this population, such as work motivation in the present study. Besides of striving for a sufficient sample size, future research should develop and validate a questionnaire on motivation to work for people with SMI and based on a theoretical framework, such as the theory of planned behaviour (14). Work motivation and employment outcomes should also be assessed at multiple time points, as work motivation seems to be a dynamic concept that can increase over time (22, 38). Understanding

the relation between work motivation, including its factors of influence (14), and employment outcomes in people with SMI who have expressed a wish to work, may help improve vocational rehabilitation outcomes. Additional interventions or training, for example social skills training or an extra course to improve knowledge for a specific job, can be used to improve potentially changeable components of work motivation, such as self-efficacy. Such integration of vocational rehabilitation with additional interventions is more effective with regard to employment outcomes for people with SMI, than a vocational rehabilitation programme alone (10).

### Conclusion

The results of this study show no statistically significant associations between the level of work motivation and employment outcomes in people with SMI enrolled in a vocational rehabilitation program. These associations may be underestimated due to range restriction of the work motivation's level. Further research is recommended to increase knowledge on the associations between work motivation and employment outcomes, as it could be relevant for further understanding success in vocational rehabilitation.

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## Appendix A

### Work motivation questionnaire

The following statements concern your ideas about regular paid work and getting back to work. For each statement, please indicate to which extent you agree or disagree with the statement. Point out the answer that fits best.

- Strongly agree (1)
- Agree (2)
- Disagree (3)
- Strongly disagree (4)
- Not applicable (only an option for item 18, 19, 20, 21)

1. It is very important for me to start working again.
2. I am fine with not having a job.
3. Work is important in my life.
4. Without work, I can also live a happy life.
5. If I would win the lottery, I would never work another day.
6. I am willing to change the way I organize my private life, if that would be necessary to get a job.
7. I am willing to do a short course or training to increase my chances of finding a job.
8. I am willing to move to another city for a job.
9. I do not mind working irregular hours.
10. I don't have much time to apply for a job right now.
11. I do not plan on constantly spending time searching for a job.
12. I have no clue as to what jobs suit me.
13. I have barely spent time thinking about what types of jobs I could do in the future.
14. I have some ideas about what jobs would suit me, but I have to investigate this further.
15. I know what type of work I want to do (for example: administrative, care etc.).
16. I have spoken to friends about my plans to start working again.
17. I can make clear to others what type of job I want to do.
18. For my family members, it is important that I work.
19. For my friends, it is important that I work.
20. For my mental health care providers (case manager, psychologist, psychiatrist), it is important that I work.
21. For my partner, it is important that I work.
22. I think that finding a job is a challenge.

23. I think I have a good chance to start working again.  
 24. Given my health issues, it will be very difficult for me to start working again.  
 25. With my health issues, eventually it will be possible to start working again.  
 26. I think there are barely jobs that I can do.  
 27. Employers are not interested in me.

### Internal consistency of the work motivation questionnaire

Cronbach's alpha's for the total scale and the subscales

	Cr. alpha	Items	Number of participants
Total Scale	0.82	All	27
	0.78	All, excluding 21*	103
	0.76	All, excluding 16, 18, 19, 20, 21*	134
Subscales			
Self-consciousness regarding work	0.82	12, 13, 15, 17	150
Drive to work	0.65	1, 2, 3, 6, 22	149
Seeing opportunities	0.58	23, 24, 25, 26, 27	140
Action readiness	0.57	4, 7, 8, 9, 10, 11, 14	146

\*Item(s) regarding social pressure



# 3

## **Experiences with the implementation of Individual Placement and Support for people with severe mental illness: a qualitative study among stakeholders**

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## Abstract

**Background:** Individual Placement and Support (IPS) is an evidence-based approach to help people with severe mental illness achieve competitive employment. This article provides insight into an organizational and a financial implementation strategy for IPS in the Netherlands by exploring the perceived facilitators and barriers among participating stakeholders. The goal of this multifaceted strategy was to improve IPS implementation by improving the collaboration between all organizations involved, and realising secured IPS funding with a ‘pay for performance’ element.

**Methods:** A qualitative, explorative study among practitioners (n=8) and decision makers (n=7) in mental health care and vocational rehabilitation was performed using semi-structured interviews to collect rich information about the possible facilitators and barriers with regard to the organizational and financial implementation strategy for IPS.

**Results:** Important perceived facilitators were the key principles of the IPS model, regular meetings of stakeholders in mental health care and vocational rehabilitation, stakeholders’ experienced ownership of IPS and collaboration, the mandate and influence of the decision makers involved and secured IPS funding. Important perceived barriers included the experienced rigidity of the IPS model fidelity scale and lack of independent fidelity reviewers, the temporary and fragmented character of the secured funding, lack of communication between decision makers and practitioners and negative attitudes and beliefs among mental health clinicians. Changes in legislation were experienced as a facilitator as well as a barrier.

**Conclusions:** The results of this study suggest that the collaboration and IPS funding were experienced as improved by applying an organizational and a financial implementation strategy. However, considerable effort is still necessary to overcome the remaining barriers identified and to make the implementation of IPS a success in practice.

## Background

Despite the importance of employment for people with severe mental illness (SMI) [1-4], their labour market participation is poor: in both the United States and Europe it does not exceed 20%. Although between 30% and 65% of these individuals report to desire some form of employment [5-7], they often rely on social assistance or disability benefits [4]. In the Netherlands, for example, up to 25% of the individuals who are granted a disability benefit have SMI [4, 8]. Until now, most vocational approaches for people with SMI have been stepwise, first training individuals before placing them in, often sheltered or volunteer, work (“train and place”) [9, 10]. However, in the past few years, the focus has shifted to supported employment (“place and train”), aiming to place individuals in regular competitive jobs without prevocational training [9-11]. Several systematic reviews conclude that supported employment is more effective than other interventions in obtaining and maintaining employment for people with SMI [12, 13]. Individual Placement and Support (IPS) is an evidence-based example of such an approach [14]. IPS includes the following key principles: eligibility based on client choice (zero-exclusion), a focus on competitive employment and clients’ preferences, work incentives planning, systematic job development, rapid job search and placement with individualized job supports, and integration of mental health and employment services [5]. Fidelity to the IPS model is associated with greater effectiveness with regard to employment outcomes [12, 15].

Despite the strong evidence base for IPS, implementation of this model in the daily practice of mental health care and vocational rehabilitation institutes is difficult [16, 17]. Important barriers to implementation are insufficient collaboration between the organizations involved and inadequate, fragmented and bureaucratically complicated funding [5, 10, 17-20].

To improve IPS implementation, a Dutch mental health agency (MHA), the Dutch Social Security Institute: the Institute for Employee Benefits Schemes (UWV), the municipality of Amsterdam, and a health insurance company (HIC) started to collaborate since 2014. This collaboration included an organizational and a financial strategy to help remove the aforementioned barriers. The organizational implementation strategy consisted of regular meetings between the different stakeholders involved. The financial implementation strategy consisted of secured IPS funding with a ‘pay for performance’ element, rewarding the MHA for placing an IPS participant in a competitive job.

Although previous research has shown that some organizational and financial factors are important implementation barriers [5, 10, 17-20], no studies have provided in-depth understanding of whether strategies focusing on removing these barriers can actually be effective for IPS implementation in practice.

The aim of the present study was to provide more insight into an organizational and a financial implementation strategy for IPS, by exploring the facilitators and barriers perceived by participating stakeholders.

## Methods

### Study design

A qualitative explorative study among stakeholders was performed using semi-structured interviews to collect rich information about the possible facilitators and barriers with regard to an organizational and a financial implementation strategy for IPS [21].

### Context information

#### IPS before the start of the collaboration

Before this collaboration between the different organizations started, there were few mental health agencies in the Netherlands that provided IPS services according to the IPS model [5]. There were also no formal agreements related to the practical execution and funding of IPS. Depending on the mental health agency, IPS services were usually partly financed by health insurance companies or one of the benefit agencies. In practice, it was rather unclear which part was financed by which organization during an IPS trajectory. This became even more unclear when the client actually started working in a competitive job, and as a consequence lost (a part of) his benefits.

#### IPS within the collaboration

Any client with SMI who received treatment at the MHA and benefits from UWV or the municipality of Amsterdam, could express his desire to obtain a competitive job to his mental health clinician. The client then was referred to an IPS specialist who was part of the same specialized MHA treatment team and provided IPS services according to the IPS model [5]. In the first year of the collaboration each full-time IPS specialist involved had a caseload of 20 clients or fewer and worked within one or two specialized MHA treatment teams. At intake, the IPS specialist and the client decided within eight consultations whether IPS was the right intervention for the client. Then the IPS specialist discussed in a multidisciplinary meeting with vocational rehabilitation practitioners of UWV and the municipality whether the IPS applicant qualified for funding. This meeting and the funding were part of the organizational and financial implementation strategy, respectively.

### Organizational implementation strategy

The organizational implementation strategy consisted of collaboration between the different organizations involved at two levels:

- 1) At the management level, there was a meeting every eight weeks between the decision makers who were considered key leaders and had a managing or advising role within their organization. They initiated the collaboration and arranged the agreements related to the practical execution and funding of IPS. Their goal was to improve the collaboration and communication between the MHA, UWV, the municipality and the HIC, facilitate practitioners, create support within their own organization and ensure IPS sustainment.
- 2) At the practitioner level, there was a meeting every six weeks between the IPS specialists, the labour experts, the insurance physician and the case manager. In their meetings, these mental health care and vocational rehabilitation practitioners discussed whether new IPS applicants qualified for funding. They also discussed the progress of the current IPS participants and any questions related to the participants' benefits.

### Financial implementation strategy

The financial implementation strategy consisted of secured IPS funding with a 'pay for performance' element. A fair or good IPS fidelity score was a condition for this funding. The duration and amount of the funding (excluding intake and job coaching) depended on the type of benefits the client received.

For clients who received social assistance benefits, IPS was funded by the municipality conform regular responsibilities. The MHA received 900 euro at the start, 900 euro after three months and 900 euro after a maximum of 18 months. To stimulate a successful IPS trajectory, the MHA received an extra 1800 euro when placing a client within nine months in a competitive job for at least 12 hours a week during at least one month.

For clients who received disability benefits, IPS was funded by UWV conform regular responsibilities. The MHA received 2420 euro at the start and 2420 euro after a maximum of 36 months. To stimulate a successful IPS trajectory, the MHA received an extra 1210 euro when placing a client in a competitive job for at least 12 hours at 35% of the minimum wage during at least two months.

All the IPS intakes were funded by the HIC for a maximum of eight hours. All the job coaching was funded by UWV as usual.

### Socio-political context: the Participation act

Since 2015 a new law in the Netherlands, the so called Participation Act, replaced several older Acts for social assistance benefits and disability schemes [22, 23]. This new Act was introduced to stimulate more people with a distance to the

labour market, such as people with a disability, into competitive employment. Municipalities were made fully responsible for the execution of the Participation Act. Following the implementation of this Act, both employers and the government guaranteed 125.000 additional jobs by 2026 for people with a disability or social assistance benefits.

### Study participants

All stakeholders involved in the first year of this collaboration were asked to participate in this qualitative study. These stakeholders were from the various organizations: one municipality, two different UWV front offices, two different locations of one MHA and one HIC.

### Interviews

For the interviews (n=15) a topic list was used, based on the theoretical framework of determinants of innovations [24-26]. The interview topics were related to the innovation, the professionals and the organizations involved, and the socio-political context [24-26]. In the present study, the innovation consisted of both IPS and the organizational and the financial implementation strategy. Additional file 1 [Appendix A] provides an overview of the interview topics and questions. The semi-structured interviews were conducted between October 2015 and June 2016 by one researcher (M.V.), trained in qualitative research methods. Participants were asked to tell the interviewer about their experiences with the collaboration with the stakeholders of the other organizations involved, the IPS funding, IPS within the context of this collaboration and the impact of laws and regulations. They were also asked about how the new strategy fitted within their own organization and their role in this collaboration. To elicit any information the participants deemed important, open narrations were encouraged . Interviews lasted about one hour (range 30 – 95 minutes) and were voice-recorded. One interview was conducted by telephone; all others were face to face and took place at a location convenient for the participants, usually the participants' work location.

### Analysis

All interviews were transcribed verbatim. Atlas.ti software was used to facilitate data management and analysis. All transcripts were read thoroughly and analysed. A summary of each interview was made and sent to each participant to determine whether the themes were appropriately described and matched their responses. This member checking was used to improve the credibility and validity of the data [21]. Ten participants responded, and five of them requested minor changes. Thematic content approach was used for data analysis [27].

The analyses were conducted iteratively allowing emerging themes to be explored in subsequent interviews.

All transcripts were coded by one researcher (M.V.). The five most information-rich interviews were coded independently by two researchers (M.V. and F.G.S.). A coding scheme was developed by these two researchers and consensus was reached by discussion. The themes, facilitators and barriers identified by these two researchers were discussed in meetings with a third researcher (M.J.W.), focusing on understanding the collected data and correct interpretation. After several research meetings, a thematic map was developed. Within the themes, facilitators and barriers were distinguished. The aforementioned theoretical framework was used to guide the analysis of the interviews [25]. In the last phase, the themes were refined and the facilitators and barriers identified were sorted and collated according to overarching themes by M.V. and F.G.S. Provisional and final results were critically discussed in the research team meetings with all authors.

The quotations in the Results section were translated from Dutch to English by M.V., and were also discussed with the other authors. Back translation was not performed.

### Ethical considerations

The Medical Ethics Committee of the VU University Medical Center gave approval for the study. All procedures performed in this study were in accordance with the ethical standards of this institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

## Results

### Participant characteristics

All invited stakeholders were willing to participate. Participant characteristics are presented in Table 1.

**Table 1.** Participant characteristics

Level (n) Organization Stakeholder	Experience in current role, years
Decision maker (n=7)	
MHA	
Director	7
Policy adviser	8.5
IPS program leader	1
Staff member/ occupational therapist	36
UWV	
Manager	2.5
Municipality of Amsterdam	
Participation adviser	10
HIC	
Mental health care adviser	7
Practitioner (n=8)	
MHA	
IPS specialist (a)	2
IPS specialist (b)	2
IPS specialist (c)	2
IPS specialist (d)	2
UWV	
Insurance physician	28
Labour expert (a)	15
Labour expert (b)	5
Municipality of Amsterdam	
Case manager	6

MHA = Mental Health Agency; UWV = Dutch Social Security Institute: the Institute for Employee Benefits Schemes; HIC = Health Insurance Company

**Experiences, facilitators and barriers**

The participants shared their experiences on how they had perceived this first year of collaboration for IPS between the organizations and mentioned a large number of facilitators and barriers. The perceived facilitators and barriers were classified into different themes related to the innovation and the socio-political context [24-26, 28]. Table 2 [Appendix B] provides a thematic overview of all perceived facilitators and barriers. A summary of these facilitators and barriers is shown in Table 3. The most discussed themes are reported below, along with quotations to illustrate some facilitators and barriers.

**Table 3.** Summary of perceived facilitators and barriers

Themes	Facilitators	Barriers
1. Innovation		
1.1 IPS		
Intervention	Evidence based effectiveness of IPS Key principles of the IPS model	Costs of IPS IPS model fidelity scale and fidelity reviews Compatibility of IPS with existing work procedures
1.2 Collaboration		
Between organizations involved <sup>a</sup>	Regular meetings of stakeholders Sharing information, knowledge and expertise Pre-existing relationships and collaboration between stakeholders Shared interests, goals and vision of stakeholders	Clients' privacy and medical confidentiality Organization of the structural meetings Lack of involvement of practitioners in vocational rehabilitation Lack of communication between decision makers and practitioners
Professionals involved		
Stakeholders characteristics	Mandate and influence of decision makers	IPS not experienced as part of the mental health treatment
Attitude and beliefs	Ownership of IPS and collaboration	Work not experienced as a achievable goal for people with SMI

Table 3. Continued

Themes	Facilitators	Barriers
1.3 IPS funding	Substantial funding for IPS	Fragmented funding
Secured funding <sup>b</sup>		Lack of clarity with regard to costs of IPS services
Ethics		
Pay for performance <sup>b</sup>	Pay for performance might encourage IPS specialists	Not appropriate to receive extra payments within health care setting
Sustainability	Covenant between involved organizations stimulates collaboration and funding	Lack of proven cost-effectiveness of IPS
		Temporary financial agreements between the organizations involved
2. Socio-political context		
Government	Support and funding of Ministry of Social Affairs and Employment	Dutch social safety net does not stimulate participation in paid work
	New Participation Act provides sense of urgency regarding participation of people with SMI	New Participation Act has unwanted consequences
		Health insurance act limits IPS funding by health insurance company

<sup>a</sup>Part of the organizational implementation strategy. <sup>b</sup>Part of the financial implementation strategy.

## 1. Innovation

### 1.1 IPS

In general, IPS was considered to be an effective intervention for a difficult target group. The key principles of the IPS model were perceived as a facilitator. Several decision makers and MHA practitioners thought implementing IPS with high fidelity to the IPS model was important, because they expected high fidelity IPS services to be more effective.

However, the IPS model fidelity scale was experienced as a barrier by different decision makers, as some items of this scale were considered rigid; the item about integration of the IPS specialist in a specialized MHA treatment team, for example. These decision makers argued that IPS services should not be limited to specialized mental health care, which is now the case in the Netherlands.

MHA decision maker (policy adviser): *“Our healthcare system is continuously changing. That’s a good thing (...) I think you have to keep an open mind for these changes and should not stick to the model fidelity that rigidly.”*

Some MHA decision makers and practitioners also thought it was inappropriate that the fidelity reviews were conducted by the same organization as where IPS specialists were trained. The fidelity reviewers of this organization were not considered independent.

### 1.2 Collaboration

The collaboration between the organizations involved was experienced as successful. An important facilitator for this collaboration was having the regular meetings of stakeholders at management and practitioner level. Most participants pointed out that these meetings, particularly at practitioner level, provided designated and easy to reach contact persons. Both collaboration aspects (meetings, contact persons) facilitated short decision lines and fast responses of the stakeholders involved. Some participants also pointed out that regular meetings at both levels stimulated evaluation of new procedures. All participants agreed that regular meetings with stakeholders working within different organizations increased the trust between these stakeholders, as they got to know each other better. This trust improved the perceived reliability of each other’s judgement and facilitated open communication.

MHA practitioner (IPS specialist (a)): *“I considered it a useful meeting (...) the lines of communication are short... and it’s quite useful to have a contact person within those organizations.”*



Most participants pointed out that the collaboration between the organizations was stimulated by stakeholders that experienced ownership of IPS and the collaboration, and were enthusiastic and passionate with regard to IPS. In addition, the mandate and the influence of the participating decision makers was mentioned as an important facilitator by several decision makers. They were seen as opinion leaders with an affinity for the target group, who create support within organizations, arrange funding and promote sustainment of IPS.

MHA decision maker (staff member/ occupational therapist): *“You need people that are inspired (...) with an extreme level of involvement, because otherwise you won’t make it; just procedures aren’t enough. You need people that step up and say: I’m going to do this!”*

Communication between the decision makers and the practitioners was experienced as a barrier by several participants. Most practitioners were not aware of the decisions made during management meetings. Some decision makers also admitted they did not know what the obstacles for MHA practitioners were with regard to IPS and the collaboration with the practitioners of the other organizations.

UWV decision maker (manager): *“No, I don’t know [how these regular meetings between practitioners work in practice] and I suppose that’s strange, because I proposed to initiate these meetings [between practitioners] myself.”*

Some participants, mostly practitioners, also mentioned that there was no formal, written information available about the responsibilities and the roles of the different practitioners involved in the collaboration. This lack of a clear protocol and written information about the agreements between the organizations involved, sometimes resulted in uncertainties and miscommunication among practitioners.

MHA practitioner (IPS specialist (c)): *“I think the agreements between MHA and UWV (...) should be documented, because at the moment there is no written information available.”*

An important barrier mentioned by several MHA decision makers and practitioners was the lack of support experienced within their own organization, based on negative attitudes and beliefs among professionals not directly involved in the collaboration. According to the MHA participants, the mental health clinicians within the specialized MHA treatment teams often did not

refer clients to the IPS specialists, because these clinicians did not experience IPS as a part of the regular mental health treatment, and were not focused on recovery related to societal participation in work.

MHA practitioner (IPS specialist (d)): *“Some managers and colleagues see things differently. They don’t support recovery as much as we do within IPS and that is an obstacle (...). [Colleagues argue:] My clients can’t work, my clients won’t work (...). I simply don’t believe that if a case manager has a caseload of 40 clients, none of them wants to work”.*

### 1.3 IPS funding

All participants recognized that the secured, substantial funding for IPS was an important facilitator. Several participants thought the pay for performance element of the IPS funding might encourage IPS specialists.

UWV decision maker (manager): *“Maybe some see it as a perverse incentive, but it does provide a reason not to give up for a client if you get a fee for success. Therefore, all in all, I think it’s a very good strategy.”*

Some participants argued that the funding was not adequate, because it was still fragmented and applying for the funding was time consuming. One of the MHA decision makers was also concerned that the funding would not cover all costs of IPS.

MHA decision maker (IPS program leader): *“(...) it’s not just one financial agreement, of course that always creates issues. Ideally, there would be one all-in package [IPS funding] for three years.”*

With regard to the pay for performance element, a MHA decision maker expressed concerns about increased financial risks for the MHA and pressure to place clients in a regular, paid job. A few MHA decision makers also argued it was not appropriate to receive extra payments for achieving goals to place clients in paid work within a health care setting. While some decision makers were afraid that the pay for performance element would be a perverse incentive, other participants were convinced that it had little influence on IPS specialists in daily practice. Most participants thought an important barrier was that the financial agreements between the organizations involved were only temporary.

HIC decision maker (mental health care adviser): *“The municipality has ensured IPS financing for two years, but that means financing ends next year. The*

*same goes for us, we have agreed on financing up to February 2018. In the period ahead, we will all have to discuss how we can ensure sustainable IPS funding."*

Another barrier mentioned by the decision makers of the benefit agencies and the HIC, was the lack of proven cost-effectiveness of IPS. They all agreed proven cost-effectiveness of IPS was necessary in order to decide whether to continue IPS funding.

## 2. Socio-political context

The socio-political context was experienced as favourable for the implementation of IPS, but also challenging because of the ongoing changes in laws and regulations regarding the IPS funding and participation of people with SMI. Most participants mentioned the new Participation Act as a facilitator, because it provided a sense of urgency regarding the participation of people with SMI among employers and within benefit agencies. This sense of urgency contributed to the realization of secured IPS funding.

Several participants thought the new Participation Act also had a few unwanted consequences, such as insecurity for people with SMI and organizations involved, and the increased influence of the municipalities regarding the participation policy (decentralization).

MHA practitioner (IPS specialist (d)): *"I think the Participation Act is really complicated, because your access to [IPS] services depends on the municipality you live in. (...) you depend on the political orientation of your municipality, how rich your municipality is and what they want to spend money on. Well, I think that's insane."*

## Discussion

The aim of the present study was to gain in-depth insight into an organizational and a financial implementation strategy for IPS by exploring the perceived facilitators and barriers among participating practitioners and decision makers in mental health care and vocational rehabilitation. Using a theoretical framework [24, 25], several perceived facilitators and barriers related to IPS, the implementation strategies and the socio-political context were identified. Important perceived facilitators were the key principles of the IPS model, regular meetings of stakeholders in mental health care and vocational rehabilitation, stakeholders' experienced ownership of IPS and collaboration, the mandate and influence of the decision makers involved and secured IPS funding. Important perceived barriers included the experienced rigidity of the IPS model fidelity scale and

lack of independent fidelity reviewers, the temporary and fragmented character of the secured funding, lack of communication between decision makers and practitioners and negative attitudes and beliefs among mental health clinicians. Changes in legislation were experienced as a facilitator as well as a barrier.

## Comparison with other studies

In the literature on multifaceted implementation strategies, financial and organizational implementation activities are underrepresented [29]. Grimshaw et al. showed that most strategies focused on professionals involved [30]. An important reason for that may be that professional-directed implementation strategies are easier to realise in the study practice than financial or organizational strategies [29]. There is, however, some literature on facilitators and barriers to the implementation and sustainment of supported employment [10, 20, 31], and to components of multifaceted implementation strategies for supported employment [32, 33]. For example, two studies evaluating implementation [10] and sustainment [20] of supported employment found that important facilitators to IPS implementation and sustainment were strong personal commitments by program leaders [10] and leadership [20], in line with the facilitators found in the present study. Unlike the present study, these studies [10, 20] focused only on the experiences of MHA and IPS stakeholders and did not include stakeholders from different organizations.

Regular meetings of professionals comparable to the meetings in this implementation study were also found to be important in the study by Holwerda et al. [34]. Using questionnaires to assess the collaboration between professionals in mental health care and vocational rehabilitation to support employment of individuals with mental disorders, they also found that collaborating in a structural way was essential for developing an effective collaboration between the organizations involved [34].

Although the secured IPS funding (including pay for performance) as a strategy was experienced as a facilitator, it was not perceived as adequate, as the funding itself was still rather fragmented, and the agreements about the funding were only temporary. Previous studies also identified inadequate funding as an important barrier to IPS implementation and sustainment [10, 19, 20, 31]. Noel et al. concluded that, within the context of an active learning community, secured funding was an important facilitator to IPS sustainment [20]. This learning community promotes dissemination, implementation, sustainment and expansion of IPS [19, 20].

The finding of limited consensus about the added value of pay for performance in the present study was also reported by McGrew et al. [32], who found that although some participating professionals were satisfied with the funding,

others raised concerns about increased financial risks, pressure to achieve job placements and possible pressures for adverse client selection.

### **Strengths and limitations**

A strength of this study is that it is one of the first studies to assess the experiences with a multifaceted implementation strategy for IPS among stakeholders. Another strength is that all decision makers and practitioners involved in the first year of the collaboration between the different organizations were interviewed. This helped to achieve an accurate and complete understanding of perceived facilitators and barriers among these different stakeholders. Furthermore, the participants provided feedback on their interview summary, which improves the credibility and validity of the data. The credibility of the analysis is also increased by coding five interviews independently and developing the coding scheme by two researchers, and discussing the results in research team meetings with all authors.

The use of a theoretical framework [24, 25] to develop a topic list and guide the interviews and their analysis, is both a strength and a limitation of this study. It is a strength because using a framework based on prior research enables a structured analysis and might improve the validity of the data; it is also a limitation because the framework [24, 25] focuses on innovations within health care organizations. The innovation in this study, however, consisted of a multifaceted implementation strategy, mainly focusing on improving the IPS implementation by collaboration between different types of organizations and secured IPS funding.

A limitation of this study is the limited generalizability of the findings due to the small number of participants within this qualitative study focusing on the Dutch social security context. However, similar facilitators and barriers to the implementation of IPS have been reported in other countries with a different social security system [19, 20, 31, 35].

### **Implications for practice and research**

Important barriers were the ignorance of decision makers regarding obstacles for MHA practitioners, and a lack of formal written information about the responsibilities and the roles of the different practitioners involved. These findings suggest that communication between decision makers and practitioners, and information transfer with regard to the innovation, can be improved and therefore need more attention in future implementation strategies in order to make IPS a success in practice.

The perceived barriers related to the IPS funding suggest that there is a need for one, sustainable funding for all clients based on proven cost-effectiveness of IPS.

Consequently, future research should focus on evaluating the cost-effectiveness of IPS. In addition, the experienced rigidity of the IPS model fidelity scale and lack of independent fidelity reviewers were perceived as barriers to providing IPS services and may need further evaluation in the European context, considering the dependence of IPS funding on the IPS fidelity score. However, it appears to be important to continue IPS fidelity monitoring, since ongoing fidelity monitoring may promote long-term sustainability of IPS [15, 19, 31].

An important barrier was the lack of support experienced within the MHA, based on negative attitudes and beliefs among mental health clinicians. Fortunately, these negative attitudes and beliefs of clinicians are likely to change over time, as they come to better understand the relevance of employment on health for everyone [36]. This process may be accelerated by increasing clinicians' involvement in the IPS trajectories and by presenting frequently examples of successful IPS candidates to them. However, not only were negative attitudes and beliefs among clinicians experienced as challenging for IPS implementation in the MHA by several MHA participants, the ongoing changes in laws and regulations regarding IPS funding and participation of people with SMI also seemed to complicate this process. It is therefore important to ensure ongoing support and continuity within all organizations involved, and to continue facilitating IPS specialists.

## **Conclusions**

This qualitative study provides more insight into the perceived facilitators and barriers of an organizational and a financial implementation strategy for IPS in the Netherlands by exploring the experiences of stakeholders involved. Important perceived facilitators were the key principles of the IPS model, regular meetings of stakeholders in mental health care and vocational rehabilitation, stakeholders' experienced ownership of IPS and collaboration, the mandate and influence of the decision makers involved and secured IPS funding. Important perceived barriers included the experienced rigidity of the IPS model fidelity scale and lack of independent fidelity reviewers, the temporary and fragmented character of the secured funding, lack of communication between decision makers and practitioners and negative attitudes and beliefs among mental health clinicians. Changes in legislation were experienced as a facilitator as well as a barrier. These results suggest that the collaboration and IPS funding were experienced as improved by applying this implementation strategy. However, considerable effort is still necessary to overcome the remaining barriers identified and to make the implementation of IPS a success in practice.

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## Appendix A

### Overview of interview topics and questions<sup>1,2</sup>

#### General information about the participant

- 1) What is your current age?
- 2) What is your current job function/ role?
- 3) Since when have you worked in this job function/ role?
- 4) What is your role in the IPS collaboration?
- 5) Have you been involved in the implementation of an innovation before?

#### Collaboration between the MHA, UWV, the municipality and the HIC

- 6) How have you experienced the collaboration between the MHA, UWV, the municipality and the HIC?
- 7) In your opinion, have the newly made agreements related to this collaboration made a difference?
- 8) How satisfied are you with this collaboration in comparison to the situation before this collaboration?
- 9) Do you have any suggestions to improve future collaboration?

#### Regular meetings at the management level

- 10) How did you experience the meetings at the management level? How did these meetings turn out in your opinion?
- 11) How satisfied are you with these meetings?
- 12) According to you, what are points for further improvement of these meetings?

#### Regular meetings at the practitioner level

- 13) How did you experience the meetings at the practitioner level?
- 14) How satisfied are you with these meetings?
- 15) According to you, what are points for further improvement of these meetings?

#### IPS funding with pay for performance (i.e. financial agreements between 1) the MHA and UWV and 2) the MHA and the municipality)

- 16) According to you, what are the most important differences and similarities between the two financial agreements made between the participating organisations? For example: the duration of the funding, the total amount of money, the level of pay for performance and the amount of administrative burden (i.e. number and size of required reports)?

- 17) What do you think of these financial agreements? Have these agreements turned out as planned in practice?
- 18) What is your opinion on the pay for performance element of the IPS funding?
- 19) How satisfied are you with the IPS funding?
- 20) According to you, what are points of improvement regarding the IPS funding? Do you have any suggestions for the future regarding this funding?

#### Role of the IPS training organization

- 21) What are your experiences with the IPS training organization?
- 22) What do you think about the role of this organization?
- 23) How satisfied are you with the IPS training?
- 24) How satisfied are you with the fidelity reviews?

#### Characteristics of the innovation (i.e. IPS within the context of the collaboration between the MHA, UWV, the municipality and the HIC, including financial agreements related to IPS funding)

- 25) Were the new agreements and procedures related to the IPS collaboration and funding clear to you?
- 26) Does the innovation fit within the existing work procedures?
- 27) Do you benefit from the innovation?

#### Characteristics of professionals (in)directly involved

- 28) Have you experienced support of your direct colleagues (same job function/ role) with regard to the innovation?
- 29) Have you experienced support of other professionals (other job function/ role) with regard to the innovation?
- 30) Have you experienced support of your supervisor/ manager with regard to the innovation?

#### Characteristics of the organizations involved

- 31) According to you, to what extent have the following factors influenced the innovation in your own organization?
  - o Staff turnover
  - o Staff capacity
  - o Number of people involved
  - o Time available for the innovation

### **Socio-political context**

- 32) According to you, what is the impact of (changes in) laws and regulations (e.g. the Participation Act) on the innovation?
- 33) According to you, how do clients feel about innovation?

IPS: Individual Placement and Support

MHA: mental health agency

UWV: the Dutch Social Security Institute: the Institute for Employee Benefits Schemes

HIC: health insurance company

- <sup>1</sup> Fleuren M, Wiefferink K, Paulussen T: Checklist determinanten van innovaties in gezondheidszorgorganisaties. TSG 2010, 88:51-54.
- <sup>2</sup> Fleuren MA, Paulussen TG, Van Dommelen P, Van Buuren S: Towards a measurement instrument for determinants of innovations. Int J Qual Health Care 2014, 26:501-510.

## Appendix B

**Table 2.** Thematic overview of perceived facilitators and barriers

Theme	Facilitators	Barriers
1. Innovation		
1.1 IPS		
Intervention	<ul style="list-style-type: none"> <li>Evidence based effectiveness of IPS</li> <li>Proven effective intervention</li> <li>Key principles of the IPS model</li> <li>High fidelity IPS services are expected to be more effective</li> </ul>	<ul style="list-style-type: none"> <li>Costs of IPS</li> <li>Expensive intervention</li> <li>IPS model fidelity scale and fidelity reviews</li> <li>Some criteria of the IPS model fidelity scale are experienced as rigid</li> <li>Fidelity reviews are conducted by the IPS training organization; fidelity reviewers of this organization are not considered independent</li> <li>Compatibility of IPS with existing work procedures</li> <li>IPS is not perceived as consistent with existing work procedures</li> <li>Low number of IPS applicants</li> </ul>
Target group	<ul style="list-style-type: none"> <li>Defined target group</li> <li>Clearly defined criteria of the target group, i.e. people with SMI</li> <li>High existing costs of target group</li> <li>Potential financial profit for the financiers instead of usual high costs due to this target group</li> </ul>	<ul style="list-style-type: none"> <li>Difficult target group</li> <li>Vulnerability of people with SMI</li> <li>People with SMI have a significant distance to the labour market</li> <li>Stigmatization of people with SMI</li> </ul>
1.2 Collaboration		
Between organizations involved <sup>a</sup>	<ul style="list-style-type: none"> <li>Regular meetings of stakeholders</li> <li>Designated contact persons per organization</li> <li>Short decision lines and fast response of stakeholders involved</li> <li>Stimulate regular evaluation of new procedures</li> <li>Trust between stakeholders</li> <li>Improves experienced reliability of the judgement of other stakeholders</li> <li>Facilitates open communication between stakeholders</li> <li>Sharing information, knowledge and expertise</li> <li>Lower costs for medical expertise for municipality</li> <li>Pre-existing relationships and collaboration between stakeholders</li> <li>Informal, face to face contact between stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Clients' privacy and medical confidentiality</li> <li>Organization of the structural meetings</li> <li>Absent stakeholders</li> <li>Lack of preparation, structure and continuity</li> <li>Lack of involvement of practitioners in vocational rehabilitation</li> <li>Relatively few IPS applicants for benefit agencies</li> <li>IPS is considered as a mental health care instrument</li> <li>Lack of information about IPS action plan, interim progress and results of IPS services (outcome monitoring)</li> </ul>

Table 2. Continued

Theme	Facilitators	Barriers
	Shared interests, goals and vision of stakeholders	Lack of communication between decision makers and practitioners At management level it is not clear what the obstacles for practitioners are Practitioners are not aware of the decisions made during management meetings No formal, written information available about responsibilities and roles of the different practitioners involved
Within organizations involved	Outreaching organisation	Introvert organisation
Organization characteristics	Previous experience of organisation to collaborate	Lack of previous experience of organisation to collaborate change Rigid structure and policy of organisation to change
Culture	Interest and focus on IPS of organisation Structural consultation about IPS and collaboration within the organization	Introvert organisation Lack of previous experience of organisation to collaborate change Rigid structure and policy of organisation to change
	Support of supervisors Formal reinforcement by management to integrate IPS into organizational policies Support of the board of directors	
Conditions	Adequate availability of time to provide IPS services Adequate IPS training	Lack of availability IPS training Lack of staff capacity High staff turnover High work load of practitioners Lack of adequate knowledge of IPS services within organization Inadequate knowledge transfer of IPS and agreements with other organizations
Professionals involved		
Stakeholders characteristics	Mandate and influence of decision makers Opinion leaders Affinity with target group	
Attitude and beliefs	Ownership of IPS and collaboration Enthusiastic and passionate stakeholders	IPS not experienced as part of the mental health treatment Doubting effectiveness and added value of IPS Work not experienced as a achievable goal for people with SMI
1.3 IPS funding		
Secured funding <sup>b</sup>	Substantial funding for IPS	Fragmented funding Different financial agreements between organizations (e.g. amount of money) Lack of clarity with regard to costs of IPS services



Table 2. Continued

Theme	Facilitators	Barriers
Ethics		
Pay for performance <sup>b</sup>	Pay for performance might encourage IPS specialists	Not appropriate to receive extra payments within health care setting Perverse incentive: more critically with regard to IPS indication and closing IPS services Little influence on IPS specialists in daily practice
Access to IPS		Limited availability of IPS for clients outside municipality of Amsterdam
Sustainability	Covenant between involved organizations stimulates collaboration and funding	Lack of proven cost-effectiveness of IPS Temporary financial agreements between the organizations involved
2. Socio-political context		
Government	Support and funding of Ministry of Social Affairs and Employment  New Participation Act provides sense of urgency regarding participation of people with SMI Realization of IPS funding Positive for people with SMI Inclusive employers	Dutch social safety net does not stimulate participation in paid work Benefit trap (financial disincentives to work)  New Participation Act has unwanted consequences Insecurity for people with SMI and organizations involved Decentralization: increased influence of the municipalities regarding participation policy  Health insurance act limits IPS funding by health insurance company
Client attitude	Desire to work and enrol in IPS	Fear of losing benefit and privacy  Administrative burden for the client

<sup>a</sup> Part of the organizational implementation strategy. <sup>b</sup> Part of the financial implementation strategy.

# 4

## **Experiences with Individual Placement and Support and employment – a qualitative study among clients and employment specialists**

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## Abstract

**Background:** Individual Placement and Support (IPS) is an evidence-based, effective approach to help people with severe mental illness (SMI) achieve competitive employment. The aim of the present study is to explore experiences with Individual Placement and Support using a multifaceted implementation strategy (IPS+MIS), and competitive employment. The goal of this strategy was to improve IPS implementation by enhancing collaboration between mental health care and vocational rehabilitation stakeholders, and realizing a secured IPS funding with a 'pay for performance' element.

**Methods:** A qualitative, exploratory study was performed using semi-structured interviews with IPS clients (n=10) and two focus groups with IPS employment specialists (n = 7 and n = 8) to collect rich information about their experiences with IPS+MIS and competitive employment. Thematic content analysis was used to analyse the data.

**Results:** Themes related to experiences with IPS and the multifaceted implementation strategy were identified, including the importance of discussing the client's motivation and motives to work, facilitators and barriers to obtaining and maintaining employment, facilitators to collaboration between stakeholders, barriers to benefits counselling, organizational barriers to IPS execution and collaboration between stakeholders, financial barriers to IPS execution and experiences with the pay for performance element.

**Conclusions:** Although the multifaceted implementation strategy seems to contribute to an improved IPS implementation, the barriers identified in this study suggest that further steps are necessary to promote IPS execution and to help people with SMI obtain and maintain competitive employment.

## Background

Employment is important for the recovery of people with severe mental illness (SMI) (1-5). However, their employment rates are low (6, 7) and they often rely on social assistance or disability benefits (4). Although obtaining and maintaining employment is difficult for many people with SMI, most of them want to work (8-10).

In the Netherlands, a widely used definition of SMI is: a psychiatric disorder that requires care or treatment, for which coordinated care from professional care providers in care networks is indicated to realize the treatment plan. The disorder is accompanied with serious impairments in social and/or societal functioning and is persistent over time; the impairment is the cause and result of the psychiatric disorder (11). In the Netherlands, 60% of the people with SMI have a psychotic disorder, such as schizophrenia, affective or organic psychosis; 40% of them have other diagnoses, such as autism, a severe depression or a personality disorder (11).

Individual Placement and Support (IPS) supported employment is an evidence-based, effective approach to help people with SMI obtain and maintain competitive employment (12). IPS employment specialists offer this service and play a key role in this approach. These practitioners are guided by the following eight IPS principles:

- 1) Competitive employment: IPS services aim to get people into competitive employment. Competitive employment is defined as work in the community that anyone can apply for and pays at least minimum wage.
- 2) Zero exclusion: IPS employment specialists help anyone who expresses a desire to work; for example, people are not excluded on the bases of diagnoses, symptoms or disabilities.
- 3) Integration of mental health and employment services: IPS employment specialists attach to one or two mental health treatment teams (i.e. mental health care practitioners, such as case managers and psychiatrists). They have frequent meetings with their team(s) in which they discuss their caseload.
- 4) Client's preferences: IPS services are based on client's preferences and choices rather than on the employment specialist's and mental health care provider's judgments.
- 5) Personalized benefits counselling: IPS employment specialists help clients obtain personalized, understandable, and accurate information about how work may affect their benefits.
- 6) Rapid job search: IPS services focus on rapid job search rather than pre-employment assessments, training and counselling to help clients obtain employment.

7) Systematic job development: IPS employment specialists develop and maintain relationships with various employers, building an employer network. They systematically visit employers, who are selected based on the client's preferences, to learn about their business needs and hiring preferences.

8) Time-unlimited and individualised follow-along support: IPS employment specialists provide time-unlimited, individualised support for as long as the client wants and needs it (13).

Although the effectiveness of IPS regarding obtaining and maintaining employment in people with SMI is well established (14-16), implementation of this approach has been challenging (17-20). Poor collaboration among stakeholders from organizations involved in IPS (i.e. mental health agencies, benefits agencies and health insurance companies), and inadequate funding are important barriers to IPS implementation (6, 18-23). In the Netherlands, for example, when IPS was first introduced, there were no formal agreements related to the collaboration between the stakeholders involved in IPS and funding of IPS. More specifically, there were no structural meetings between these stakeholders and IPS services were usually partly funded by health insurance companies or one of the benefit agencies, depending on the mental health agency. In practice, it was rather unclear which part was funded by which organization during an IPS trajectory.

To improve IPS implementation in the Netherlands, stakeholders from a mental health agency, the Dutch Social Security Institute: the Institute for Employee Benefits Schemes (UWV), the municipality of Amsterdam, and a health insurance company started to collaborate since 2014; in 2015 stakeholders from another mental health agency also joined. This collaboration included a multifaceted implementation strategy, comprising an organizational and a financial strategy. The organizational implementation strategy consisted of regular meetings between the different stakeholders involved at two levels:

1) At the management level, there were regular meetings between decision makers who were considered key leaders within their organization. Their main goal was to ensure IPS sustainment.

2) At the practitioner level, there were regular meetings between IPS employment specialists and several vocational rehabilitation professionals within the benefits agencies involved. These practitioners discussed whether new IPS applicants qualified for funding, the progress of the current IPS clients, and any questions related to the clients' benefits. Their main goal was to organize the IPS funding for new clients, and to provide optimal and improved benefits counselling as compared to usual IPS practice (19).

The financial implementation strategy consisted of secured IPS funding with a 'pay for performance' element, rewarding the mental health agency with extra

payments for placing an IPS client in a competitive job. The duration and amount of the funding (excluding intake and job coaching) depended on the type of benefits the client received. The duration of the IPS funding for clients who received social assistance benefits from the municipality was limited to 18 months in the first year of the collaboration and thereafter to 24 months; for clients who received disability benefits from UWV the duration was limited to 36 months. The amount of the funding (including pay for performance) was higher for clients who received social assistance benefits than for clients who received disability benefits. All the IPS intakes were funded by the health insurance company for a maximum of 8 hours; during this intake, the IPS employment specialist and the client decided whether IPS was the right intervention for the client (19).

A recent qualitative study among the aforementioned stakeholders has concluded that the collaboration and funding regarding IPS can be improved by applying the multifaceted implementation strategy (19). However, this study has identified several other barriers that need to be addressed to further improve IPS implementation in practice, such as the temporary and fragmented character of the IPS funding (19).

While several previous studies have focused on clients' (5, 24-26) or employment specialists' (27, 28) experiences with IPS, no research has been conducted on clients' and employment specialists' experiences with IPS+MIS. Although the multifaceted implementation strategy was primarily aimed at professionals involved in IPS, it is valuable to incorporate input from both employment specialists and from clients to advance understanding of how this strategy may improve IPS implementation and employment outcomes.

This qualitative study draws from a larger study investigating the effectiveness of IPS+MIS, which recruited participants at the community mental health care divisions targeted at adults with SMI of the two mental health agencies involved. Inclusion criteria were: having a SMI, age between 18 and 65 years, having participated in IPS+MIS, and being willing to give informed consent. Exclusion criteria were: full-time hospitalisation.

### Aims

1. To explore experiences with IPS+MIS, and obtaining and maintaining competitive employment among IPS clients.
2. To explore experiences with IPS+MIS, and helping clients to obtain and maintain competitive employment among IPS employment specialists.

## Methods

### Study design

A qualitative, exploratory study was performed using semi-structured interviews with IPS clients and focus groups with IPS employment specialists to collect rich information about experiences with IPS+MIS, and competitive employment. The consolidated criteria for reporting qualitative research (COREQ) (29) were used for the study design and reporting.

### Participants

#### IPS clients

IPS clients were selected in this study if they participated in the larger IPS+MIS study (described previously) using purposeful sampling, defined as identifying and selecting information-rich participants that are especially knowledgeable about or experienced with the topics of interest (30). This procedure was used to increase heterogeneity among the clients and concerned selecting both clients who had been employed and unemployed during their IPS trajectory, according to the data of the IPS+MIS study. Furthermore, heterogeneity was increased by selecting clients based on gender, age, education, type of benefits (social assistance or disability), employment specialist and mental health agency. Eight employed and eight unemployed clients were contacted by telephone and were provided with information about the aim and procedures of the study. Six employed and four unemployed clients were willing to participate. They were sent an information letter about the study by email. The email also included the date and time of the interview, and the remark that the client could contact the researcher (M.V.) by telephone or email if the client had additional questions. Accordingly, ten clients were recruited and interviewed.

#### IPS employment specialists

The employment specialists in this study were part of specialized mental health treatment teams of the two mental health agencies involved in the aforementioned collaboration, and provided IPS services to the intervention participants in the effectiveness study, according to the IPS model (13, 19). They were supervised by two IPS program leaders. Eligibility criteria were: having completed the training to become an IPS employment specialist, having provided IPS+MIS, and being willing to give informed consent. Purposeful sampling (30) was used to recruit employment specialists via these IPS program leaders. The program leaders were asked to select employment specialists varying in gender, age and years of experience to create heterogeneous focus groups. They were also asked to distribute an information letter about the study to the selected employment

specialists. All selected employment specialists (n = 15) were willing to participate. Eight employment specialists from the mental health agency involved in the aforementioned collaboration from the beginning, and seven employment specialists from the mental health agency that joined this collaboration later, were recruited for two focus groups.

### Procedures

#### Interviews

The semi-structured interviews (n=10) were conducted between July 2018 and March 2019 by M.V., trained and experienced in qualitative research. Interviews lasted about 1 hour (range 36–74 min) and were voice-recorded. All interviews were face to face and took place at the clients' mental health agency. At the start of the interview, the aim and procedures of the study were explained by the researcher, and the informed consent form was signed. A topic guide with open-ended questions was developed, based on literature (19, 31-33) and extensive discussions during several meetings of the research team. This guide was used for the interviews to ensure comparability of the interviews, increasing reliability. Appendix A provides an detailed overview of the interview topics and questions [Appendix A]. During the interviews, clients were asked to tell the researcher about their experiences with the IPS trajectory and the multifaceted implementation strategy, i.e. IPS funding and the collaboration between their employment specialist and professionals of their benefits agency. Furthermore, they were asked to tell about their experiences with employment. To elicit any information the clients deemed important, open narrations were encouraged. At the end of each interview, the clients received a gift card. After 10 interviews no new themes emerged related to experiences with IPS and the multifaceted implementation strategy; at that point it was concluded that data saturation was achieved (34). Therefore, no additional interviews were conducted.

#### Focus groups

The two focus groups were conducted in May and June 2019, and took place at the employment specialists' mental health agencies. Both focus groups lasted about 2.5 hours and were voice-recorded. The first focus group was moderated by H.M., trained and experienced in qualitative research; M.V. was present as an observer, assisting the moderator and monitoring the group interaction. M.M. was present as secretary, taking notes. The second focus group was moderated by M.V.; a trained research assistant, working in the field of public and occupational health, was present as an observer, also taking notes. A topic guide with open-ended questions was developed, based on literature (19, 31-33) and extensive discussions during several meetings of the research team. This guide

was used to ensure comparability of the focus groups, increasing reliability. At the start of the focus group, the aim and procedures of the study were explained by the moderator, and the informed consent forms were signed. Then, the topics were discussed. Appendix B provides a detailed overview of the focus group topics and questions [Appendix B]. The employment specialists were asked to discuss their experiences with IPS and helping clients obtaining and maintaining competitive employment. Furthermore, they were asked to discuss their experiences with the multifaceted implementation strategy, i.e. IPS funding and the collaboration with professionals of the benefits agencies. The employment specialists received no compensation for their participation in the focus groups. After two focus groups no new themes emerged related to experiences with IPS and the multifaceted implementation strategy (34); at that point it was concluded that data saturation was achieved. Therefore, no additional focus groups were conducted.

#### Ethical considerations

The Medical Ethics Committee of the VU University Medical Center gave approval for the study. All procedures performed in this study were in accordance with the ethical standards of this institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Written informed consent was obtained from all participants included in the study.

#### Data analysis

The interviews and focus groups were transcribed verbatim. Atlas.ti software was used to facilitate data management and analysis. A summary of each interview and both focus groups was made by M.V., and sent by email to the participants concerned for a member check to improve the credibility and validity of the data. In the email, the participants were asked to respond if they had any comments with regard to the summary. This email also included the remark that if the participant did not respond, the researcher would conclude that the participant agreed with the summary content. Two clients and two employment specialists responded; all of them agreed with the summary content. Thematic content analysis was used to analyse the data (35). The first phase of the analytic process included thoroughly reading all transcripts to become familiar with the data. Relevant text parts were coded and a coding scheme was developed. The next phase included examining similarities and discrepancies in the data, and ultimately grouping and combining codes into themes and subthemes in an iterative manner. All transcripts were coded by M.V.; four interviews and one focus group were coded independently by M.V.

and M.M. The codes, themes and subthemes identified by these two researchers were discussed in meetings with a third researcher (F.S.) until consensus was reached. In the last phase, the themes and subthemes were refined by M.V. and F.S. The provisional and final results, including representative quotations from the interviews and focus groups to illustrate them, were critically discussed in meetings with all research team members. These quotations were translated from Dutch to English as literally as possible by a native English speaker.

## Results

Participants' characteristics are presented in Table 1.

**Table 1.** Participants' characteristics

<b>IPS clients (n =10)</b>	
Sex female (n)	4
Median age in years (range)	40 (27-55)
Psychotic disorder (n)	7
Low and medium level of education (n)	7
Receiving benefits (n)	8
Competitively employed in the past 5 years (n)	7
Currently employed (n)	6
Median working hours/ week (range)	20 (14-40)
<b>IPS employment specialists (n=15)</b>	
Sex female (n)	13
Median age in years (range)	42 (23-62)
Median number of years of experience as employment specialist (range)	2.5 (1-11)

The thematic content analysis resulted in several themes related to experiences with IPS and the multifaceted implementation strategy. Appendix C provides an overview of all identified themes and subthemes at the level of IPS client and employment specialist [Appendix C]; the most discussed or emphasized themes and subthemes are summarized in Table 2 and reported below.

**Table 2.** Overview of identified themes and subthemes at the level of IPS client and employment specialist

<b>1. Experiences with IPS</b>	
1.1 Importance of discussing client's motivation and motives to work	Requires attention regularly Various motives to work
1.2 Facilitators to obtaining employment	IPS employment specialist's crucial role Employers' inclusiveness Client's relevant work experience, competences and/or skills <sup>a</sup>
1.3 Barriers to obtaining employment	Financial factors related to client (e.g. fear of financial decline) Disclosure of client's mental illness to employer Client's lack of self-confidence and/or self-esteem <sup>a</sup>
1.4 Facilitators to maintaining employment	Disclosure of client's impairments and needs towards employer Positive atmosphere and culture within company
1.5 Barriers to maintaining employment	Client's mental health problems and susceptibility to stress Financial factors related to employer (e.g. low wage)
<b>2. Experiences with multifaceted implementation strategy</b>	
2.1 Facilitators to collaboration between stakeholders	Regular meetings <sup>b</sup> Committed contact persons within benefits agencies <sup>b</sup>
2.2 Barriers to benefits counselling	Employment specialist's limited knowledge regarding benefits Long response time of professionals within benefits agencies Complex laws and legislation regarding social security
2.3 Organizational barriers to IPS execution and collaboration between stakeholders	Lack of continuity <sup>b</sup>
2.4 Financial barriers to IPS execution	Inadequate IPS funding <sup>b</sup> Variation in follow-up support depending on psychiatrist <sup>b</sup>
2.5 Experiences with pay for performance element	Not aware of pay for performance element Not an appropriate incentive Logical that mental health agency receives extra payments <sup>a</sup> Does not influence employment specialist <sup>b</sup>

<sup>a</sup> Only perceived by clients. <sup>b</sup> Only perceived by employment specialists.

## 1. Experiences with IPS

### 1.1 Importance of discussing client's motivation and motives to work

Discussing the client's motivation and motives to work during the IPS trajectory was perceived as important by some clients and most employment specialists. They believed it requires attention regularly and mentioned several reasons for regularly discussing motivation and motives to work from the start of the IPS trajectory: 1) motivation to work is the only criterion for participation in IPS and is also a facilitator for employment, 2) it helps to decide together with the client whether IPS is the right intervention for the client, 3) discussing motives is important for setting goals and if the client's motivation decreases; by referring to the previously discussed motives and focusing on the positive aspects of work, the employment specialist can promote work motivation, 4) motives can change over time.

*ES14: "[...] I explain that motivation is the only thing that counts for participation in IPS. I had another client yesterday and he said: [...] 'so if I don't want to, then I don't have to?' And then I thought [...]: you are in control. I explain and make this clear right from the start so that they also know that if they are not motivated, they can express that and that they don't have to think: I am now obliged to participate."*

Various client's motives to work were mentioned by both clients and employment specialists. According to the employment specialists and several clients, financial factors, such as low pay and fear of losing benefits, were important for the client and influenced their motivation, choices regarding work and (mental) health.

*Man, employed 24h/w: "It isn't anything more than benefits, so in that sense, I wouldn't notice much financially. But yes, if you worked there for five days, you'd have the feeling that you didn't earn much, and then receiving benefits would almost be more interesting [...]. Yes, that might be a reason to leave in the long run, but then of course I'd have to find something that really pays well and suits better."*

Being occupied (with something meaningful) and a sense of belonging and participation were mentioned as the most important motives to work by most clients.

### 1.2 Facilitators to obtaining employment

Both clients and employment specialists mainly mentioned facilitators related to the employment specialist, and reported that the employment specialist had a crucial role during the IPS trajectory. Creating opportunities for the client to

gain work and learning experiences, while providing hope and respecting the client, was seen as the employment specialist's most important task. Meeting the client's needs and wishes by the employment specialist, and the employment specialist's involvement and availability were seen as the most important facilitators to obtaining employment.

*Man, employed 26h/w: "[...] what do you want yourself? What do you want to achieve? What are your ambitions? She [his IPS employment specialist] started to ask those questions and that is how we came up with what I wanted. [...] I am very satisfied with my IPS employment specialist. She did a good job. I'm pretty much where I should be now, and yes, she listened to me and understood my ambitions correctly."*

Other important facilitators mentioned by both clients and employment specialists, were the employment specialist's network, and activating and motivating the client by the employment specialist.

*Woman, employed 18h/w: "[...] I wasn't that motivated to start working again. [...] Here you were encouraged, like: try it and look how it goes [...]. But also: just come every week to our appointment, then we are going to search for a job together. I was just anxious to start working again. [...] And here I was told: 'you can do it, it is going to be alright.'"*

Several employment specialists also pointed out that they have an important task in challenging stigmatizing attitudes among employers and the mental health care providers within their own team, who often underestimate the client's capabilities to work.

*ES14: "They [her multidisciplinary treatment team] gave me the feedback that they expected me to focus on destigmatization. So, for example, if choices were made about daytime activities or IPS, with new clients, that I would think about those kinds of decisions together with them [her multidisciplinary treatment team] [...]."*

Most clients and employment specialists also stated that the employer's inclusiveness (i.e., a positive attitude towards providing opportunities to people with a mental illness and hiring them) was an important facilitator; according to these employment specialists, inclusive employers often represent small companies that have affinity with people with mental health issues.

Other facilitators mentioned by several clients were relevant work experience, competences and/ or skills of the client.

### 1.3 Barriers to obtaining employment

Most clients and employment specialists recognized that financial factors, such as fear of financial decline and a lack of financial incentive, were an important barrier to obtaining employment.

*Woman, unemployed: "[...] I thought [...] that I would earn less in terms of salary for a job than my benefits. And yes, I thought: well... I've already completed my studies and I do want to be rewarded for that."*

In addition, disclosure of the client's mental illness towards the employer was considered a barrier. According to several clients and employment specialists, disclosure of the diagnosis can lead to stigma and discrimination, resulting in not being hired. Most of these employment specialists recommended to disclose only relevant information, such as the client's needs in order to function optimally at work.

*ES9: "In this, I am sometimes directing, well I mean: not directing but more advising. If people do want to disclose and simply say: 'I have schizophrenia and I have experienced psychoses', I will say: do you understand that statements like that can evoke certain ideas in a person? Does it serve you to use those terms or can you perhaps use a different way to describe the situation? It often just doesn't have a positive effect, because people have certain ideas about those terms."*

Other important barriers mentioned by several clients were the client's lack of self-confidence and/ or self-esteem, due to a lack of societal participation and a significant distance from the labour market.

### 1.4 Facilitators to maintaining employment

Disclosure of client's impairments and needs towards the employer was considered an important facilitator to maintaining employment by most clients and employment specialists, because it can help create understanding and commitment of the employer and the work environment, and if necessary it may result in work adjustments. They stated it can also create space and reduce stress for the client.

*Woman, employed 18h/w: "I am very sensitive to stress and I don't mind my employer knowing that. When my employer knows what kind of person I am and how I should be treated, it gives me a certain reassurance. It also takes some sort of pressure off [...]."*



The other facilitators mentioned were mainly related to the employer and work environment. A positive atmosphere and culture within the company, characterized by a supportive and flexible environment, and opportunities for self-development, were seen as one of the most important facilitators by both clients and employment specialists.

*Woman, employed 20h/w: "I can just be myself with all the things I blurt out [...]. It feels familiar, they [her colleagues] are my type of people [...] and it is not much of a business world, [...] they are very gentle people and everything just goes the way it goes [...]. It is not all very tight, because then I wouldn't have been able to cope with it [...]. I also dare to say what is and what is not going well. I also feel comfortable to say if I have not got around to doing something, I also dare to say what I am unsure about [...]; I dare to say all that, to everyone who works there."*

In addition, the presence of an in-company job coach or another supporting professional (e.g. team leader) within the company, was experienced as another important facilitator by several employed clients.

### 1.5 Barriers to maintaining employment

Several clients, most of whom were unemployed, and employment specialists indicated that the client's mental health problems and susceptibility to stress were important barriers to maintaining employment.

*Man, unemployed: "I'm quitting [the job] because I don't think it is worth being admitted in the clinic for the third time."*

Several clients and employment specialists also reported that financial factors, such as a low wage, were an important barrier. In addition, financial motives of employers to hire the client were considered a barrier by several employment specialists. They believed that hiring the client because of financial incentives lowers the chance of successfully maintaining a job, as some employers end the client's contract as soon as they stop meeting the conditions for the financial compensation.

*ES13: "I think that it is important to really check, at an earlier phase, whether an employer is motivated to deal with any difficulties that might exist. If there is only a financial incentive, the chances are that it will fail."*

## 2. Experiences with multifaceted implementation strategy

### 2.1 Facilitators to collaboration between stakeholders

Most clients were not aware that there was a collaboration between their mental health care agency and benefits agency, but they did feel positively about it, once this organizational part of the multifaceted implementation strategy was explained to them again.

The employment specialists felt their collaboration with the professionals of the benefits agencies was improved due to the regular meetings and designated contact persons. According to the employment specialists, these committed contact persons were easy to reach and mainly helped the employment specialists to answer general questions about the client's benefits, and to refer them to other professionals within the benefits agency who could help the client.

### 2.2 Barriers to improving benefits counselling

Despite the regular meetings with the designated contact persons within the benefits agencies, most clients and employment specialists agreed benefits counselling required more attention. In addition, helping clients with their benefits issues was perceived as an important part of the employment specialist's job. The limited knowledge of the employment specialist regarding benefits issues and the long response time of professionals within the benefits agencies were seen as barriers. Most clients and employment specialists also pointed out that the Dutch laws and legislation regarding social security are complex, making it very difficult to figure out what the financial consequences would be if a benefit recipient started working in a paid job. According to the employment specialists and some clients, this insecurity regarding income consequences of employment resulted in distress in the client and was often a reason for the client to reject activities related to paid employment.

*Woman, employed 20h/w: "[...] I was very scared of the financial consequences, because I thought I would really be worse off, financially. That is entirely possible, you could just lose hundreds of euros if you were to start working more. And, no one could tell me where I could find that information; not on the internet, nobody. I called UWV, nobody could tell me... those IPS employment specialists couldn't do that either. I was really worried about that, I was completely stressed."*

### 2.3 Organizational barriers to IPS execution and collaboration between stakeholders

The employment specialists also mentioned some important organizational barriers to the execution of IPS and the collaboration between stakeholders. Lack of continuity due to a high staff turnover and lack of knowledge in newly hired staff was seen as the most important organizational barrier.

R9: "What affects our results and the way we work with IPS is that for the last three or four years, we've had an outflow of IPS employment specialists and then a new inflow and sometimes, for months, no IPS employment specialist in the team, and then once again, someone new that has no experience. [...] You really have to work two years or three years to really improve results and get more people [clients] to work. Plus the number of agreements and contracts that are there, with the municipality, with UWV, that are not always [...] transferred properly because there is such an amount of information that people [employment specialists] already have to absorb."

In addition, the employment specialists reported that many colleagues felt they were underpaid for their job compared to other mental health care professionals and that this was an important reason for many employment specialists to search for another, better paid job, resulting in a high turnover of employment specialists.

#### 2.4 Financial barriers to IPS execution

Although most clients did know their IPS trajectory was funded by their benefits agency, they did not mention any barriers related to the IPS funding. The employment specialists, however, agreed that the current IPS funding is inadequate. According to them, the duration of the funding is too short and the amount is too low. Furthermore, they experienced it as a barrier that clients can qualify for funding only once and only for a restricted time period, considering the vulnerability of people with a severe mental illness, with a considerable risk of relapse and losing their job. The lack of possibilities to offer (short-term) follow-up support to clients at risk of losing their job, after the ending of the IPS trajectory, was also seen as an important barrier.

R13: "[...] I now have the first people for whom the IPS trajectory has ended and for whom it's gone wrong afterwards, and I think it would be very good if there were some kind of fallback possibility. So that in principle, the trajectory does stop, but if it is necessary that you can jump in quickly for a short period."

The employment specialists stated that they did try to provide follow-up support, despite the lack of IPS funding. Several employment specialists claimed expenses from the health insurance company for the provided follow-up support, after the ending of the trajectory. To claim these expenses, they needed permission from the psychiatrist. According to the employment specialists, this can result in variation of the support offered depending on the psychiatrist, as some psychiatrists experienced pressure from the health insurer and did not

allow this funding to be used for IPS, while other psychiatrists perceived IPS as a part of the mental health treatment and gave permission to claim expenses.

#### 2.5 Experiences with pay for performance element

Most clients and employment specialists were not aware of the pay for performance element and did not know what happened with the extra payments. Although most clients felt it was logical that the mental health agency received extra payments when a client was successfully placed in a paid job, a few clients stated it was not appropriate.

*Woman, employed 20h/w: "Isn't the IPS employment specialist getting his salary paid [...]? So why should the mental health agency still receive a bonus? I do not really find it necessary [...]."*

The employment specialists did not feel a financial incentive, extra motivation or pressure due to the pay for performance element. In addition, they were not aware of the criteria for the extra payments. Some employment specialists thought a financial incentive was not appropriate considering the risk of selection of promising clients; others felt more appreciation and less workload for the employment specialist would be preferable and more motivating for the employment specialist than the pay for performance element.

## Discussion

The aim of the present study was to explore experiences with IPS+MIS, and competitive employment, among IPS clients and employment specialists. Several themes related to experiences with IPS were identified, including the importance of discussing the client's motivation and motives to work, and facilitators and barriers to obtaining and maintaining employment. Furthermore, several themes related to the multifaceted implementation strategy were identified, including facilitators to collaboration between stakeholders, barriers to benefits counselling, organizational barriers to IPS execution and collaboration between stakeholders, financial barriers to IPS execution and experiences with the pay for performance element. Clients and employment specialists generally had comparable experiences with IPS, implemented by applying the multifaceted strategy, and often mentioned the same facilitators and barriers to obtaining and maintaining employment.

### Comparison with literature

This study found that discussing the client's motivation and motives to work regularly during the IPS trajectory is important, as clients have various motives to work and their level of motivation and motives can change over time. These findings are in line with previous studies, stressing the importance of addressing motivation to work in people with SMI (36-38).

Another finding in the present study is that the employment specialist's role was perceived as crucial in helping clients to obtain employment, by both clients and employment specialists; important facilitators were meeting the client's needs and wishes by the employment specialist, and the employment specialist's involvement and availability. Existing research examining experiences with IPS reports similar findings (26, 27). Unlike the present study, these studies (26, 27) focused only on the IPS clients' perspectives and did not include the employment specialists.

The role of the employment specialist seems less prominent in helping clients to maintain employment, as the most discussed facilitators to maintaining employment in the present study were directly or indirectly related to the employer and the work environment. This limited role of the employment specialist in helping clients to keep their job was also reported by Koletsi et al. (26), who found that IPS clients did not receive as much support from their employment specialist while at work as they would like to have. A more pro-active role of the employment specialist when the client is employed, including more frequent contacts with the client at the job site, may help the client to stay longer employed (39).

An important finding was that the client's disclosure towards the employer was experienced as both a facilitator and barrier to employment, depending on the timing and the type of information disclosed. Disclosure of the client's mental illness, e.g. the diagnosis, towards the employer was considered a barrier to obtaining employment, as it can lead to stigma and discrimination, resulting in the client not being hired; disclosure of the client's work impairments and needs was considered a facilitator to maintaining employment because it can help create understanding and commitment of the employer and the work environment, and if necessary may result in work adjustments. These findings are consistent with those of Brouwers et al. (40), who found that disclosure can lead to stigma and discrimination, but also to work environment support. These findings also suggest that disclosure during the hiring period may better be avoided (40, 41); once the client is hired, however, disclosure of the client's work impairments and needs may enhance sustainable employment.

### Strengths and limitations

A strength of this study is that it is the first study exploring experiences with IPS+MIS, and barriers and facilitators to successfully obtaining and maintaining competitive employment, among IPS clients and employment specialists. Another strength is that the COREQ checklist was used for the study design and reporting, improving the quality of this qualitative study (29). Although qualitative studies tend to have small sample sizes, which may limit generalizability, they can provide more insight.

Purposive sampling was used to increase heterogeneity among the clients and employment specialists, but it was not fully successful, as more included clients were employed than not; it is possible that they had mostly positive experiences with IPS and employment, causing selection bias. In addition, the majority of the included employment specialists was female. Although more differentiation in gender of the employment specialists would have been preferable, it is uncertain whether this influenced the results of this study.

Participants were asked to review a summary of their interview or focus group to improve the credibility and validity of the data. The majority of the participants (21 of 25), however, did not respond to the email including this summary. This may have compromised the quality of the data.

The quotations of the participants were translated from Dutch to English as literally as possible by a native English speaker. Although the essence of the quotations has remained the same, it is possible that the English translations of the quotations do not exactly match the original quotations in Dutch.

### Implications for practice and research

Activating and motivating the client by the employment specialist were experienced as important facilitators to obtaining employment. Additional interventions, such as motivational interviewing, can be used by the employment specialist to further enhance the client's motivation (36, 37). This use of additional interventions is likely to reinforce the effects of IPS for clients (16, 37, 42, 43). The finding that the client's relevant work experience, competences and/ or skills were experienced as facilitators to obtaining employment, also suggests that additional interventions or training for the client during the IPS trajectory may reinforce the effects of IPS (16). Implementing additional interventions along with IPS, however, is challenging and needs more attention (42).

Some barriers to obtaining employment identified in this study, such as the client's lack of self-confidence and/ or self-esteem, appear to have psychosocial underpinnings. Although pre-employment assessments are not recommended in IPS programmes (13), this finding suggests that assessing psychosocial factors in an early phase of the IPS trajectory may be useful for identifying clients with psychosocial issues who would benefit from additional interventions (43).

Financial factors, such as employer-focused financial incentives, may be a facilitator to obtaining employment for people with mental illness (40). In the present study, however, financial factors were experienced as both a barrier to obtaining and maintaining employment. Financial motives of the employer to hire the client and a low wage for the client, for example, were considered important barriers to maintaining employment. These findings suggest that the current financial incentives for employers and clients should be evaluated and adjusted, as they do not seem to contribute to sustainable employment of clients. An interesting finding was that both IPS clients and employment specialists were not fully aware of all aspects of the multifaceted implementation strategy. For example, most clients and employment specialists were not aware of the pay for performance element and did not know what happened with the extra payments. This finding suggests that information transfer with regard to the multifaceted implementation strategy needs more attention (19). Although the multifaceted implementation strategy is primarily aimed at the professionals involved in IPS, the clients should also be informed correctly about the services they are receiving (13, 44), as the pay for performance element, for example, might unintentionally result in adverse client selection and pressure to achieve job placements quickly by the employment specialists (19, 45). Moreover, helping clients to have a more comprehensive understanding of their IPS trajectory, will foster shared decision making and their self-determination (13, 44).

Although the collaboration between stakeholders and IPS funding seems to be improved due to the multifaceted implementation strategy (19), organizational and financial barriers were mainly identified in the present study. An important theme related to the multifaceted implementation strategy, were barriers to benefits counselling. The limited knowledge of the employment specialist regarding benefits issues was perceived as a barrier, while helping clients with their benefits issues was perceived as an important part of the employment specialist's job. Furthermore, the Dutch laws and legislation regarding social security were considered complex, making it very difficult to figure out what the financial consequences would be if a benefit recipient started working in a paid job. These findings suggest that employment specialists should receive a targeted training on the relevant, Dutch laws and legislation regarding social security. In addition, the availability of professionals within benefits agencies should be improved, as the long response time of the professionals within the benefits agencies was experienced as a barrier. Clear and accurate information about the impact of having paid employment on the client's benefits should be readily available and offered to clients, as insecurity regarding income is likely to result in distress and a disincentive to engage in employment (46).

Another important theme related to the multifaceted implementation strategy, were financial barriers to IPS execution. The finding that the lack of possibilities for the employment specialist to offer follow-up support to clients was perceived as an important barrier, suggests that the current IPS funding is still not adequate, as it does not support the key IPS principle of providing time-unlimited, individualised support (13). An interesting finding is that some psychiatrists who perceived IPS as a part of the mental health treatment, gave permission to employment specialists to claim expenses from the health insurance company for follow-up support, while other psychiatrists did not, resulting in variation of the support for clients depending on the psychiatrist. Currently, only the IPS intake is funded by the health insurance company for a maximum of 8 hours (19). To avoid variation in the follow-up support, as reported in this study, the part of the IPS funding reimbursed by the health insurance company should be adapted to the current practice and formalized (22).

## Conclusions

This qualitative study provides more insight into the IPS clients' and employment specialists' experiences with IPS+MIS, and competitive employment. Although the multifaceted implementation strategy seems to contribute to an improved IPS implementation, the barriers identified in this study suggest that further steps are necessary to promote IPS execution and to help people with SMI obtain and maintain competitive employment.

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## Appendix A

### Overview of the interview topics and questions

#### General information about the client

Current age  
 Diagnosis  
 Level of education  
 Current situation regarding benefits  
 Current situation regarding the IPS trajectory  
 Competitively employed in the past 5 years (yes or no)  
 Current situation regarding competitive employment

#### IPS trajectory

What are reasons or motives for you to work?  
 What are reasons or motives for you to start with IPS?  
 What are your experiences with your IPS trajectory?  
 What kind of support or help did you receive?  
 What is going well? What are you satisfied with?  
 What is not going well? What are you not satisfied with?  
 Do you have any suggestions to improve the IPS trajectory?  
 How is the relationship with your IPS coach? How did you experience the role of the IPS coach?  
 Has your mental health care provider had a role during your IPS trajectory? If so, what was the role of your mental health care provider(s)?  
 What are your experiences with the collaboration between your employment specialists and your mental health care provider(s)? What is your opinion on this collaboration?

#### Multifaceted implementation strategy

Have professionals of your benefits agency had a role during your IPS trajectory? If so, what was the role of these professionals?  
 Has your health insurance company had a role during your IPS trajectory? If so, what was the role of your health insurance company?  
 What are your experiences with the collaboration between your employment specialist and the professionals of your benefits agency regarding your IPS trajectory? What is your opinion on this collaboration?  
 What are your experiences with the IPS funding? Do you know who finances your IPS trajectory? Do you know that your mental health agency receives extra payments when your employment specialists places you in a competitive job? What is your opinion on this?

### **Obtaining and maintaining employment**

What are your experiences with employment?

What helps/ helped you to obtain a job? According to you, what are/ were facilitators?

What helps/ helped you to continue working in a job? According to you, what are/ were facilitators?

Which barriers to obtaining a job did you experience?

Which barriers to maintaining a job did you experience?

Can you give any reasons why you have not been successful in obtaining and/ or maintaining a job (so far)?

How do you experience your current job? What is going well? Are you satisfied?

What is not going well? What do you need to improve your situation?

What is your opinion on disclosure of your mental illness towards your (future) employer? What are your experiences with disclosure so far?

According to you, what are the effects of employment or employment related activities on your health and daily functioning?

## **Appendix B**

### **Overview of the focus group topics and questions**

#### **General information about the employment specialist**

Current age

Number of years of experience as IPS employment specialist

#### **IPS trajectory**

- Client's motivation and motives to work and to start with IPS

What role does motivation play during the IPS trajectory?

Do you ask clients what their motives are to work? If so, why?

- Experiences with IPS and helping clients to obtain and maintain employment

How do you perceive your role as IPS employment specialist?

What do you do to help clients to obtain employment? What is going well? What are points for improvement? According to you, what are facilitators and barriers to obtaining employment for clients?

What do you do to help clients to maintain employment? What is going well? What are points for improvement?

According to you, what are facilitators and barriers to maintaining employment for clients?

According to you, what is going well within the IPS trajectory? What are points for improvement?

What is your opinion on disclosure of the client's mental illness towards the employer? What are the benefits? What are the disadvantages?

According to you, what are the effects of employment or employment related activities on the client's health and daily functioning?

- Collaboration between employment specialists and mental health care providers

How do you see your role within your multidisciplinary treatment team? How are you seen by the other members of your team?

How do you experience your collaboration with the mental health care providers within your team? What is going well? What are points for improvement?

What is the role of the mental health care providers during the IPS trajectory? What is going well? What are points for improvement?

### Multifaceted implementation strategy

- Collaboration between employment specialists and professionals of the benefits agencies

How do you experience your collaboration with professionals of the benefits agencies? What is going well? What are points for improvement?

- IPS funding

What do you think of the current IPS funding? How satisfied are you with the IPS funding? What are points for improvement?

What is your opinion on the pay for performance element?

## Appendix C

Overview of all identified themes and subthemes at the level of IPS client and employment specialist

### 1. Experiences with IPS

1.1 Importance of discussing client's motivation and motives to work	<ul style="list-style-type: none"> <li>Requires attention regularly</li> <li>Various motives to work               <ul style="list-style-type: none"> <li>Financial factors</li> <li>Being occupied (with something meaningful)</li> <li>Sense of belonging and participation</li> <li>Structure</li> <li>Self-development</li> <li>Promoting recovery</li> <li>Improving self-esteem</li> <li>Having a purpose</li> <li>Social contacts<sup>b</sup></li> </ul> </li> </ul>
1.2 Facilitators to obtaining employment	<ul style="list-style-type: none"> <li>IPS employment specialist's crucial role</li> <li>Creating opportunities for client to gain work</li> <li>Providing hope and respecting client</li> <li>Meeting client's needs and wishes</li> <li>Being involved and available</li> <li>Having a network</li> <li>Activating and motivating client</li> <li>Destigmatizing<sup>b</sup></li> <li>Employers' inclusiveness</li> <li>Client's relevant work experience, competences and/ or skills<sup>a</sup></li> <li>Support from client's family and friends<sup>a</sup></li> <li>Mental health care provider providing adequate and needed care</li> </ul>
1.3 Barriers to obtaining employment	<ul style="list-style-type: none"> <li>Financial factors related to client               <ul style="list-style-type: none"> <li>Fear of losing benefits or issues with benefits</li> <li>Fear of financial decline</li> <li>Lack of financial incentive</li> </ul> </li> <li>Disclosure of client's mental illness to employer</li> <li>Client's lack of self-confidence and/ or self-esteem<sup>a</sup></li> <li>Mental health care provider not referring client to IPS<sup>b</sup></li> <li>Financial factors related to employer               <ul style="list-style-type: none"> <li>Low wage</li> <li>No travel allowance<sup>b</sup></li> <li>Long distance to work<sup>a</sup></li> </ul> </li> </ul>
1.4 Facilitators to maintaining employment	<ul style="list-style-type: none"> <li>Disclosure of client's impairments and needs towards employer</li> <li>Positive atmosphere and culture within company</li> <li>Mental health care provider providing adequate and needed care</li> <li>Support from client's family and friends</li> <li>Client's wish for self-development<sup>a</sup></li> </ul>



1.5 Barriers to maintaining employment	Client's mental health problems and susceptibility to stress Financial factors related to employer Low wage Issues with payment of wage <sup>b</sup> Financial motives to hire client <sup>b</sup> Organizational issues within company
1.6 Positive effects of employment (related activities) on health and functioning	Less health care consumption Feeling of recovery Structure Self-development Improved self-confidence and/ or self-esteem
1.7 Negative effects of employment (related activities) on health and functioning	Feeling stressed and insecure (about financial situation) Relapse of mental illness Work related physical complaints <sup>a</sup> Relational problems <sup>a</sup>
<b>2. Experiences with multifaceted implementation strategy</b>	
2.1 Facilitators to collaboration between stakeholders	Regular meetings <sup>b</sup> Committed contact persons within benefits agencies <sup>b</sup>
2.2 Barriers to benefits counselling	Employment specialist's limited knowledge regarding benefits Long response time of professionals within benefits agencies Complex laws and legislation regarding social security
2.3 Organizational barriers to IPS execution and collaboration between stakeholders	Lack of continuity <sup>b</sup> Lack of staff capacity <sup>b</sup> High work load for mental health care staff <sup>b</sup>
2.4 Financial barriers to IPS execution	Inadequate IPS funding <sup>b</sup> Variation in follow-up support depending on psychiatrist <sup>b</sup>
2.5 Experiences with pay for performance element	Not aware of pay for performance element Not an appropriate incentive Logical that mental health agency receives extra payments <sup>a</sup> Does not influence employment specialist <sup>b</sup>

<sup>a</sup>Only perceived by clients. <sup>b</sup>Only perceived by employment specialists.

# 5

## **Evaluation of an implementation strategy for Individual Placement and Support in the Netherlands: a 30-month observational study**

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## Abstract

**Background:** Individual Placement and Support (IPS) is an evidence-based, effective approach to help people with severe mental illness (SMI) obtain and maintain competitive employment. The aim of the present study was to examine employment outcomes and associations with an organizational and a financial factor in people with SMI who participated in Individual Placement and Support using a multifaceted implementation strategy (IPS+MIS). The goal of this strategy was to improve IPS implementation by enhancing collaboration among mental health care and vocational rehabilitation stakeholders, and realizing secured IPS funding.

**Methods:** An observational cohort study including 103 participants was conducted, with a 30-month follow-up. Descriptive analyses were used to examine employment outcomes. Multivariable logistic and linear regression analyses were performed to study associations with an organizational and a financial factor: the level of experience of mental health agencies with providing IPS+MIS and the type of IPS funding (i.e. municipality funding (reference group) and the Dutch Social Security Institute: the Institute for Employee Benefits Schemes (UWV) funding).

**Results:** Forty-six percent of the participants were competitively employed at any time during the 30-month follow-up; the median number of days until competitive job obtainment and in competitive jobs was 201 and 265, respectively. The majority of all jobs obtained (81%) were categorized as 'elementary occupations', 'clerical support workers', and 'service and sales workers'. A higher level of experience of the mental health agencies with providing IPS+MIS was found to be positively associated with job obtainment (OR= 3.83, 95% CI 1.42-10.30,  $p=0.01$ ) and the number of days worked in competitive jobs ( $B= 1.21$ , 95% CI 0.36-2.07,  $p=0.01$ ). UWV funding was found to be negatively associated with job obtainment (OR= 0.30, 95% CI 0.11-0.77,  $p=0.01$ ). No association was found for the type of IPS funding and the number of days worked in competitive jobs ( $B=-0.73$ , 95% CI -1.48-0.02,  $p=0.06$ ).

**Conclusions:** This study shows that almost half of the people who participate in IPS+MIS obtain a competitive job within 30 months. The results further suggest that both the level of experience of mental health agencies with providing IPS+MIS, and funding may play a role in employment outcomes.

## Background

Obtaining and maintaining competitive employment is challenging for people with severe mental illness (SMI). Although most of these people have a wish to work (1-3), their employment rates are low (4, 5) and they often receive social assistance or disability benefits (6).

Individual Placement and Support (IPS) is a clearly described model of vocational rehabilitation and includes the following eight principles: eligibility based on client choice, focus on competitive employment, integration of mental health and employment services, attention to consumer choice, personalized benefits counselling, rapid job search, systematic job development, and time-unlimited and individualized follow-along support (7). Research shows that IPS yields better employment outcomes than other vocational rehabilitation programs for people with SMI (8-10).

Although IPS is more effective than other programs, it is complicated to implement this model in both the Netherlands and other countries (11-18). Inadequate funding and cooperation between mental health care and vocational rehabilitation services appear significant barriers to enhance further implementation in practice (4, 11-15, 17, 19-22). To overcome these barriers, stakeholders from two mental health agencies, the Dutch Social Security Institute: the Institute for Employee Benefits Schemes (UWV), the municipality of Amsterdam, and a health insurance company in the Netherlands, initiated a collaboration. This collaboration consisted of a multifaceted implementation strategy (MIS), including an organizational and a financial component. The organizational component consisted of regular meetings among the different stakeholders involved, and the financial component consisted of secured IPS funding with a 'pay for performance' element. A detailed description of IPS using a multifaceted implementation strategy (IPS+MIS) within the context of this collaboration is provided in the methods section.

While the effectiveness of IPS has been documented in numerous studies (8-10), much less is known about the impact of contextual factors, including organizational and financial factors, on the implementation of IPS and its outcomes. Gaining more knowledge on these factors is considered important, as the outcomes of IPS are influenced by the quality of its implementation (23, 24). Existing research mainly reports on the positive associations between IPS fidelity, reflecting the quality of IPS implementation, and employment outcomes (25-27). A recent study, for example, has found that improved IPS fidelity is associated with improved employment outcomes over time (25), suggesting that the experience of mental health agencies with providing IPS could impact employment outcomes. However, it is possible that not only IPS fidelity, but also

other factors, directly or indirectly influence the implementation of IPS and its outcomes (27, 28). Funding, for example, is likely to indirectly influence the proportion of IPS participants commencing employment, mediated through potential impacts on fidelity (28).

Strategies aiming to improve IPS implementation in practice, such as the MIS, thus seem relevant, and need to be further explored. Since the goal of the MIS was to remove organizational and financial barriers (13, 14), it is likely that this strategy may help improve IPS implementation and employment outcomes of people with SMI.

Up to now, research on IPS+MIS has focused on stakeholders' experiences with IPS+MIS (13, 14). However, no studies have examined the employment outcomes of people with SMI who participated in IPS+MIS, and associations with an organizational and a financial factor related to this MIS. These two factors are 1) the level of experience of mental health agencies with providing IPS+MIS and 2) the type of IPS funding. Therefore, the objectives of this study were:

1. To examine employment outcomes of people with SMI who participated in IPS+MIS during the 30-month follow-up period.
2. To study associations between employment outcomes in people with SMI who participated in IPS+MIS and 1) the level of experience of mental health agencies with providing IPS+MIS and 2) the type of IPS funding.

This study contributes to the literature by providing a better understanding of what impact contextual factors may have on employment outcomes of people with SMI.

## Methods

### Study design

This was an observational cohort study conducted between 2014 and 2020 in people with SMI who participated in IPS+MIS.

### Context information

#### IPS+MIS within the context of the collaboration among stakeholders

Clients with SMI who received treatment at one of the two participating mental health agencies and expressed a wish to work to their mental health clinician, were referred to an IPS employment specialist of the same specialized mental health treatment team for an intake. These clients also received disability benefits from UWV or social assistance benefits from the municipality, or were not entitled to benefits.

During the intake phase, the IPS employment specialist and the client decided within eight consultations whether IPS was the right intervention for the client. Then the IPS employment specialist discussed in a multidisciplinary meeting with vocational rehabilitation practitioners of UWV and the municipality whether the IPS applicant qualified for funding, and if so, for which type of funding. This meeting and the funding were part of the multifaceted implementation strategy (MIS), which consisted of an organizational and a financial component (13, 14).

The organizational component comprises regular meetings at two levels among the professionals of the different organizations involved: 1) at the management level, there were regular meetings among decision makers who had a managing or advising role within their organization. Their main goal was to facilitate practitioners and ensure IPS sustainment; 2) at the practitioner level, there were regular meetings among IPS employment specialists and several vocational rehabilitation professionals. Their main goal was to organize the IPS funding for new clients, and to provide improved benefits counselling as compared to usual IPS practice (13, 14).

The financial component was composed of secured IPS funding with a pay for performance element, rewarding the participating mental health agencies with an additional fee for placing an IPS client in a competitive job. A fair or good IPS fidelity score was a condition for this funding (13, 14).

In the Dutch context, municipalities provide social assistance benefits and are responsible for vocational rehabilitation of clients who either receive these benefits or who are not entitled to any type of benefits; UWV is a national agency which provides disability benefits to its clients and is responsible for their vocational rehabilitation; UWV clients all paid in the past premiums as employees for this social security insurance. There were thus two types of IPS funding, that were based on the same principles, but the duration and amount of the funding depended on the type of benefits clients received (13, 14):

- 1) IPS funding from the municipality: for clients who received social assistance benefits from the municipality or who were not entitled to any type of benefits, the maximum duration of the funding was 18 months and the maximum amount was 2700 euro (excluding job coaching) in the first year of the collaboration (i.e. 2014). To stimulate a successful IPS trajectory, the mental health agencies received an extra 1800 euro when placing a client in a competitive job (i.e. pay for performance element) (13, 14). After the first year, the maximum duration was extended to 24 months, and the maximum amount was 7500 euro (including job coaching) without a pay for performance element.

- 2) IPS funding from UWV: for clients who received disability benefits from UWV, the maximum duration of the funding was 36 months and the maximum amount was 4840 euro (excluding job coaching). To stimulate a successful IPS trajectory, the mental health agencies received an extra 1210 euro when placing a client in a competitive job (i.e. pay for performance element) (13, 14).

### **IPS fidelity**

The 25-item IPS fidelity scale (29) was used to assess the quality of implementation; it evaluates the quality of staffing, organization and services for IPS programs. The total score ranges from 25 to 125, and the critical cut-off point for being recognized as IPS program is >74. Fidelity reviews were conducted by two trained, external assessors according to protocol during a full-day visit at the two participating mental health agencies. The ratings were based on interviews, team meeting observations, and document reviews; the two assessors discussed any rating discrepancies until consensus ratings were reached (25). The IPS model fidelity was evaluated at five time points during the study period (2014-2020). The two participating mental health agencies scored 'fair' (74-99 points) or 'good' (100-114 points) at the first measurement in 2014, and both improved their IPS fidelity steadily, scoring 'exemplary' (115-125 points) at the last measurement in 2019.

### **Participants**

Recruitment took place between March 2014 and July 2017 at the community mental health care divisions targeted at adults with SMI of the two participating mental health agencies. Inclusion criteria were: having a SMI (i.e. a psychiatric disorder that requires care or treatment, for which coordinated care from professional care providers in care networks is indicated to realize the treatment plan; the disorder is accompanied with serious impairments in social and/ or societal functioning and is persistent over time; the impairment is the cause and result of the psychiatric disorder (30)), age between 18 and 65 years, participating in IPS+MIS, and willingness to give informed consent. Exclusion criteria were: competitive employment at study entrance and full-time hospitalization. IPS employment specialists informed their clients about the study and asked the clients who were eligible to participate. Written informed consent was obtained from all participants included in the study.

## **Procedures**

### **Data collection**

Data were prospectively collected during a 30-month follow-up period through interviews with participants, consisting of several self-report questionnaires regarding demographic characteristics, mental health (Mental Health Inventory-5 (31): consisting of five items, scored on a 6-point Likert scale), self-esteem (Rosenberg Self Esteem scale(32): consisting of ten items, scored on a 4-point Likert scale) and employment. Interviews were face to face and took place at the participants' mental health agency; the questionnaires were administered and filled out by M.V. or a trained research assistant, working in the field of public and occupational health. In addition, IPS specialists provided information about the participants' diagnoses and employment status.

### **Ethical considerations**

The Medical Ethics Committee of the Amsterdam University Medical Centre gave approval for the study. All procedures performed in this study were in accordance with the ethical standards of this institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

## **Measures**

### **Level of experience of the mental health agencies with providing IPS+MIS**

The moment of the participant's inclusion in the study (i.e. the day baseline measures were collected) was considered as a proxy for the level of experience of the two mental health agencies with providing IPS+MIS. At the start of this study, these two agencies were relatively unexperienced with providing IPS+MIS. It is probable that the level of experience of these two mental health agencies with providing IPS+MIS increased over time, as reflected by their increasing IPS fidelity scores. It is therefore plausible that clients who started their IPS trajectory later in time, participated in a high-fidelity IPS+MIS program, provided by the more experienced mental health agencies. Accordingly, to study the association between the level of experience of the mental health agencies with providing IPS+MIS and employment outcomes, the total inclusion period (i.e. 10 March 2014-27 July 2017) was dichotomized in the first half of the total inclusion period, 10 March 2014-18 November 2015, and the second half of the inclusion period, 19 November 2015-27 July 2017 (i.e. the group of clients who were included in the second half of the total inclusion period, participated in IPS+MIS when the mental health agencies were considered to be more experienced with providing IPS+MIS).

### Type of IPS funding

The duration and amount of the IPS funding depended on the type of benefits the participant received: clients who received social assistance benefits from the municipality or who were not entitled to benefits, received funding from the municipality; clients who received disability benefits from UWV, received funding from UWV. The type of benefits the participant was receiving at baseline was therefore considered as a proxy for the type of IPS funding. Accordingly, to study the association between the type of IPS funding and employment outcomes, the type of benefits at baseline were dichotomized in social assistance benefits from the municipality or no benefits, and disability benefits from UWV.

### Competitive employment and employment outcomes

Competitive employment was defined as having a paid job against prevailing wages, in a company or organization in the regular labour market, not set aside for persons with a disability, that is, in an integrated work setting. Information was derived from interviews with participants at baseline and after 6, 18 and 30 months, and from employment records filled out every two months by their employment specialists. All collected data on competitive employment were used to categorize the jobs obtained during the study period, and to calculate employment outcomes.

For objective 1. the employment outcomes were: 1) the proportion of participants who obtained competitive employment, 2) the median number of days until first competitive job obtainment, 3) the median number of days worked in competitive jobs, and 4) the characteristics of the jobs participants obtained during the 30-month follow-up, including number of jobs, median hours worked per week and median number of days worked in a job per job category (International Standard Classification of Occupations 2008 (33)). For objective 2. the employment outcomes were: 1) job obtainment, defined as having worked in a competitive job yes or no for one day or more, and 2) the number of days worked in competitive jobs at any time during the 30-month follow-up.

### Confounders

The covariates gender, age, educational level, work history (worked in past 5 years yes/ no) and mental health (Mental Health Inventory-5 (31)) at baseline were considered as confounders for the associations between employment outcomes and 1) the level of experience of the mental health agencies with providing IPS+MIS and 2) the type of IPS funding. These confounders were chosen based on literature on predictors of employment outcomes in people with a mental illness (34-36).

### Statistical analyses

Before analyses were conducted, data cleaning was performed. Employment outcomes during the 30-month follow-up period were summarized using descriptive statistics. To evaluate whether the level of experience of the two mental health agencies with providing IPS+MIS was associated with job obtainment, logistic regression analysis was used with job obtainment as the dependent variable. The association between the level of experience of the two mental health agencies with providing IPS+MIS and the number of days worked in competitive jobs was assessed in the subgroup of participants who were employed at any time during the 30-month follow-up; participants who were not competitively employed were not included in these analyses. Because the number of days worked in competitive jobs was skewed to the right, a log transformation was used before performing this analysis. To assess this association, linear regression analysis was used with the number of days worked in competitive jobs as the dependent variable. In both the logistic and linear regression analysis, the moment of the participant's inclusion in the study was used as the independent variable; clients who were included in the study during the first half of the inclusion period were the reference group. Associations between the type of IPS funding and job obtainment, and the number of days worked in competitive jobs, were also assessed using logistic and linear regression analysis, respectively. In these analyses, clients who were receiving social assistance benefits from the municipality or no benefits at baseline were the reference group. Participants were not included in analyses if specific data on confounders or employment were missing. For all analyses, both a crude and an adjusted analysis (adjusted for all predefined confounders) were performed. For all analyses, a two-sided significance level of 5% was used and 95%-confidence intervals (CIs) for odds ratios (ORs) and regression coefficients (Bs) were calculated. All statistical analyses were performed using SPSS 26.0 (SPSS, Chicago, IL, USA).

## Results

### Baseline characteristics

A total of 103 participants were included in this study. The baseline characteristics are shown in Table 1; the number of participants per characteristic varies between 98 and 103 due to missing data. A total of 80 participants (78%) had a low or medium level of education and less than half of the participants (45%) worked competitively in the past five years. The majority of the participants received disability benefits from UWV (59%) and had a psychotic disorder (72%).

**Table 1.** Baseline characteristics of the participants<sup>a</sup>

Characteristics	All participants (N=103)
Sex male, N (%)	67 (65)
Mean age in years (SD)	38.7 (9.7)
Married, N (%)	5 (5)
Living independently, N (%)	90 (87)
Born in the Netherlands, N (%)	71 (69)
Low and medium level of education, N (%)	80 (78)
Worked competitively in past 5 years, N (%)	44 (45) (N=98)
Disability benefits, N (%)	60 (59) (N=102)
Psychotic disorder, N (%)	74 (72)
Mean score MHI-5 (mental health) (SD), range 0-100	45.1 (9.4) (N=100)
Mean score RSE (self-esteem) (SD), range 0-30	18.4 (4.8) (N=101)

<sup>a</sup>N varies between 98 and 103 due to missing data. N=103 when the N is not indicated in the table

### Employment outcomes

The employment outcomes during the 30-month follow-up are shown in Table 2. A total of 47 participants (46%) were competitively employed at any time during the 30-month follow-up, and 29 participants (28%) worked 6 months (183 days) or longer. In the subsample of competitively employed participants (N=47), the median number of days until competitive job obtainment was 201 (6.6 months), and the median number of days worked in competitive jobs was 265 (8.7 months).

**Table 2.** Employment outcomes during the 30-month follow-up

Employment outcomes	All participants (N=103)
Obtained competitive employment (%)	47 (46)
Median number of days until competitive job obtainment [IQR] <sup>a</sup>	200.5 [58.8-537.3]
Median number of days worked in competitive jobs [IQR] <sup>b</sup>	265.0 [93.0-512.0]

<sup>a</sup>Subsample of participants competitively employed, N=46

<sup>b</sup>Subsample of participants competitively employed, N=47

Figure 1 presents the monthly employment rates of the participants (N=102) throughout the 30-month follow-up. Participants rapidly obtained a rate of competitive employment of 13% by the second month of the study. Thereafter, their rate of competitive employment increased gradually to 28% in the 22th month and stabilized at around that level.

**Figure 1.** Monthly employment rates of the participants (N=102) throughout the 30-month follow-up

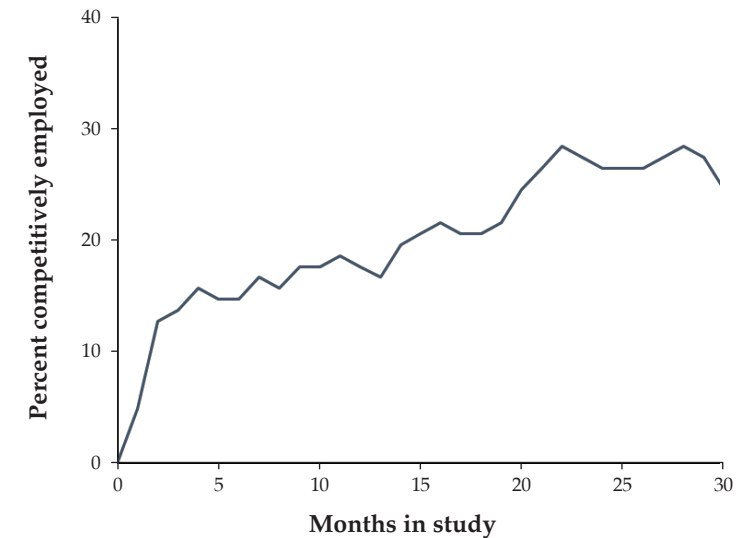


Table 3 presents the characteristics of the competitive jobs participants obtained during the 30-month follow-up period. All jobs (N=73) were divided in seven categories; the categories ‘elementary occupations’ (N=33, e.g. cleaner and shelf filler), ‘clerical support workers’ (N=14, e.g. post carrier and customer contact centre information clerk) and ‘service and sales workers’ (N=12, e.g. waiter and concierge) included the majority of all jobs obtained (81%). The overall median number of hours/week worked per job was 21, and the overall median number of days worked per job was 179 (5.9 months).

**Table 3.** Characteristics of the competitive jobs participants obtained during the 30-month follow-up period

Job category	All jobs (N)	Median hours/week worked per job <sup>a</sup> [IQR]	Median number of days worked per job <sup>b</sup> [IQR]
Professionals	2	12.5 [-]	194.0 [-]
Technicians and associate professionals	5	24.0 [14.0-24.5]	93.0 [77.5-496.0]
Clerical support workers	14	20.0 [15.5-28.0]	179.0 [45.0-360.0]
Service and sales workers	12	23.0 [17.0-30.0]	85.5 [14.3-229.5]
Plant and machine operators, and assemblers	4	13.0 [10.0-28.0]	420.0 [-]
Elementary occupations	33	20.0 [14.0-30.0]	210.0 [47.5-537.0]
Unknown job(s)	3	24.0 [-]	150.0 [-]
All job categories	73	21.0 [15.8-25.8]	179.0 [60.0-420.0]

<sup>a</sup>Based on 70 jobs due to missing data on total hours/week worked

<sup>b</sup>Based on 67 jobs due to missing data on total number of days worked

### Association between the level of experience of mental health agencies with providing IPS+MIS and employment outcomes

All results presented were adjusted for all the predefined confounders. The logistic regression analysis on job obtainment showed a statistically significant association between the moment of participant's inclusion (proxy for the level of experience of the mental health agencies with providing IPS+MIS) and job obtainment (OR=3.83, 95% CI 1.42-10.30, p=0.01) (N=95). Clients who were included in the study during the second half of the inclusion period were more likely to obtain employment compared to clients who were included in the study during the first half of the inclusion period. The linear regression analysis on the number of days worked in competitive jobs also showed a statistically significant association between the moment of participant's inclusion and the number of days worked in competitive jobs (B=1.21, 95% CI 0.36-2.07, p=0.01, R-squared=0.23) (N=44). Clients who were included in the study during the second half of the inclusion period and obtained competitive employment, worked more days on average than the clients who were included in the study during the first half of the inclusion period and obtained employment.

### Association between the type of IPS funding and employment outcomes

All results presented were adjusted for all the predefined confounders. The logistic regression analysis on job obtainment showed a statistically significant association between receiving disability benefits at baseline (proxy for IPS funding from UWV) and job obtainment (OR=0.30, 95% CI 0.11-0.77, p=0.01) (N=94). Clients who were receiving disability benefits from UWV at baseline were less likely to obtain employment compared to clients who were receiving social assistance benefits from the municipality or no benefits at baseline. The linear regression analysis on the number of days worked in competitive jobs did not show a statistically significant association between receiving disability benefits at baseline and the number of days worked in competitive jobs (B=-0.73, 95% CI -1.48-0.02, p=0.06, R-squared=0.15) (N=44).

## Discussion

### Main findings

This study had two objectives: 1) examining the employment outcomes of people with SMI who participated in IPS+MIS, and 2) studying the associations between employment outcomes in these people and the level of experience of mental health agencies with providing IPS+MIS, and the type of IPS funding. Forty-six



percent of the participants were competitively employed at any time during the 30-month follow-up. The competitively employed clients obtained their job within about 7 months, and worked for about 9 months in total. They obtained a variety of mostly entry-level jobs, such as elementary, clerical support, and service and sales positions. Furthermore, a higher level of experience of the mental health agencies with providing IPS+MIS was found to be positively associated with employment outcomes. In addition, IPS funding from UWV was found to be negatively associated with job obtainment, but not associated with the number of days worked in competitive jobs.

### Comparison with literature

In the present study, 46% of the IPS clients obtained a competitive job at any time during the 30-month follow-up. This percentage is in line with the percentages found in several previous European studies on IPS (37-40), reporting between 22% (40) and 46% (39) of the IPS clients being competitively employed during the follow-up. These studies (37-40), however, were randomized controlled trials, examining IPS implemented as usual, whereas the present study was an observational study focusing on IPS+MIS. The follow-up period was also longer in the present study than in some of the previous studies (38-40). Although the labour market characteristics, policies and welfare systems differ between European countries (41), a recent meta-analysis suggests that these differences do not seem to impact employment outcomes (10).

Consistent with their educational level at baseline, participants in this study obtained mostly jobs that were categorized as 'elementary occupations', 'clerical support workers' and 'service and sales workers'. This finding is in line with previous research (42, 43), which reports similar categories (43) and jobs (42), the majority of these jobs requiring a low or medium level of education.

Although no previous research studied the association between the type of IPS funding and employment outcomes in people who participated in IPS+MIS, several studies also suggest that funding is relevant for the implementation of IPS (4, 13, 14, 17, 20, 28), and therefore might influence employment outcomes (4, 17, 20, 25, 27, 28, 44).

### Strengths and limitations

This is the first European study examining the employment outcomes and associations with an organizational and a financial factor related to the MIS in people with SMI who participated in IPS+MIS. One of its strengths is the long follow-up period. Another strength is that the majority of data was collected through face to face interviews with IPS clients and that the employment outcomes were based on information provided by employment specialists, improving the quality of the results.

An important limitation is the assumption that the moment of participant's inclusion is a proxy for the level of experience of mental health agencies with providing IPS+MIS. Although it is plausible that the differences in employment outcomes between the two groups of clients is due to the increased experience of the mental health agencies with providing IPS+MIS, it is also possible these differences are influenced by other factors, such as changes in economic conditions in the community, greater acceptance by community employers and legislation stimulating work participation (14). Another limitation is the assumption that the type of benefits the participant was receiving at baseline was considered as a proxy for the type of IPS funding. Although this is a plausible assumption, the significant association between receiving disability benefits and job obtainment may have also been influenced by other factors, such as the difference in severity of the mental health problems and the distance from the labour market between the two groups of clients. Adjustment for work history and mental health in this analysis may have compensated this limitation somewhat. The sample size is also a limitation, since it was not possible to adjust for all potential confounders, such as diagnosis (36) and self-esteem (34). To minimize selection bias, the employment specialists were asked to recruit all clients who met the inclusion criteria. However, it is possible that they recruited mostly motivated clients, causing selection bias. The employment specialists could also not provide more detailed information about all clients they had approached for IPS+MIS and/ or this study.

### Implications for practice and research

The low percentage of clients who worked 6 months or longer during the 30-month study period, deserves attention (only 28%). This percentage can be improved by helping more clients to obtain employment, and once employed, by helping them to stay longer employed. Since the IPS employment specialist's role already seems prominent in helping clients to obtain employment (13), this low percentage suggests that employment specialists should focus more on helping clients maintaining their job. Based on literature, one way to accomplish this, could be improving the match between client and employer (45), for example, by improving employment specialists' skills in job development (i.e. building an employer network by developing and maintaining relationships with various employers (46)) through training, repeated role-plays, field mentoring and group supervision (47). Moreover, improved employment specialists' skills in job development could also increase the probability of obtaining competitive employment (47-49). Another way for employment specialists to help clients maintaining employment, could be with a more pro-active role when the client is employed, including more frequent contacts with the client, for instance at the job site (13, 50-52).

The finding that participants who were included later in time had better employment outcomes than participants who were included earlier in time, suggests that the experience of mental health agencies with providing IPS+MIS may indeed play a role in better employment outcomes. Stakeholders may gain more experience over time on how to collaborate successfully with each other (i.e. the organizational component of the MIS) and on how to organize more adequate funding (i.e. the financial component of the MIS), resulting in improved IPS services for clients. Stakeholders from mental health agencies who are planning to implement IPS+MIS in the near future, may benefit from collaborating with stakeholders from agencies who are experienced with providing IPS+MIS, as they can learn from their experience with organizing a collaboration among different organizations involved in IPS and funding (14, 17). Since the IPS fidelity increased over time in both participating mental health agencies, this finding also suggests that the MIS may influence fidelity and thereby indirectly the proportion of IPS clients obtaining employment (25, 27, 28). For mental health agencies that achieve high IPS fidelity, such as the mental health agencies in this study, focusing on improving other factors that can impact the implementation, may further improve employment outcomes (28). Examples of organizational factors that deserve attention are lack of continuity due to a high staff turnover and lack of knowledge in newly hired staff (13, 14).

The finding that participants who received IPS funding from UWV were less likely to obtain employment than participants who received funding from the municipality, suggests that the duration and amount of IPS funding may play a role in employment outcomes of people who participated in IPS+MIS. One of the differences between the UWV and the municipality funding was the pay for performance element: the UWV funding included the pay for performance element during the first three years of the collaboration, while the municipality funding included it only during the first year of the collaboration. This suggests that the pay for performance element might not stimulate successful trajectories, as it probably does not influence IPS employment specialists in daily practice (13, 14). Financing organizations could consider other types of financial incentives to improve outcomes, for example rewarding IPS employment specialists with monetary bonuses for placing clients in competitive jobs instead of the mental health agencies. However, future research is recommended to provide more insight into what impact funding has on employment outcomes. Furthermore, future research on the (cost-)effectiveness of IPS+MIS seems warranted, and should focus on employment outcomes related to maintaining competitive employment.

## Conclusions

This study shows that almost half of the people who participate in IPS+MIS obtain a competitive job within 30 months. The results further suggest that both the level of experience of mental health agencies with providing IPS+MIS, and funding may play a role in employment outcomes.

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# 6

**Effectiveness, cost-effectiveness, and  
return-on-investment of Individual  
Placement and Support compared  
with traditional vocational rehabilitation  
for individuals with severe mental illness  
in the Netherlands: a nationwide  
implementation study**

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Submitted

## Abstract

**Objectives:** To assess the effectiveness, cost-effectiveness, and return-on-investment of Individual Placement and Support (IPS) implemented through a reimbursement strategy on a nationwide scale compared with traditional vocational rehabilitation (TVR) regarding sustainable participation in competitive employment in individuals with severe mental illness (SMI) receiving sickness or disability benefits.

**Methods:** An observational study was conducted using administrative data regarding all Dutch individuals receiving sickness or disability benefits in the period 2012-2019. Exact matching and difference-in-difference fixed-effect estimations were performed to handle the non-randomized nature of the data. The proportion of individuals having worked for 12 hours or more per week in competitive employment, and the proportion of individuals having worked in competitive employment for one hour or more per month were used as outcomes. Competitive employment was defined as having a positive non-zero wage and number of hours worked per month. Cost-effectiveness and return-on-investment (ROI) were assessed from the societal and payer perspective.

**Results:** IPS led to a statistically significant higher probability of being competitively employed of 4 to 9-% points from 6 to 36 months after starting the intervention. From the societal and payer perspective, IPS was – on average – less costly and more effective than TVR and ROI estimates showed that IPS was – on average – cost saving (e.g. societal perspective:  $\Delta C$ :-364 [95%CI:-3977 to 3249];  $\Delta E$ :0.104 [95%CI:0.046 to 0.164]; Benefit-Cost-Ratio:2.1 [95%CI:-14.8 to 19.1]), but the uncertainty surrounding these estimates was large.

**Conclusions:** IPS implemented through a reimbursement strategy on a nationwide scale is more effective and seems more cost-effective than TVR in people with SMI receiving sickness or disability benefits. Based on this economic evaluation on a nationwide scale, the implementation of IPS by a wide scale reimbursement strategy should be promoted to enhance sustainable participation in competitive employment in these individuals.

## Key Messages

**What is already known on this topic** – Worldwide work participation of people with severe mental disorders is low. In randomized controlled trials it is shown that Individual Placement and support (IPS) is an effective and cost-effective method to help individuals with severe mental disorders achieve competitive employment. Despite its effectiveness, implementation of IPS in usual rehabilitation care is limited, highlighting the need for effective implementation strategies to implement IPS on a wide scale.

**What this study adds** – The results of the present study show that IPS implemented on a nationwide scale through a reimbursement strategy is effective and seems cost-effective, and offers a high return-on-investment from both the societal and payer perspective.

**How this study might affect research, practice or policy** – The results of this economic evaluation can motivate decision makers on the national level to reimburse IPS for people with severe mental disorders. A nationwide reimbursement strategy will improve the implementation of IPS and work participation of people with severe mental disorders.

## Introduction

According to a commonly used definition of severe mental illness (SMI) in the Netherlands, an individual with SMI is someone with a psychiatric disorder that requires treatment, for which coordinated support from professional care providers in care networks is indicated to realize the treatment plan. The disorder is accompanied with serious impairments in social and/or societal functioning and is persistent over time; the impairment is the cause and result of the psychiatric disorder (1). The majority of individuals with SMI have a psychotic disorder, such as schizophrenia or a bipolar disorder (1).

Although most individuals with SMI prefer to work and working contributes to their recovery, their employment rates are low and they often rely on disability benefits (2-6). Hence, the economic burden of SMI for society is significant and includes both direct costs to the healthcare system and indirect costs, which are mainly borne by employers and the social security system (2).

Individual Placement and support (IPS) is internationally recognized as an evidence-based, effective, and cost-effective method to help individuals with SMI to obtain and maintain competitive employment (7-12). IPS services aim to get all clients who want to work, rapidly into competitive jobs without pre-employment training, and are provided by employment specialists who are integrated in mental health services (13). In contrast to this ‘place and train’ approach, traditional vocational rehabilitation (TVR) services for individuals with SMI use a stepwise approach, by training clients before placing them, in often sheltered or volunteer, work (‘train and place’) (14, 15). Research shows that IPS is more than twice as effective as TVR in getting individuals with SMI into competitive employment (7). Regarding cost-effectiveness, a European multicountry randomized controlled trial demonstrated that IPS is more effective at a lower cost compared with TVR in all countries except for the Netherlands (11). At the Dutch site, the quality of IPS implementation, as measured

by the IPS fidelity scale(19), was low, which may have had a negative impact on the cost-effectiveness outcomes (11, 12).

In both the Netherlands and other countries, one of the major barriers to a successful implementation of IPS has been inadequate funding (15-25). To improve the implementation of IPS in the Netherlands, the Dutch Social Security Institute: the Institute for Employee Benefits Schemes (UWV) started to reimburse IPS on a structural basis in 2012. The aim of UWV was not only to improve work participation of individuals with SMI, but also to reduce costs of benefits. The underlying hypothesis for this policy change was that the costs of benefits for clients with SMI may exceed reimbursement costs for IPS, as has been shown in other countries (11, 25). This nationwide reimbursement consisted of structural IPS funding, offered by UWV to all mental health agencies providing IPS services (23, 24, 26, 27). Only clients with SMI who received sickness or disability benefits from UWV were eligible for this funding (23, 24, 26, 27). A detailed description of the reimbursement policy for IPS is provided in the methods section.

Despite the relevance of structural IPS reimbursement, there is a lack of studies on this topic. Only one study investigated the effectiveness of IPS after the introduction of the nationwide reimbursement of IPS, and showed that IPS leads to a higher probability of being competitively employed compared with TVR in individuals with SMI who receive disability benefits (26). Since administrators and policy makers are increasingly investing a considerable amount of time and resources in IPS implementation (18, 21, 24, 27), it is important to not only evaluate the effectiveness, but also the cost-effectiveness and return-on-investment of IPS to ensure that resources are being allocated optimally. Therefore, the aim of the present study was to assess the effectiveness, cost-effectiveness, and return-on-investment of IPS reimbursed on a nationwide scale compared with TVR regarding sustainable participation in competitive employment in individuals with SMI receiving sickness or disability benefits.

## Methods

### Study design and data

This study was carried out using administrative data from Statistics Netherlands and UWV, regarding all Dutch individuals receiving sickness or disability benefits in the period 2012-2019.

The Medical Ethics Committee of the Amsterdam University Medical Centre gave approval for the study. All procedures performed in this study were in accordance with the ethical standards of this institutional research committee

and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

### Patient and public involvement

It was not appropriate or possible to involve patients or the public in the design, or conduct, or reporting, or dissemination plans of this research.

### Context information

#### Benefits and vocational rehabilitation for individuals with SMI

In the Netherlands, individuals with SMI who are not able to work due to their illness can apply for different types of benefits at UWV (28-30). See Appendix A for detailed information on these benefits (Appendix A). Generally, individuals who receive a disability benefit are more likely to face greater challenges in participating in the labor market compared to those with a sickness benefit, who typically have a shorter duration of illness. UWV is an autonomous administrative authority and is responsible for the vocational rehabilitation of individuals receiving sickness or disability benefits (26, 27). For a significant period, UWV primarily offered TVR services to individuals with SMI receiving these benefits. In 2012, UWV also began to reimburse IPS, provided by mental healthcare agencies. Since then, an increasing number of mental healthcare agencies have implemented and started offering IPS services.

### Interventions

#### IPS

IPS is a clearly described model of vocational rehabilitation and includes the following eight principles: 1) focus on competitive employment, 2) zero exclusion and eligibility based on client choice, 3) rapid job search, 4) attention to consumer choice, 5) integration of mental health and employment services, 6) personalized benefits counselling, 7) systematic job development, and 8) time-unlimited and individualized follow-along support (13).

To be effective, IPS should be implemented according to the model, as a high model fidelity is associated with better employment outcomes (31-33). In the Netherlands, mental healthcare agencies that wanted to offer IPS to their clients, received a model fidelity assessment after having professionals trained in providing IPS services. This fidelity assessment was conducted every two years by independent reviewers to ensure quality of the IPS services (31). To receive funding from UWV, the mental healthcare agencies needed to have a fair or good IPS fidelity score and only individuals with SMI receiving sickness or disability benefits from UWV were eligible (23, 24, 26, 27). Only professionals trained as IPS employment specialists were allowed to provide IPS services

within these agencies. During the study period (2012-2019), around 15-20 mental healthcare agencies in the Netherlands offered IPS services more than incidentally.

During the study period, there were two IPS funding regimes:

1. Old regime (January 2012 - February 2017): funding was provided for a maximum duration of 36 months, excluding job coaching. Mental healthcare agencies received additional funding upon successfully placing participants in competitive jobs. Data were available only for IPS participants receiving a disability benefit.
2. New regime (March 2017 - December 2019): the maximum funding duration remained at 36 months, but a higher amount was introduced, which included coverage for job coaching expenses. Data were available for all IPS participants receiving a sickness or disability benefit.

### TVR

The goal of vocational rehabilitation services provided to UWV clients is to help individuals overcome barriers to employment and successfully find work. The process involves regular meetings with UWV professionals to assess the client's needs and determine which additional services may be required, such as social activation, employee skills enhancement, determining labor market position, job hunting and matching, and job coaching services. These services are financed by a designated budget.

### Study population and matching procedure

Administrative data were used to select both intervention and control group individuals, of whom their baseline was defined as the start of their intervention. The intervention group consisted of individuals receiving sickness or disability benefits, who participated in IPS services, funded by UWV, between 2012 and 2019 and were not employed at the start of the intervention. The control group consisted of individuals who participated in TVR, funded by UWV, during the same time period, and were not employed at the start of the intervention. These individuals were matched to the intervention group individuals on sex (male/female), age (<25, 25-35, 35-45, >45 years), region (agglomeration of big cities in West-Netherlands and rest), work history in 12 months before intervention (0-1 month,  $\geq 2$  months), type of benefit (disability, other), presence of disability benefits 12 months before start of the intervention (yes, no), number of months of disability benefits over the last 12 (1-9 months, 10-12 months) and over the last 36 months (1-24 months, 25-36 months), medical costs in the last 12 months before start of the intervention ( $\leq 1.200$  euro, 1.200-6.000 euro, 6.000-12.000 euro,  $\geq 12.000$  euro), mental health care costs in the last 12 months before start of the

intervention ( $\leq 1.200$  euro, 1.200-12.000 euro,  $\geq 12.000$  euro), size of the mental health institute (no institute,  $\leq 49$  interventions,  $\geq 50$  interventions for IPS and TVR interventions during the study period) and presence of other interventions 36 months before start of the intervention (yes, no). Individuals were also matched on SMI-criteria. For the operationalization of SMI in administrative data, an individual is usually considered to have SMI in a specific year if he or she meets one of the four following criteria: 1) at least one health insurance claim for treatment related to schizophrenia in the current year or one of the previous two years; 2) a record of both open and closed longer-lasting mental health insurance claims in each year for the current year and the previous two years, excluding claims for diagnostics, indirect time and treatments related to alcohol, addiction, dementia or delirium; 3) an indication for living in sheltered or supported housing; 4) expenses for medications related to bipolar disorder or psychosis (26). These criteria were developed by a Dutch business intelligence center for health insurance providers (Vektis), in cooperation with mental health care providers. All four SMI-criteria have been included as binary (0/1) variables in the matching.

To avoid selection effects and provide a clearer comparison with the intervention group, the control group was limited to individuals who received treatment from mental healthcare agencies that do not offer IPS on a large scale (i.e.  $\geq 30$  IPS trajectories over the total research period). This was done to ensure that the control group was not influenced by the availability of IPS and to reduce the likelihood that individuals who receive IPS differ from individuals who receive TVR on unobservable characteristics. Individuals who had been competitively employed within the month prior to starting the intervention and those who were permanently disabled and unable to work were excluded from the analyses. Additionally, participants who had received IPS within a two-year period before or after the start of TVR were also excluded. The same sort of interventions (i.e. IPS or TVR) that started during the same 2-year time frame were treated as one intervention with the starting date of the first intervention.

Due to the large sample size (i.e. 1,787 individuals in the IPS-group and 103,439 individuals in the TVR-group) it was possible to apply exact non-parametric matching. Regarding observed characteristics, exact matching outperforms propensity score matching, ensuring that individuals in the TVR group have the exact same characteristics as their counterparts in the IPS-group. When using a propensity score, matched pairs have similar scores, but may differ in terms of observed variables of interest, which may introduce a bias in the results. While exact matching ensures that the TVR- and IPS-group share identical characteristics, it could limit the number of matches due to a possible shortage of exact matches for every individual receiving IPS.



Please note, however, that an individual in the TVR-group can serve as a control for multiple IPS participants. In the analysis phase, every individual in the TVR-group was weighted by the inverse of the number of controls for the specific individual receiving IPS he or she was matched to.

### Effect measures

The primary effect measure was the proportion of individuals having worked for at least 48 hours per month in competitive employment (yes/no). This corresponds approximately to having worked for at least 12 hours per week and may be considered as a measure for sustainable employment. A commonly used effect measure in literature on IPS effectiveness was also evaluated (7): the proportion of individuals having worked in competitive employment for at least one hour per month (yes/no). Competitive employment was defined as having positive non-zero wage and number of hours worked per month; data on self-employment were not available in this study. Both effect measures (i.e. 1) monthly competitive employment  $\geq 12$  hours per week and 2) monthly competitive employment  $\geq 1$  hour) were assessed every month after baseline (i.e. the start of IPS/TVR) during a 36-month period, using data from Statistics Netherlands, which contained precise information on the start and end dates of jobs, the type of employment (competitive or sheltered), and the hours worked in those jobs for all Dutch citizens.

### Resource use and valuation

Costs were measured from a societal and payer perspective. From the societal perspective, intervention costs, sickness and disability benefit costs, and healthcare costs were included. The societal perspective is generally recommended when various stakeholders may be affected by an intervention (e.g. by the Dutch Manual of Costing) (34, 35). This is also the case for IPS, as UWV invests in IPS and may benefit from its implementation through reduced spending on sickness and disability benefits, whereas the government and health insurance companies may benefit from it through reduced medical costs. From the payer perspective, only UWV costs were included. This perspective was added as it may provide valuable information to possible payers of the intervention. Information on the individuals' intervention and benefits costs was collected from the database of UWV. Information on the individuals' healthcare costs was collected from a National database containing information on all health insurance claims of Dutch citizens that are part of the Basic Health insurance package of all adults ( $\geq 18$  years). This package covers visits to all medical specialists, emergency services, and medically necessary procedures, such as surgery, x-rays, obstetrics, and prescription medications. All costs were standardized to 2019 Euro rates using consumer price index numbers for each year.

## Statistical analyses

### Effectiveness

First, the baseline characteristics of both matched cohorts were descriptively analyzed. For the effectiveness analysis, a difference-in-difference fixed-effect estimation to the matched sample was applied, which made it possible to estimate the causal effect of IPS. The difference-in-difference estimation together with exact matching corrects for potential pre-intervention differences between the IPS group and the control group. A similar approach has been followed by De Graaf-Zijl et al. (26). See Appendix B for the specification of the analysis model (Appendix B).

The differences in effect measures were analyzed for the total IPS and TVR group. For all analyses, a two-sided significance level of 5% was used and 95% confidence intervals for the coefficients ( $\beta_i$ ) were calculated. Effectiveness analyses were performed in STATA.

### Cost-effectiveness

The cost-effectiveness analysis was performed from the societal and payer perspective and related the difference in total costs between the IPS group and the control group during the 36 months after baseline ( $\Delta C$ ) to the differences in effects ( $\Delta E$ : having worked for at least 12 hours per week and having worked for at least one hour). These differences were estimated using independent sample *t-test* on the matched cohorts. Please note that these analyses were performed on complete-cases only; i.e. those with complete cost and effect data for the full duration of 36 months. As data were gathered from databases and data incompleteness was mainly due to the fact that some individuals started with the intervention less than 36 months ago (i.e. they could not have completely observed data), data incompleteness was assumed not to bias the outcomes.

Incremental cost-effectiveness ratios were estimated by dividing the differences in costs by the differences in effects (ICER= $\Delta C/\Delta E$ ). Incremental Net Benefits (INBs) were estimated for three different willingness-to-pays (i.e.  $\lambda$ = the maximum amount of money decision-makers are willing to pay per worker returned to sustainable employment), being €0, €10,000, and €25,000, using the formula  $INB = \Delta E * \lambda - \Delta C$ . Then, cost-effectiveness acceptability curves were developed indicating the probability of IPS being cost-effective versus TVR for a broad range of willingness-to-pays (36, 37). Cost-effectiveness analyses were performed in R.

### Return-on-investment

The return-on-investment (ROI) analysis was performed from the societal and payer perspective. Costs were defined as the difference in program costs of the IPS and TVR intervention. Benefits were defined as the mean difference in

benefits costs (payer perspective and benefits and healthcare costs (societal perspective)). Positive benefits indicate a cost saving, while negative benefits indicate a monetary loss.

Two metrics were determined: 1) Net Benefit (NB)=benefit-costs; 2) Benefit Cost Ratio (BCR)=benefits/costs. An NB of more than 0 and a BCR of more than 1 indicate a positive financial return (37). Return-on-investment analyses were performed in R.

## Sensitivity analyses

### Effectiveness

Three sensitivity analyses were performed evaluating the effectiveness of 1) the old funding regime (2012 – 2017) for individuals receiving a disability benefit, 2) the new funding regime (2017- 2019) for individuals receiving a disability benefit, and 3) the new funding regime for individuals receiving a sickness benefit.

### Cost-effectiveness and return-on-investment

Two sensitivity analyses were performed: 1) excluding sickness and disability benefits costs, and 2) stratified from funding regime (i.e. old versus new funding regime for individuals receiving a disability benefit). The first sensitivity analysis was performed for the cost-effectiveness analysis only, as sickness and disability benefits costs have some level of overlap with the effect outcome (i.e. competitive employment).

## Results

### Characteristics

The characteristics of the IPS and TVR groups, pre and post matching are shown in Table 1. The matching strategy resulted in a TVR-group of 16,466 controls for 863 persons who received IPS, i.e. for 48% of the IPS-group at least one control was found. On average, there were 19 controls per individual receiving IPS. The matched IPS-sample had more or less the same characteristics as the total IPS-group, with a few differences: the matched sample scored lower on all SMI-criteria and had lower medical costs per month compared with the total IPS-group.

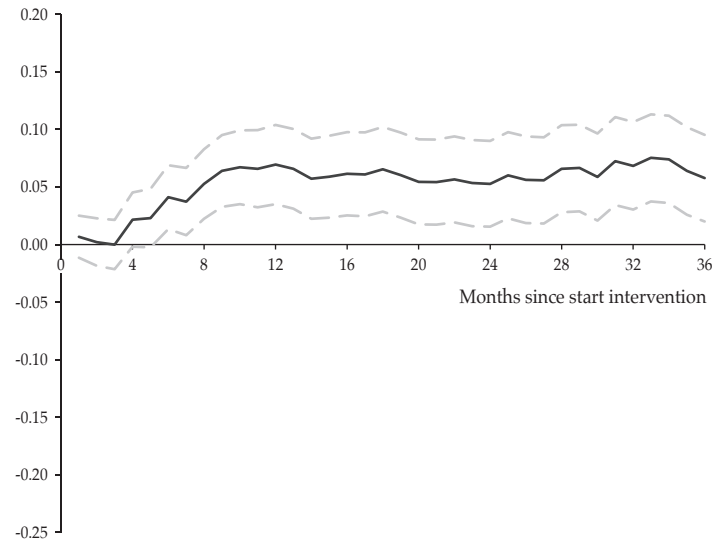
### Effectiveness

Figure 1 and Appendix C present the estimated coefficients per month for the effect of IPS over TVR with 95% confidence interval for the total group (Appendix C). The first plot shows that IPS leads to higher probabilities of being competitively employed for at least 12 hours per week of 4 to 7%-points; this effect is statistically

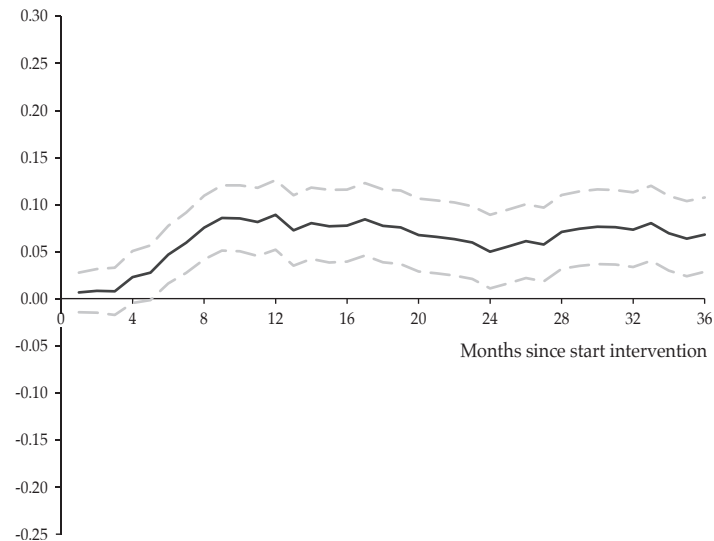
**Table 1.** Characteristics of IPS and TVR groups, pre and post matching

	Pre-matching		Post-matching	
	TVR	IPS	TVR (weighted)	IPS
Women (%)	46	37	39	39
Avg. age at start intervention	36.3	36.8	36.6	36.7
Ethnic background				
- Western (%)	9	11	10	10
- Non-Western (%)	19	17	22	16
Region				
- Randstad (agglomeration of big cities) (%)	43	49	50	50
Type of benefit				
- Disability (%)	47	36	40	40
Type of household				
- Single with or without children (%)	39	63	57	64
- Couple with or without children (%)	38	22	29	22
- Other (%)	23	15	14	14
SMI-criteria				
- 1. Schizophrenia treatment in one of last 3 years (%)	2	41	25	25
- 2. Mental health claims in last 3 years (%)	5	49	40	40
- 3. Indication for sheltered / support living (%)	4	11	6	6
- 4. Medications related to bipolar disorder / psychosis (%)	10	66	56	56
Work history in 12 months before intervention ≥1 months (%)	22	17	11	11
Disability benefits 12 months before start intervention (%)	62	71	75	75
Number of months of disability benefits over the last 12 months (%)	8	9	9	9
Number of months of disability benefits over the last 36 months (%)	21	24	25	25
Medical costs per month in past 12 months (in Euro)	345	1139	993	995
Type of provider:				
- Medium (≤49 interventions) (%)	4	13	5	5
- Large (≥50 interventions) (%)	7	55	50	50
Presence of other interventions 36 months before start of the intervention (%)	14	14	8	8
Number of observations	103,439	1787	16,466	863

**Figure 1.** Estimated coefficients per month for the effect of IPS over TVR with 95% confidence interval for the total group



a) Monthly competitive employment  $\geq 12$  hours per week



b) Monthly competitive employment  $\geq 1$  hour

significant from month 6 until 36 after the start of the intervention. The second plot shows that IPS also leads to higher probabilities of being competitively employed for at least one hour per month of 5 to 9%-points; this effect is also statistically significant from month 6 until 36 after the start of the intervention.

### Costs

Information on the mean costs per group and corresponding cost differences can be found in Table 2. Intervention costs and healthcare costs were higher for IPS compared with TVR, while sickness and disability benefits costs, total societal costs, and total payer costs were lower. Of those differences, only the difference in intervention costs was statistically significant.

**Table 2.** Mean costs per group and corresponding cost differences

Cost category	Mean costs (SD)		Costs (95% CI)
	IPS (n=377)	TVR (n=510)	
Intervention costs	7393 (2784)	7069 (5601)	323 (42 to 604)
Sickness and disability benefit costs	39487 (46409)	40634 (47868)	-1147 (-5832 to 3538)
Healthcare costs	28724 (29676)	28264 (31412)	460 (-2536 to 3456)
Total societal costs	75603 (35790)	75968 (36552)	-364 (-3977 to 3249)
Total payer costs	46879 (46492)	47703 (48194)	-824 (-5517 to 3869)

### Cost-effectiveness

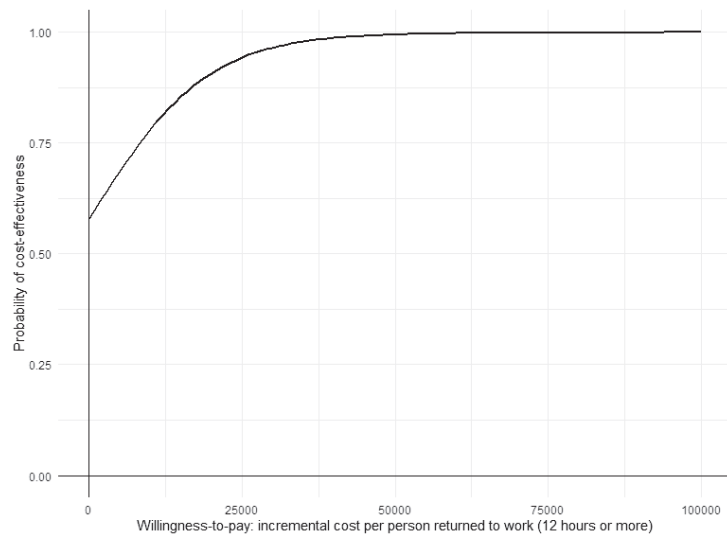
Cost-effectiveness results can be found in Table 3 and Figure 2. In the main analysis, IPS dominated TVR for both outcomes and both perspectives, meaning that it was - on average - less costly and more effective. INBs were - on average - positive for all willingness-to-pays. Cost-effectiveness acceptability curves indicated that if decision-makers are not willing to pay anything per individual extra returned to competitive employment, the probability of IPS being cost-effective compared with TVR is 0.58 for the societal perspective and 0.63 from that of the payer. These probabilities gradually increased with increasing values of willingness-to-pay, e.g., to 0.9 if societal decision-makers are willing to pay 19,000 Euros per individual extra returned to competitive employment.

**Table 3.** Differences in mean costs and effects (95% Confidence intervals) and incremental cost-effectiveness ratios

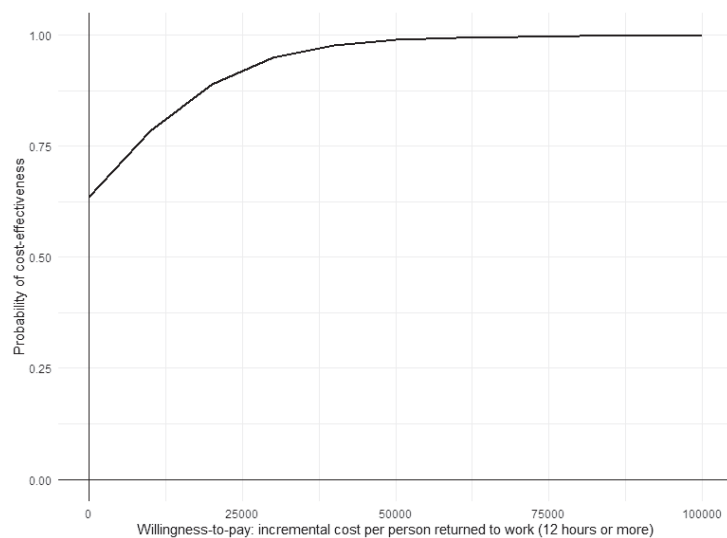
Analysis	Sample size		Outcome	$\Delta C$ (95% CI)	$\Delta E$ (95% CI)	ICER	INB	INB	INB
	IPS	TVR		€	Points	€/point	λ=€0	λ=€10,000	λ=€25,000
<b>Main analysis</b> Societal perspective	377	510	Employed for at least 12 hours per week (yes/no)	-364 (-3977 to 3249)	0.104 (0.046 to 0.164)	-3475	364	1404	2964
	377	510	Employed for at least one hour per month (yes/no)	-364 (-3977 to 3249)	0.047 (-0.004 to 0.099)	-7708	364	834	1539
<b>Main analysis</b> Payer perspective	377	510	Employed for at least 12 hours per week (yes/no)	-824 (-5517 to 3869)	0.104 (0.046 to 0.164)	-7866	824	1864	3424
	377	510	Employed for at least one hour per month (yes/no)	-824 (-5517 to 3869)	0.047 (-0.004 to 0.099)	-17448	824	1294	1999
<b>SA1 (excl. benefit costs)</b> Societal perspective	377	510	Employed for at least 12 hours per week (yes/no)	783 (-2199 to 3765)	0.104 (0.046 to 0.164)	7474	-783	257	1817
	377	510	Employed for at least one hour per month (yes/no)	783 (-2199 to 3765)	0.047 (-0.004 to 0.099)	16580	-783	-313	392
<b>SA1 (excl. benefit costs)</b> Payer perspective	377	510	Employed for at least 12 hours per week (yes/no)	323 (42 to 604)	0.104 (0.046 to 0.164)	3083	-323	717	2277
	377	510	Employed for at least one hour per month (yes/no)	323 (42 to 604)	0.047 (-0.004 to 0.099)	6839	-323	147	852
<b>SA2 (old regime only)</b> Societal perspective	177	167	Employed for at least 12 hours per week (yes/no)	-1102 (-6251 to 4046)	0.121 (0.033 to 0.209)	-9122	1102	2312	4127
	177	167	Employed for at least one hour per month (yes/no)	-1102 (-6251 to 4046)	0.147 (-0.056 to 0.238)	-7504	1102	2572	4777
<b>SA2 (old regime only)</b> Payer perspective	177	167	Employed for at least 12 hours per week (yes/no)	-832 (-7598 to 5935)	0.121 (0.033 to 0.209)	-6882	824	2042	3857
	177	167	Employed for at least one hour per month (yes/no)	-832 (-7598 to 5935)	0.147 (-0.056 to 0.238)	-5661	824	2302	4507
<b>SA2 (new regime only)</b> Societal perspective	181	294	Employed for at least 12 hours per week (yes/no)	400 (-4870 to 5670)	0.064 (-0.012 to 0.141)	6167	-400	240	1200
	181	294	Employed for at least one hour per month (yes/no)	400 (-4870 to 5670)	0.094 (-4870 to 5670)	4242	-400	540	1950
<b>SA2 (new regime only)</b> Payer perspective	181	294	Employed for at least 12 hours per week (yes/no)	-296 (-7095 to 6502)	0.064 (-0.012 to 0.141)	-4563	296	936	1896
	181	294	Employed for at least one hour per month (yes/no)	-296 (-7095 to 6502)	0.094 (-4870 to 5670)	-3139	296	1236	2646

$\Delta C$ : differences in mean costs; €: Euro;  $\Delta E$ : differences in mean effects; ICER: incremental cost-effectiveness ratio; INB: Incremental Net Benefits (INBs); λ= the maximum amount of money decision-makers are willing to pay per worker returned to sustainable employment

**Figure 2.** Cost-effectiveness acceptability curves for outcomes from the societal and payer perspective

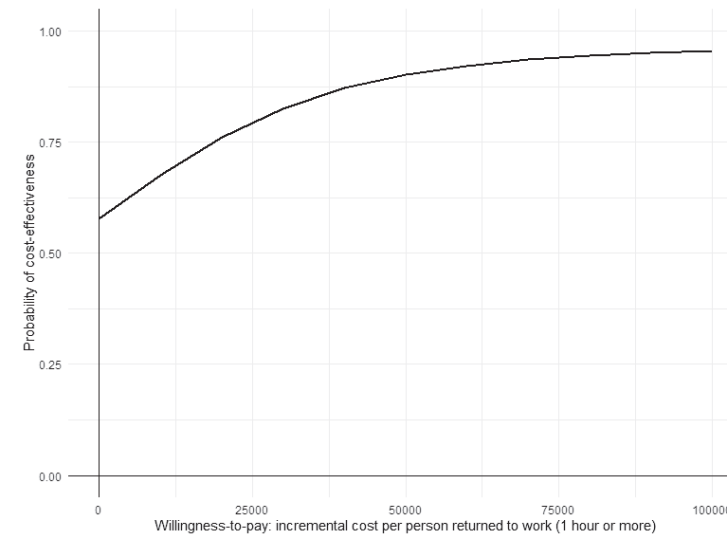


*a) Monthly competitive employment  $\geq 12$  hours per week from the societal perspective*

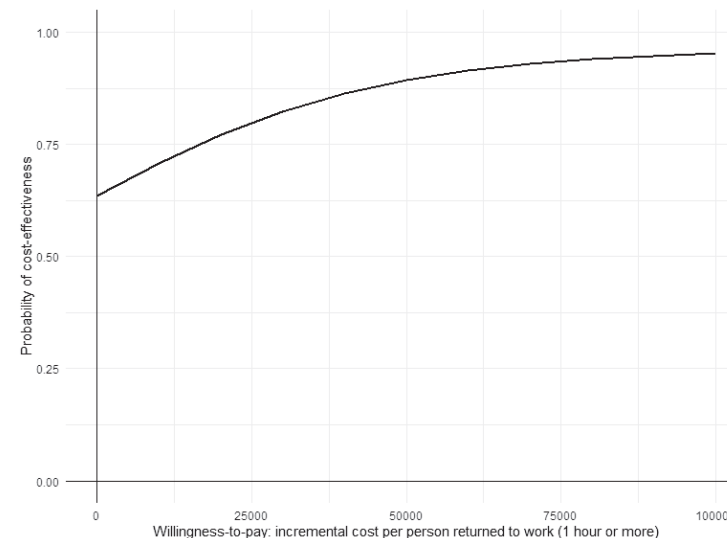


*b) Monthly competitive employment  $\geq 12$  hours per week from the payer perspective*

**Figure 2.** Continued



*c) Monthly competitive employment  $\geq 1$  hour from the societal perspective*



*d) Monthly competitive employment  $\geq 1$  hour from the payer perspective*

## Return-on-investment

Return-on-investment results can be found in Table 4. These results show that implementing IPS instead of TVR resulted in positive financial return estimates from the societal and payer perspective. To illustrate, the NB and BCR from the societal perspective show that – on average – implementing IPS instead of TVR resulted in net saving of 364 Euros (NB) and a return of 2.1 Euros per Euro invested (BCR). All ROI estimates, however, were associated with high levels of uncertainty.

## Sensitivity analyses

### Effectiveness

Appendix D presents the estimated coefficients per month for the effect of IPS over TVR with 95% confidence interval for 1) the old funding regime for individuals receiving a disability benefit, 2) the new funding regime for individuals receiving a disability benefit, and 3) the new funding regime for individuals receiving a sickness benefit (Appendix D). These analyses showed that IPS is effective, on average, for both effect measures in individuals receiving a disability benefit, with the highest impact in the old funding regime. In addition, IPS was not found to be effective in individuals receiving a sickness benefit.

### Cost-effectiveness and return-on-investment

Table 4 shows that when disability costs were excluded from the cost-effectiveness analysis, IPS was - on average - more costly and more effective than TVR, meaning that it no longer dominated TVR and that its cost-effectiveness will more strongly depend on the willingness-to-pay of decision-makers. The stratified results showed that the cost-effectiveness and return-on-investment of IPS compared with TVR was more favorable for the old funding regime compared with the new funding regime.

**Table 4.** Costs, benefits, Net Benefits (NB), and Benefit Cost Ratios (BCR)

Analysis	Sample size		Costs (95% CI)	Benefits (95% CI)	NB (95% CI)	BCR
	IPS	TVR				
Main analysis Societal perspective	377	510	323 (42 to 604)	687 (-4174 to 5549)	364 (-4530 to 5258)	2.1 (-14.8 to 19.1)
	377	510	323 (42 to 604)	1147 (-5144 to 7438)	824 (-5492 to 7140)	3.6 (-18.5 to 25.5)
SA2 (old regime only) Societal perspective	177	167	957 (123 to 1792)	2059 (-5444 to 9562)	1102 (-6447 to 8651)	2.2 (-15.5 to 19.8)
	177	167	957 (123 to 1792)	1788 (-7996 to 11572)	832 (-8988 to 10651)	1.9 (-21.1 to 24.8)
SA2 (new regime only) Societal perspective	181	294	-70 (-1051 to 911)	-470 (-8121 to 7180)	-400 (-8113 to 7313)	6.7 (-8.6 to 22.0)*
	181	294	-70 (-1051 to 911)	225 (-8539 to 8990)	296 (-8503 to 9095)	-3.21 (-25.3 to 18.9)**

\*\* Please note that this negative BCR must be interpreted as a cost saving due to the fact that costs are negative.

\* Please note that this positive BCR cannot be interpreted as a cost saving due to the fact that costs are negative as well.

## Discussion

### Main results

The aim of the present study was to assess the effectiveness, cost-effectiveness, and return-on-investment of IPS reimbursed on a nationwide scale compared with TVR regarding sustainable participation in competitive employment in individuals with SMI receiving disability benefits. IPS was found to be more effective than TVR in helping individuals achieve competitive employment from 6 to 36 months after starting the intervention. From both the societal and payer perspective, IPS dominated TVR, meaning that it was - on average - less costly and more effective. Its eventual cost-effectiveness, however, will depend on what decision-makers are willing to pay per individual extra returned to competitive employment and what probability of cost-effectiveness they perceive as reasonable. For that, they can use the results of the current study. ROI estimates showed that IPS was – on average – cost saving, but the level of uncertainty surrounding these estimates was large. The latter is likely due to the high level of uncertainty surrounding the cost estimates, which is typical for cost outcomes, as they tend to be heavily right skewed, and hence relatively large sample sizes are required for obtaining significant results.

### Comparison with literature

The finding that IPS outperformed TVR in helping individuals with SMI obtain competitive employment is consistent with numerous previous studies on the effectiveness of IPS (7-9). A Dutch randomized controlled trial, for example, found a 19%-point higher probability of IPS participants having worked after 30 months compared with TVR participants (38). The estimates in the present study were slightly lower (i.e. 9%-point higher probability of having worked for at least one hour per month after 30 months), which may be attributed to the following factors: 1) all individuals in the TVR-group of the current study actually received treatment, compared to only an 80% take-up rate in the aforementioned trial; 2) the matched IPS-population in the current study likely had less severe mental health problems (i.e. few individuals received treatment for schizophrenia in the last three years) compared to the population in the previously mentioned trial, while research has shown that IPS is relatively more effective for individuals with SMI and schizophrenia spectrum disorders (39).

Although IPS aims to rapidly place individuals in paid work, its effects were found to be significant only from month 6 after the start of the intervention. This is in line with previous research, reporting significant effects after 6 months of participation in the intervention (26, 38). An explanation for this delayed impact, may be that it takes time for IPS employment specialists to establish a trusting

relationship with their clients, and to create opportunities for them to gain work and learning experiences (23). In addition, participating in activities focused on obtaining competitive employment may improve clients' work motivation over time, resulting in better work outcomes (23, 40, 41).

The present study found that IPS was generally effective in individuals receiving a disability benefit, but was not effective in those receiving a sickness benefit, who typically have more working experience. This finding is consistent with previous research, suggesting that individuals with a greater distance from the labor market benefit more from IPS compared with TVR (39, 42).

The finding that IPS is on average less costly and more effective than TVR is in contrast with a previous European multisite trial, conducted between 2003 and 2005, in which IPS dominated TVR in all countries except for the Netherlands(13). The improved impact of IPS in the Netherlands may be due to the introduction of nationwide reimbursement of IPS, where a fair or good IPS fidelity score is a prerequisite. Given that high model fidelity is linked to improved employment outcomes, this reimbursement may have resulted in improved implementation of IPS, and consequently improved outcomes (27, 31-33, 43). Another reason may be the larger sample size and longer follow-up period in the present study (12). As the present study is conducted in the period 2012-2019, it is also possible that the improved outcomes are influenced by changes in economic conditions in the community, greater acceptance by community employers and legislation stimulating work participation (24, 27).

The finding that healthcare costs were slightly higher (but not statistically significant) in IPS participants was not in line with previous economic evaluations of IPS (10, 12) and was unexpected, since having a competitive job is associated with improved mental health, quality of life and global functioning (44, 45), which in turn can lead to a reduced need for treatment and lower healthcare costs in the long term (10, 12). An explanation for this finding may be that in the Netherlands, employment specialists regularly claim expenses from health insurance companies for follow-up support to IPS participants at risk of losing their job after their trajectory ends (23). These claims require approval from psychiatrists they are collaborating with. This approval process can lead to a divergence in the follow-up support offered, influenced by the psychiatrists' personal opinions of the IPS approach or their impressions of the participants involved (23).

### Strengths and limitations

This study represents a natural experiment conducted on a nationwide scale to implement IPS. It is the first study examining the effectiveness, cost-effectiveness, and return-on-investment of IPS implemented by reimbursement on a

nationwide scale, compared with TVR regarding sustainable participation in competitive employment in individuals with SMI receiving sickness or disability benefits. The use of administrative instead of self-report data and the long follow-up period are also strengths of this study. Moreover, the ‘common trend assumption,’ necessary for valid difference-in-difference estimates, along with the presumption that incomplete data would not cause significant bias in the results, were confirmed. This was evident from the fact that the results of the cost-effectiveness and return-on-investment analyses, which were based on complete-cases only, were in line with those of the effectiveness analysis, for which all data were used. There are also several limitations. To reduce the influence of confounding, exact matching was performed with many different matching criteria, resulting in a control group with exactly the same characteristics as the intervention group. However, it is plausible that unobserved factors that were not used as matching criteria may also have influenced employment outcomes, such as educational level, diagnosis, quality of life and self-esteem (46-48). Exact matching may also have the limitation that fewer matches can be made due to a lack of exact matches for every individual receiving IPS (i.e. the common support is smaller). This may have led to potential selection bias and limited generalizability of the findings, as it restricts the number of individuals who can be included in the analyses. However, considering the relatively similar results obtained from a post-hoc analysis using propensity score matching (data not shown), it is unlikely that selection bias exerted a significant impact. Data on additional interventions participants received from their mental healthcare providers were also not available. Although the control group was limited to individuals who received treatment from mental healthcare agencies that do not offer IPS on a large scale, selection bias could not be ruled out. The criteria used for the operationalization of SMI in administrative data are in line with a commonly used definition of SMI in the Netherlands (1). It is, however, that not all participants in this study have a SMI according to this definition (1). In addition, the matched IPS sample scored lower on all SMI-criteria and had lower healthcare costs per month compared with the total IPS-group. Therefore, the analyses may be based on a subgroup with relatively more favorable characteristics. The societal perspective did not include some other relevant costs, such as presenteeism (i.e. lost productivity while being at work) and productivity losses from unpaid work. In addition, the health care costs only included those covered by the Dutch basic health insurance package, and hence excluding over-the-counter medications healthcare insured through additional healthcare packages, and out-of-pocket expenses.

### **Implications for practice and research**

The results of this study can help organizations involved in IPS, such as mental healthcare agencies, benefit agencies and health insurance companies, make better informed decisions about the implementation and funding of IPS. Since inadequate funding has been one of the major barriers to successfully implement IPS in practice, a significant amount of resources has been allocated for its implementation in the past few years (21, 23, 24, 49). The results of the present study appear promising and seem to justify implementation by nationwide reimbursement. However, there are still other barriers to implementation that need to be addressed, such as making competitive employment financially more appealing than receiving benefits for participants and reducing the impact of the so-called benefit trap (11, 15, 23).

To avoid divergence in follow-up support in IPS participants at risk of losing their job after their trajectory ends, health insurance companies could consider adapting their IPS reimbursement to current practice (i.e. reimburse more than only the IPS intake for a maximum of 8 hours) (23, 24). Another approach to offering follow-up support to IPS participants at risk of job loss after completing their trajectory could involve close collaboration with occupational physicians and insurance physicians. These specialists can provide advice to participants on addressing health-related challenges at work, helping them to stay employed. Future economic evaluations should be conducted with a larger sample size, additional cost categories (e.g., presenteeism), and use quality adjusted life years as an outcome measure. In addition, employment outcomes concerning long-term, sustainable employment should be evaluated.

### **Conclusions**

IPS implemented through a reimbursement strategy on a nationwide scale is more effective and seems more cost-effective than TVR in people with SMI receiving sickness or disability benefits. Based on this economic evaluation on a nationwide scale, the implementation of IPS by a wide scale reimbursement strategy should be promoted to enhance sustainable participation in competitive employment in these individuals.



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## Appendix A

### Benefits for individuals with SMI

In the Netherlands, individuals with SMI who are not able to work due to their illness can apply for a sickness benefit or disability benefit (Wajong/ WIA):

- **Sickness benefit:** individuals with an employment contract who become ill, continue to receive their wages from their employer in most cases. Dutch employers are obliged to pay at least 70% of the salary of their sick employees for a period of two years, and most of them top up the wage payments from 70% to 100% during the first year of sickness absence. In certain situations, however, these individuals may be eligible for a sickness benefit (Sickness Benefits Act), for example if they are employed and covered by the no-risk policy, because they are disabled or had previously been ill for a long time. Individuals without an employment contract who become ill, may also be eligible for a sickness benefit, for example if their contract ends during their sickness period.
- **Wajong benefit:** individuals who become ill or disabled at a young age ( $\leq 18$  years) and as a result are not able to work, may be eligible for the Wajong benefit (Disablement Assistance Act for Handicapped Young Persons). Individuals may also be entitled to a Wajong benefit if become ill or disabled after their 18th birthday and before their 30th birthday, and had studied for at least six months in the year before they became ill or disabled. The maximum benefit that can be received is 75% of the minimum wage. In 2019, for example, the minimum wage for individuals aged 21 years or older was 1636 euros per month.
- **WIA benefit:** individuals who have been ill for nearly two years and can earn 65% or less of their previous salary, because of their illness, may be eligible for a WIA benefit (Work and Income (Capacity for Work) Act). If they are eligible, they receive the WIA benefit instead of the wages from their employer, or instead of their sickness benefit.

## Appendix B

For the effectiveness analysis, a difference-in-difference fixed-effect estimation was performed. The analysis model was specified as follows<sup>1</sup>:

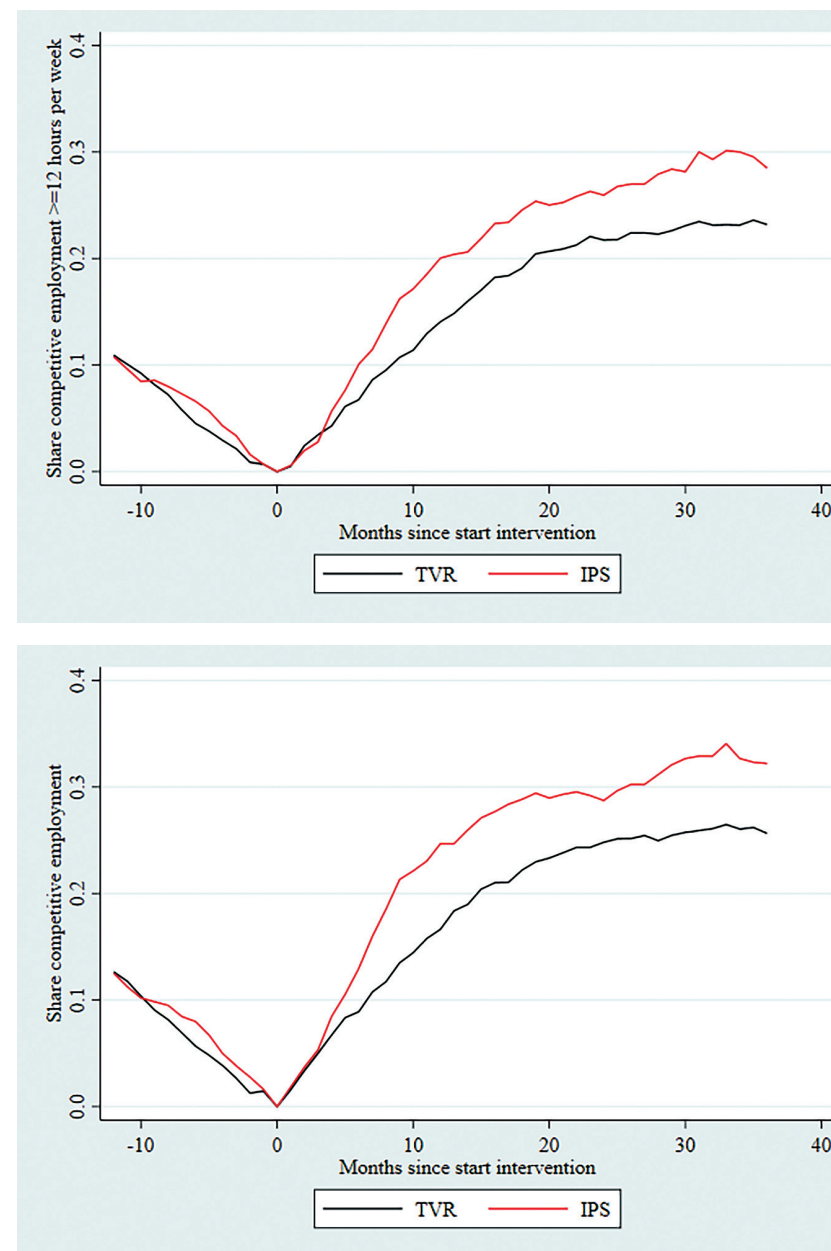
$$Y_{it} = \tau_t + \sum_{t=1}^{36} \beta_t IPS_i T_{it} + \sum_{t=-23}^{36} \gamma_t T_{it} + \epsilon_{it}$$

Where  $i$  is the individual employee and  $t$  calendar time.  $Y_{it}$  is the (weighted) outcome of interest for individual  $i$  in month  $t$ . Individuals must be unemployed in month 0. Month 1 is the month of intervention.  $\tau_t$  are quarterly calendar time dummies for each quarter.  $IPS_i$  is an indicator taking the value 1 if the individual is in the IPS group.  $T_{it}$  are time dummies representing the month compared to the start of (fictive) intervention.  $\epsilon_{it}$  is the error term.  $\beta_t$  and  $\gamma_t$  are parameters.  $\beta_t$  is the parameter of interest, the estimate of the effect of IPS in month  $t$ . The effects for every month in the three years after the start of IPS were measured.

A precondition for the application of difference-in-difference design is that there is a common trend in the outcome variables before the start of the intervention. Figure 1 shows the outcome variables for the IPS group and for the matched and weighted TVR group, per month before and after the start of the intervention (0=start intervention) and indicates that the employment rates are very similar for the IPS and the TVR group before the start of the intervention. Empirical placebo tests confirmed that both groups have common trends on all outcome variables. Figure 1 also shows that the competitive employment probabilities in the IPS-group are higher than those in the TVR-group.

<sup>1</sup> The individual specific fixed effect  $\alpha_i$  and the time-invariant IPS-effect  $\sum t \delta_i IPS_i$  drop out of the equation due to the difference-in-difference specification

**Figure 1.** Effect measures for the IPS-group and for the matched and weighted TVR-group, per month before and after the start of the intervention (0=start intervention)



## Appendix C

Estimated coefficients per month for the effect of IPS over TVR with 95% confidence interval for the total group

*Monthly competitive employment ≥12 hours per week*

Month since start intervention	Coefficient	(95% confidence interval)
1	0.007	(-0.011 to 0.025)
2	0.002	(-0.018 to 0.023)
3	0.000	(-0.021 to 0.021)
4	0.022	(-0.002 to 0.045)
5	0.023	(-0.002 to 0.048)
6	0.041*	(0.013 to 0.069)
7	0.037*	(0.008 to 0.067)
8	0.053*	(0.023 to 0.083)
9	0.064*	(0.033 to 0.095)
10	0.067*	(0.035 to 0.099)
11	0.066*	(0.032 to 0.100)
12	0.070*	(0.035 to 0.104)
13	0.066*	(0.031 to 0.100)
14	0.057*	(0.022 to 0.092)
15	0.059*	(0.023 to 0.095)
16	0.062*	(0.025 to 0.098)
17	0.061*	(0.025 to 0.097)
18	0.065*	(0.029 to 0.102)
19	0.06*	(0.023 to 0.097)
20	0.055*	(0.018 to 0.092)
21	0.054*	(0.017 to 0.091)
22	0.057*	(0.019 to 0.094)
23	0.053*	(0.016 to 0.091)
24	0.053*	(0.016 to 0.09)
25	0.06*	(0.023 to 0.098)
26	0.056*	(0.019 to 0.094)
27	0.056*	(0.018 to 0.093)
28	0.066*	(0.028 to 0.104)
29	0.067*	(0.029 to 0.104)

30	0.059*	(0.021 to 0.097)
31	0.073*	(0.034 to 0.111)
32	0.068*	(0.030 to 0.106)
33	0.075*	(0.038 to 0.113)
34	0.074*	(0.036 to 0.112)
35	0.064*	(0.026 to 0.102)
36	0.058*	(0.020 to 0.095)

\*p<0.05

*Monthly competitive employment ≥ 1 hour*

Month since intervention	Coefficient	(95% confidence interval)
1	0.007	(-0.014 to 0.028)
2	0.008	(-0.015 to 0.031)
3	0.008	(-0.017 to 0.033)
4	0.023	(-0.005 to 0.051)
5	0.028	(-0.001 to 0.057)
6	0.047*	(0.016 to 0.077)
7	0.059*	(0.027 to 0.091)
8	0.076*	(0.042 to 0.109)
9	0.086*	(0.051 to 0.120)
10	0.085*	(0.050 to 0.120)
11	0.082*	(0.045 to 0.118)
12	0.089*	(0.052 to 0.126)
13	0.073*	(0.035 to 0.110)
14	0.080*	(0.042 to 0.118)
15	0.077*	(0.038 to 0.116)
16	0.078*	(0.039 to 0.116)
17	0.084*	(0.046 to 0.123)
18	0.077*	(0.039 to 0.116)
19	0.076*	(0.037 to 0.115)
20	0.068*	(0.029 to 0.106)
21	0.066*	(0.027 to 0.105)
22	0.063*	(0.025 to 0.102)
23	0.060*	(0.021 to 0.098)
24	0.050*	(0.011 to 0.089)

25	0.056*	(0.016 to 0.095)
26	0.061*	(0.022 to 0.100)
27	0.058*	(0.018 to 0.097)
28	0.071*	(0.032 to 0.110)
29	0.074*	(0.035 to 0.114)
30	0.076*	(0.037 to 0.116)
31	0.076*	(0.036 to 0.116)
32	0.073*	(0.034 to 0.113)
33	0.080*	(0.040 to 0.120)
34	0.070*	(0.030 to 0.109)
35	0.064*	(0.024 to 0.104)
36	0.068*	(0.029 to 0.107)

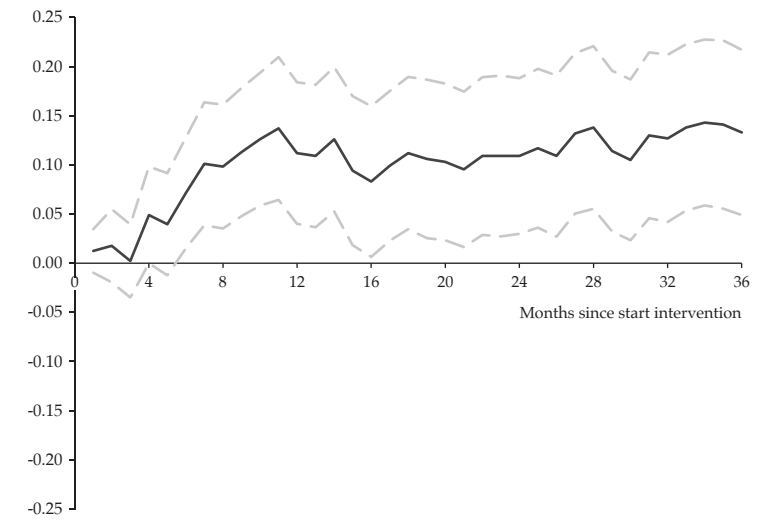
\*p<0.05

## Appendix D

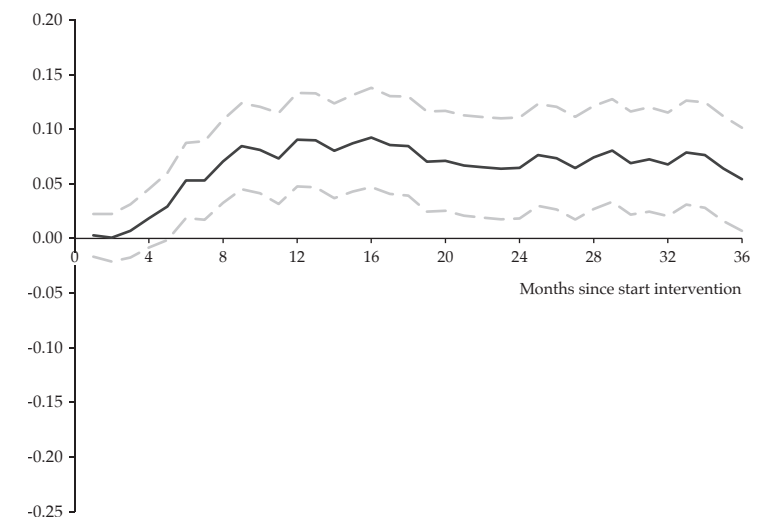
Estimated coefficients for the effect of IPS over TVR with 95% confidence interval

*Monthly competitive employment ≥12 hours per week*

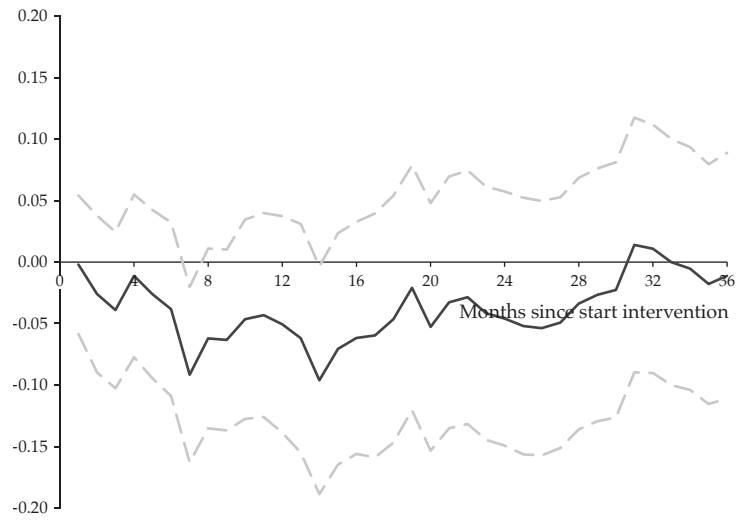
Old regime – disability benefits



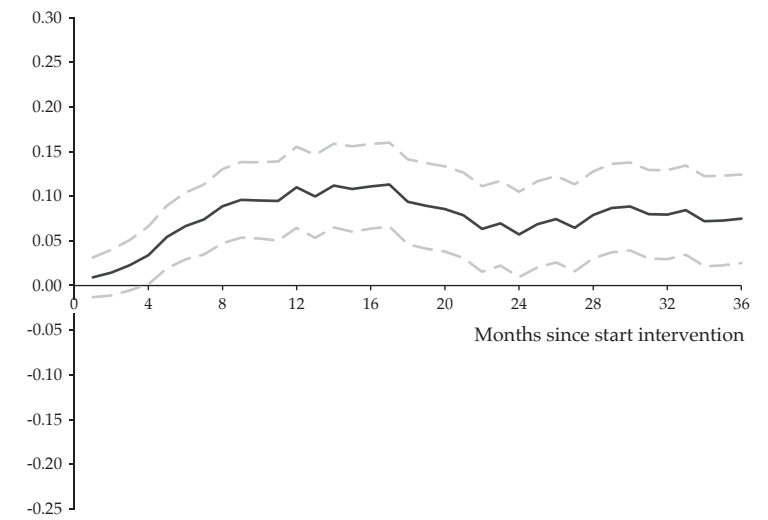
New regime – disability benefits



New regime – sickness benefit

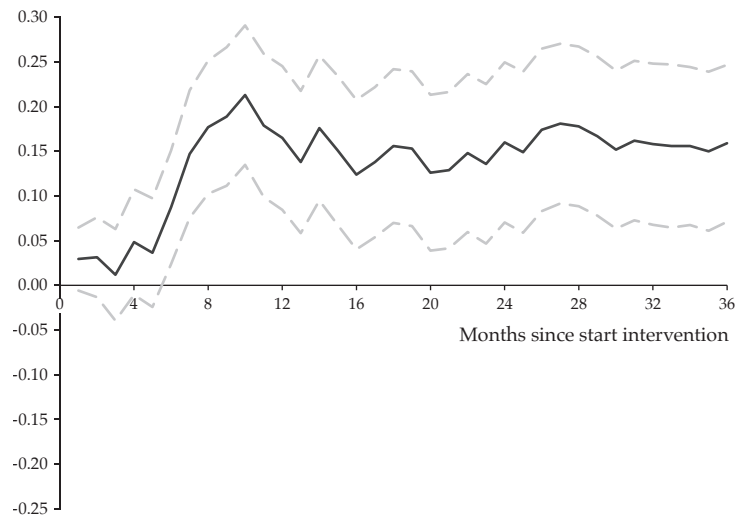


New regime – disability benefits

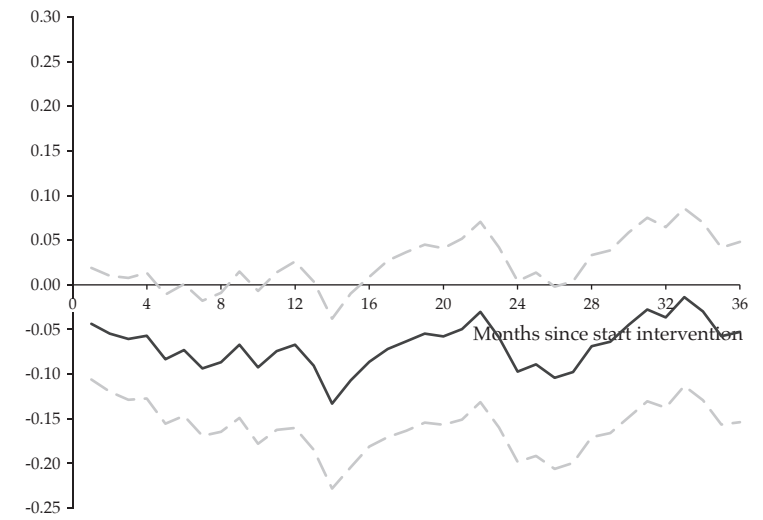


*Monthly competitive employment ≥ 1 hour*

Old regime – disability benefits



New regime – sickness benefit





# 7

## General discussion



## Preface

Worldwide work participation of people with severe mental illness is low [1-6]. Individual Placement and support (IPS) is an evidence-based, effective and cost-effective method for helping individuals with severe mental illness (SMI) obtain and maintain competitive employment [7-12]. Despite its effectiveness and cost-effectiveness, implementation of this model has been challenging in all countries [13-17]. Inadequate funding and insufficient cooperation between mental healthcare and vocational rehabilitation services are major barriers to implement IPS in practice [1, 13, 17-23]. To improve the implementation of IPS in the Netherlands, the Dutch Social Security Institute: the Institute for Employee Benefits Schemes (UWV) started offering a nationwide reimbursement for IPS since 2012, to all mental healthcare agencies providing IPS services. Multiple health insurance companies also contributed by funding the intake phase of IPS trajectories [24]. In addition, various national collaborations among stakeholders in mental healthcare and vocational rehabilitation were initiated [24]. An example of such an initiative was a collaboration among stakeholders from two mental healthcare agencies, UWV, a municipality and a health insurance company. This collaboration involved a multifaceted implementation strategy (MIS) for IPS, characterized by regular meetings among these stakeholders and secured IPS funding.

The research in this thesis was mainly focused on IPS using a multifaceted implementation strategy (IPS+MIS). The objectives of this thesis were twofold: 1) to obtain insight into the implementation of IPS, employment outcomes of IPS participants with SMI, and factors that influence these employment outcomes, and 2) to evaluate the effectiveness and cost-effectiveness of IPS implemented through a reimbursement strategy on a nationwide scale, in terms of obtaining sustainable, competitive employment. By addressing these objectives, this thesis aspires to contribute to the improvement of employment outcomes for individuals with SMI by supporting stakeholders in making better-informed decisions about the implementation, funding, and organization of IPS.

This chapter summarizes and reflects on the main findings of this thesis. It also presents its methodological considerations and implications for policy, practice and future research.

## Main findings

### **Objective 1: to obtain insight into the implementation of IPS, employment outcomes of IPS participants with SMI, and factors that influence these employment outcomes**

Motivation to work is crucial in most vocational rehabilitation programs, and in IPS, expressing a desire to work is actually the only criterion for participation. To obtain more insight into the relation between work motivation and employment outcomes in individuals with SMI who express a desire to work and participate in either IPS or traditional vocational rehabilitation (TVR), a secondary data analysis was performed (Chapter 2). No associations were found between work motivation levels and employment outcomes in these individuals (Chapter 2).

Two qualitative studies among 1) stakeholders, and 2) IPS participants and employment specialists, identified several factors that could influence the implementation of IPS and employment outcomes of IPS participants with SMI (Chapter 3 and 4). Important facilitators to IPS implementation were found to be regular meetings of stakeholders in mental healthcare and vocational rehabilitation, and dedicated contact persons within benefits agencies (Chapter 3 and 4). Although secured IPS funding was experienced as a facilitator, it was not perceived as adequate (Chapter 3 and 4). Important barriers to IPS implementation included poor communication between and within the organizations involved in IPS (i.e., mental healthcare and benefits agencies), and mental healthcare clinicians not referring their clients to IPS (Chapter 3 and 4). In addition, several barriers to benefits counseling (i.e., IPS employment specialists help participants obtain personalized, understandable, and accurate information about how work may affect their benefits) were identified, such as complex laws and legislation regarding social security (Chapter 4). The role of the IPS employment specialist was found to be crucial in supporting participants to obtain competitive employment; important facilitators include meeting participants' needs and wishes, as well as the employment specialist's involvement and availability (Chapter 4). Important facilitators to maintaining employment in IPS participants were found to be directly or indirectly related to the employer and the work environment (Chapter 4). Financial factors appeared to be critical barriers to both obtaining and maintaining competitive employment (Chapter 3 and 4). Furthermore, the participant's disclosure towards the employer was found to be both a facilitator and barrier to employment, depending on the timing and the type of information disclosed (Chapter 4).

An observational cohort study showed that 46% of the individuals who participate in IPS+MIS obtained competitive employment within 30 months and 28% worked for six months or longer (Chapter 5). The competitively employed participants



obtained their job within about seven months, and worked for about nine months in total (Chapter 5). Consistent with their educational level at baseline, participants obtained a variety of mostly entry-level jobs (Chapter 4 and 5). The results of the observational cohort study further suggested that both the level of experience of mental healthcare agencies with providing IPS+MIS, and funding may play a role in employment outcomes (Chapter 5).

**Objective 2: to evaluate the effectiveness and cost-effectiveness of IPS implemented through a reimbursement strategy on a nationwide scale, in terms of obtaining sustainable, competitive employment**

An economic evaluation showed that IPS was more effective than TVR in helping individuals with SMI receiving sickness or disability benefits achieve competitive employment from 6 to 36 months after starting the intervention (Chapter 6). From the societal and payer perspective, IPS was – on average – less costly and more effective than TVR and return-on-investment (ROI) estimates showed that IPS was – on average – cost saving. However, uncertainty surrounding the cost-effectiveness and ROI estimates was large (Chapter 6).

## Reflections on main findings

While the effectiveness of IPS is well-documented, there is limited understanding of the factors influencing its implementation and the employment outcomes for IPS participants with SMI [25]. The studies in this thesis identified numerous factors that either facilitate or impede the implementation of IPS (Chapter 3 and 4), and impact employment outcomes of IPS participants with SMI (Chapter 3, 4, 5 and 6). These factors can be categorized according to the four levels of Fleuren et al.'s theoretical framework for determinants of innovations: innovation, user, organization, and socio-political context/client [26]. The innovation category concerns the characteristics of the intervention itself, while the user category relates to the individuals implementing or receiving the intervention. The organization category considers the specific characteristics of the institution implementing the intervention, and the socio-political context/client category refers to broader considerations such as legal, financial, and societal factors [26]. The innovation central to the research in this thesis was an intervention, including an implementation strategy: IPS+MIS (Chapter 3, 4 and 5). This strategy encompassed an organizational and a financial component. The organizational component comprised regular meetings at two levels among the professionals of the different organizations involved (i.e., two mental healthcare agencies, UWV, a municipality and health insurance company): 1) at the

management level, there were regular meetings among decision makers who had a managing or advising role within their organization. Their main goal was to facilitate practitioners and ensure IPS sustainment; 2) at the practitioner level, there were regular meetings among IPS employment specialists and several vocational rehabilitation professionals (i.e., the labor expert and insurance physician from UWV, and the case manager from the municipality). Their main goal was to organize the IPS funding for new clients, and to provide improved benefits counselling as compared to usual IPS practice. The financial component consisted of secured IPS funding with a 'pay for performance' element, providing mental health agencies with extra payments for successfully placing IPS participants in competitive jobs. The innovation central to this research was thus a complex one, including a multifaceted implementation strategy that encompassed multiple components across all four levels of Fleuren et al.'s framework [26]. Given that the key barriers in the Dutch context were at the socio-political level (i.e., inadequate funding and collaboration among healthcare and vocational rehabilitation sectors) [17, 23], this strategy aimed to remove these barriers.

Numerous studies have examined the impact of multifaceted implementation strategies within the healthcare sector [27]. The complex strategy investigated in this thesis is distinctive as it spans both the healthcare and vocational rehabilitation sectors. Moreover, it incorporates both organizational and financial elements, while financial and organizational implementation activities are underrepresented in the literature on multifaceted implementation strategies [27]. In contrast, many implementation studies predominantly focus on the professionals involved [28]. An explanation for this focus may be that strategies directed at professionals are simpler to carry out in research settings compared to financial or organizational ones [27]. Existing literature further indicates that nearly every study employs a unique combination of implementation strategies [27]. All these differences make it difficult to compare the results of this thesis with those from other relevant studies. Nonetheless, evidence consistently suggests that multifaceted strategies outperform single-component strategies [28, 29].

The findings presented in Chapters 3, 4, 5, and 6 of this thesis suggest that the studied implementation strategies have positively impacted the implementation of IPS. Yet, only about 30% of mental healthcare agencies in the Netherlands offer IPS services to their clients [30]. Moreover, there are approximately 2000 IPS participants with SMI, representing about 1% of all eligible individuals diagnosed with SMI [30-32]. Additionally, the observational cohort study revealed that only 28% of participants in IPS+MIS maintained employment for 6 months or longer (Chapter 5). Thus, the implementation of IPS within usual

mental health care remains limited, and remaining barriers must be addressed to enhance IPS execution and aid individuals with SMI in obtaining and maintaining competitive employment. The following section will reflect on some significant barriers to both the implementation of IPS and the improvement of employment outcomes for IPS participants with SMI, as identified in the studies of this thesis.

### **Remaining barriers in implementing IPS and improving employment outcomes for IPS participants with SMI**

The introduction of nationwide reimbursement for IPS, as an implementation strategy at the socio-political level [26], was a major impulse for Dutch mental health agencies to start offering IPS services to their clients. The results in Chapter 6 showed that IPS implemented on a nationwide scale by this reimbursement strategy was effective and seemed cost-effective from both the societal and payer perspective. This contrasts with a prior European multisite trial carried out between 2003 and 2005, in which IPS outperformed TVR in every participating country except the Netherlands [9]. The enhanced impact of IPS in the Netherlands could be attributed to the national reimbursement strategy for IPS, which mandates a fair or good IPS fidelity score. As high model fidelity is associated with better employment outcomes, this financial strategy at the socio-political level may have contributed to better implementation of IPS, and consequently improved outcomes [33-35]. However, the results of the qualitative study exploring IPS employment specialists' experiences, revealed that this funding was still not perceived as adequate, due to the lack of possibilities for the employment specialists to offer follow-up support to IPS participants at risk of losing their job after their trajectory ends (Chapter 4). To adhere to the key IPS principle of providing time-unlimited, individualized support [36], employment specialists regularly claimed expenses from health insurance companies for follow-up support (Chapter 4). However, these claims need the endorsement of collaborating psychiatrists. This endorsement can introduce unwanted variation in the follow-up support of IPS participants with SMI, influenced by the psychiatrists' individual viewpoints on the IPS method or their perceptions of the participants involved (Chapter 4).

Although it is well-documented that work participation contributes to health and recovery [37], and societal participation is one of the six core dimensions of positive health [38], the results of Chapter 3 and 4 suggest that mental health clinicians (e.g., psychiatrists) did not recognize IPS as a component of regular treatment or consider work participation as one of the treatment goals. These results suggest that some clinicians hold the stigmatizing beliefs that working is harmful for individuals with SMI, or that they are incapable of securing paid

employment, thereby refraining from referring clients to IPS services that could assist them in finding and retaining work (Chapter 3 and 4). A recent study highlights that stigma by mental healthcare providers is a common problem, as 54% of the study participants with mental illness have experienced stigma from mental healthcare providers in the past two years [39]. Previous literature also indicates that negative attitudes and behaviors of mental healthcare clinicians about the work capabilities of individuals with mental illness can act as barriers to obtaining and retaining employment [40-43]. Individuals with mental illness often internalize the negative stereotypes held by mental healthcare professionals about their work capabilities [43, 44]. This can lead to self-stigma and anticipated stigma (i.e., the expectation of people with mental health problems will be stigmatized [45]), which could reduce their motivation and effort to gain and maintain employment [43]. Not only self-stigma and anticipated stigma are barriers to gaining and maintaining employment in individuals with mental illness, but also negative attitudes and behaviors of employers [43]. Therefore, many individuals with mental health problems who want to work experience a disclosure dilemma [43, 46]. An interesting finding in Chapter 4 was that disclosure towards the employer was experienced as both a facilitator and barrier to employment, depending on the timing and the type of information disclosed. Disclosure of the participant's mental illness (e.g., the diagnosis) towards the employer was considered a barrier to obtaining employment, as it can lead to stigma and discrimination, resulting in the client not being hired; disclosure of the client's work impairments and needs was considered a facilitator to maintaining employment because it can help create understanding and commitment of the employer and the work environment, and if necessary may result in work adjustments (Chapter 4). These findings are in line with existing literature, indicating that disclosure can have both positive (e.g., work adjustments) and negative effects (e.g., stigma and discrimination) [43]. The findings in Chapter 4 also suggest that disclosure during the hiring period may better be avoided [46, 47]; once the client is hired, however, disclosure of the client's work impairments and needs may enhance sustainable employment.

The results in Chapter 3 and 4 further suggest that the 'benefit trap' – a situation where receiving benefits creates a financial disincentive to engage in paid work – poses a significant barrier at the socio-political level [26], affecting both IPS implementation and competitive employment outcomes. Relatively more generous disability welfare systems like the Dutch model may encourage income from benefits rather than employment, thereby fostering a benefit trap [6, 48]. Moreover, the results in Chapter 4 suggest that low wages, insecurity regarding income and fear of losing benefits and financial decline can contribute to this benefit trap. These results are consistent with previous research, indicating

that the benefit trap is a substantial barrier to successful vocational rehabilitation [17, 48-50]. Although IPS proved more effective than TVR in helping individuals with SMI achieve competitive employment between 6 and 36 months after the start of the intervention (Chapter 6), the long-term risk of job loss due to relapse in illness or economic recession remains high. The potential loss of benefits may be a significant barrier in convincing individuals with SMI to participate in IPS (Chapter 4). This may also explain the notably low participation in IPS (about 1%) among individuals with SMI in the Netherlands.

## Methodological considerations

The methodological strengths and limitations of each study in this thesis have been addressed in previous chapters. This section will therefore focus on the overarching challenges we encountered while conducting implementation research. These challenges had significant implications for both our intended research designs and methods across multiple studies in this thesis.

### Challenges encountered conducting implementation research in this thesis

Implementation research is the scientific study of methods used to promote the systematic uptake of research findings and evidence-based interventions into routine practice and health policy [51]. It aims to understand what, why, and how interventions work in 'real world' settings and to test approaches to improve their quality and effectiveness [52]. A number of theories have been developed to promote the effective implementation of health interventions, for example, the theoretical framework for determinants of innovations, developed by Fleuren et al. [26]. We used this theoretical framework for the qualitative studies presented in Chapters 3 and 4 of this thesis.

Implementation research tends to be complex, reflecting the wide array of contextual factors that can influence implementation, leading to unpredictable effects, and requiring flexibility and continuous adaptations from both implementers and researchers [53]. In the process of conducting the studies for this thesis, this complexity manifested in numerous challenges, necessitating substantial amendments to our initial research protocol. These changes were especially relevant to our planned research designs and methods. A major alteration concerned the research presented in Chapter 5. Initially designed as a prospective quasi-experimental study, its purpose was to assess the effectiveness of the MIS in implementing IPS compared to IPS as applied in usual practice for individuals with SMI. This controlled hybrid study aimed to evaluate both the

effectiveness on employment outcomes as well as the effectiveness on implementation outcomes [54]. However, during the research period, UWV began providing IPS funding (i.e., the financial implementation strategy) – a key element of the MIS – to all Dutch mental health agencies offering IPS services. This development meant that both our intervention and control groups were exposed to a critical component of the MIS, eliminating the distinction between them and leaving us without a true control group. Consequently, a quasi-experimental design was no longer feasible. Instead, we redesigned this study as a non-controlled observational cohort study to examine employment outcomes of individuals with SMI who participated in IPS+MIS, and to examine associations that align as closely as possible with our original research question. Specifically, we studied associations between employment outcomes with 1) the level of experience of mental health agencies with providing IPS+MIS, and 2) the type of IPS funding (Chapter 5).

Additionally, the IPS funding itself underwent changes during our study period. The amount of funding increased, and the pay for performance component was eliminated. These changes may have affected our findings on the impact of the financial implementation strategy on employment outcomes, as discussed in Chapters 5 and 6.

Initially, we also intended to perform an economic evaluation, including a cost-utility analysis measured in terms of 'Quality-Adjusted Life Years' (QALYs) [55]. By determining the cost per QALY gained, cost-utility analyses can help policy makers decide which interventions offer the best 'value for money', aiding in efficient resource allocation [55]. However, the absence of a control group for collecting prospective costs and QALY data made this impossible. As an alternative, we used administrative data from Statistics Netherlands and UWV, regarding all Dutch individuals receiving sickness or disability benefits in the period 2012-2019 for our economic evaluation (Chapter 6). Based on these data, however, we were unable to calculate QALYs and therefore could not perform a cost-utility analysis. Additionally, healthcare cost data were only available up to December 2020. This limitation reduced the number of individuals included in the cost-effectiveness analyses, which were performed on complete-cases only, i.e., those with both cost and effect data available for the full 36-month duration. As a consequence, the sample size for the economic evaluation was relatively small (Chapter 6). As data were gathered from databases and data incompleteness was mainly due to the fact that some individuals started with the intervention less than 36 months ago (i.e., they could not have completely observed data), data incompleteness was assumed not to bias the outcomes. This assumption was confirmed by the alignment of results from the cost-effectiveness and ROI analyses, which were based on complete-cases only, with those of the

effectiveness analyses, in which all available data were used (Chapter 6). Originally, we also planned to conduct a process evaluation using the Linnan & Steckler framework to assess the quality of IPS implementation and identify factors affecting outcome variations [56]. However, due to the complexity of our intervention (i.e., IPS+MIS) and the numerous challenges we encountered during the study period (e.g., the loss of our control group, the changes in the IPS funding and a high turnover of dedicated professionals involved in the studies), we conducted two qualitative studies instead, exploring experiences with IPS+MIS (Chapter 3 and 4). Additionally, the observational cohort study in Chapter 5 assessed the quality of implementation by evaluating the fidelity scores of the participating mental health agencies, and examined the impact of contextual factors on employment outcomes of individuals with SMI participating in IPS+MIS.

## Implications for policy and practice

To further improve the implementation of IPS and its outcomes, the remaining barriers identified in this thesis should be addressed. These barriers include insufficient funding for ongoing support, particularly for those IPS participants at risk of losing their jobs (Chapter 4); stigmatizing attitudes and behaviors among mental healthcare clinicians (Chapter 3 and 4); the challenges associated with disclosing mental illness to employers (Chapter 4); and the benefit trap that discourages seeking paid employment and encourages receiving benefits (Chapter 3 and 4). The following section will discuss potential strategies to address these remaining barriers to both the implementation of IPS, and the improvement of employment outcomes for IPS participants with SMI.

### Strategies to address remaining barriers in implementing IPS and improving employment outcomes for IPS participants with SMI

Several of the remaining barriers to the implementation of IPS and the improvement of employment outcomes for IPS participants with SMI could be mitigated by improving and enhancing collaboration between mental healthcare clinicians (e.g., psychiatrists), insurance physicians, and occupational physicians. In the Netherlands, individuals with SMI who are unable to work due to their illness can apply for sickness or disability benefits. Insurance physicians are responsible for evaluating the impact of medical conditions on an individual's capacity to work, which in turn informs eligibility decisions for these benefits and guides recommendations for rehabilitation and reintegration into the workforce. Occupational physicians specialize in workplace health, assessing workplace

risks, advising on health and safety, evaluating employees' fitness for specific roles, guiding return-to-work strategies and promoting employee wellness. Both roles intersect health considerations with societal and workplace factors.

An effective strategy to foster close collaboration between clinical care, vocational rehabilitation, and occupational health care could be to integrate social medicine specialists (i.e., insurance physicians and occupational physicians) into existing mental health multidisciplinary teams that offer both mental health treatment and IPS services. The primary goal of this integrated approach should be to help IPS participants secure sustainable employment. Integrated care models including social medicine specialists already exist [57], and research shows that such integrated care models are both effective [58, 59] and cost-effective [58] in improving employment outcomes across diverse patient populations.

Insurance physicians and occupational physicians could potentially fulfill several roles within IPS services. Insurance physicians could refer their clients (e.g., claimants of sickness or disability benefits) to IPS employment specialists if these individuals express a desire to work. They can also help counteract stigmatizing attitudes and behaviors of mental healthcare clinicians concerning the work capabilities of individuals with SMI. By emphasizing the widespread health advantages of being employed, these physicians can advocate for recognizing employment as one of the treatment goals, encouraging more referrals to IPS specialists [60]. Occupational physicians, on the other hand, can address stigma from clinicians, employers, and fellow employees regarding the work capabilities of individuals with SMI. They can also have a crucial role in preventing sickness absences among IPS participants who have found employment. Additionally, they can offer ongoing support to those at risk of job loss, guiding them through health-related work challenges to help them retain their employment. Unfortunately, both the roles of the insurance physician and occupational physician are limited in the current practice of IPS. Moreover, IPS is currently largely unknown among occupational physicians.

Based on the economic evaluation presented in this thesis, continuing the reimbursement strategy for IPS is recommended to promote sustained participation in competitive employment among individuals with SMI (Chapter 6), regardless of the economic conditions [61]. Currently, this structural funding is only available for individuals with SMI receiving sickness or disability benefits from UWV. In contrast, IPS funding is only temporary for individuals who rely on municipal support for vocational rehabilitation (i.e., individuals who either receive social assistance benefits from a municipality or are not entitled to any type of benefits). However, the starting point should be that IPS funding should be sustainable and available for all individuals with SMI who express a desire to work and participate in IPS. Additionally, there are aspects where this funding

strategy could be further optimized. For instance, to ensure ongoing support for IPS participants at risk of job loss after completing their trajectory, health insurance companies could consider revising their IPS reimbursement policies to align with prevailing practices, including extending coverage beyond the initial IPS intake that is currently limited to a maximum of 8 hours (Chapter 3 and 4). Another important reason for health insurance companies to allocate additional resources to IPS services is the established association between competitive employment and improvements in mental health, quality of life and overall functioning [62, 63]. Although not corroborated by the economic evaluation in Chapter 6, it is plausible that these improvements could lead to decreased treatment needs and ultimately, reduced long-term healthcare expenses [8, 11, 12].

The findings of this thesis suggest that the 'benefit trap' is a significant obstacle to both the successful implementation of IPS and favorable employment outcomes for its participants (Chapters 3 and 4). The complex laws, rules, and regulations governing the Dutch social security system should be revised to make competitive employment more financially attractive than receiving benefits for individuals participating in IPS. Ensuring income security for IPS participants is crucial to reduce their financial risks. Additionally, providing participants with clear and accurate information about how paid employment will affect their benefits is equally important (Chapter 4), as concerns about income can lead to distress and discourage active employment pursuit [49]. The complexity of Dutch social security laws and regulations was also identified as a barrier to effective benefits counseling, complicating the understanding of financial consequences for IPS participants considering paid employment (Chapter 4). These findings underscore the high need for revising these laws and regulations.

In Chapter 4, participants' relevant work experience, competences, and skills were identified as facilitators for obtaining employment, whereas a lack of self-confidence and self-esteem emerged as barriers. These findings suggest that offering additional interventions or training during the IPS trajectory may enhance the effectiveness of IPS. Prior research corroborates this, indicating that the combination of IPS with other interventions leads to better employment outcomes than IPS alone [10, 64]. Notably, stigma and challenges associated with disclosing mental illness to employers were identified as significant barriers (Chapters 3 and 4). Enhancing IPS with an effective stigma awareness intervention for both participants and employment specialists is thus recommended, as this intervention is likely to amplify the effects of IPS [65]. Furthermore, recent research highlights that stigma and discrimination among employers are also important barriers to the employment opportunities of individuals with mental

illness [66]. To stimulate employers to hire more individuals with SMI and to ensure those individuals maintain their employment, both destigmatizing interventions [67] and financial incentives are recommended (Chapter 4). Such financial incentives could include protection against financial risks, and financial rewards for achieving sustainable employment for individuals with SMI.

## Implications for future research

Future research should assess whether close collaboration between mental health clinicians and social medicine specialists can further improve the implementation of IPS and its outcomes.

Future studies should also examine how the involvement of insurance physicians and occupational physicians in IPS affects both its implementation and outcomes. A particular focus could be whether occupational physicians contribute to improved job retention and overall health in IPS participants.

To motivate health insurers to invest more in IPS services and, given the limitations of the economic evaluation in Chapter 6, future economic evaluations should focus on assessing whether participation in IPS leads to decreased treatment needs and ultimately, reduced healthcare costs in the long-term (e.g., longer than 5 years). These evaluations should strive for a robust sample size and a long follow-up period, and should ideally include cost-utility analyses.

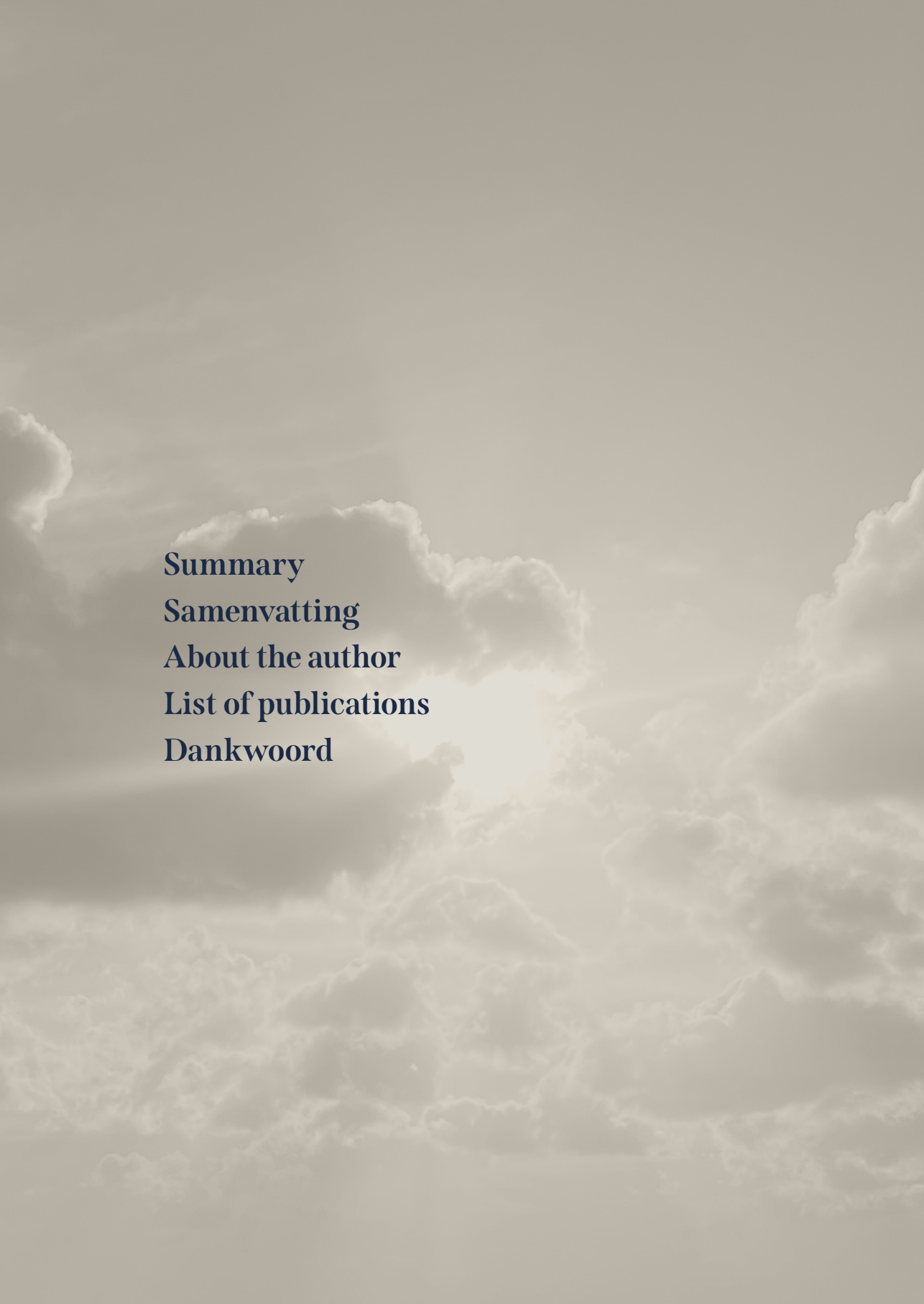
## Conclusion

The results of this thesis show that IPS implemented through a reimbursement strategy on a nationwide scale is effective and seems cost-effective in individuals with SMI. The results also indicate that the organizational implementation strategy has positively impacted the implementation of IPS within usual mental healthcare. However, significant efforts are still required to address the remaining barriers at the socio-political level as highlighted in this thesis and to further improve both the implementation of IPS and the work participation of individuals with SMI. Other barriers can be addressed by intensifying collaboration between mental healthcare clinicians and social medicine specialists, and by increasing the involvement of these specialists within IPS services.

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**Summary**

**Samenvatting**

**About the author**

**List of publications**

**Dankwoord**



## Summary

Competitive employment contributes to the health and recovery of individuals with severe mental illness (SMI). However, employment rates among these individuals are low, often leading them to rely on social assistance or disability benefits. Individual Placement and Support (IPS) is an evidence-based, effective, and cost-effective approach for helping individuals with SMI obtain and maintain competitive employment. Despite its effectiveness and cost-effectiveness, the implementation of this approach has been challenging worldwide. Inadequate funding and insufficient collaboration between mental healthcare and vocational rehabilitation services are major barriers to implement IPS within usual mental healthcare. To improve the implementation of IPS in the Netherlands, the Dutch Social Security Institute: the Institute for Employee Benefits Schemes (UWV), began offering nationwide reimbursement for IPS in 2012 to all mental healthcare agencies providing IPS services. Multiple health insurance companies also contributed by funding the intake phase of IPS trajectories. In addition, various national collaborations among stakeholders in mental healthcare and vocational rehabilitation were initiated. An example of such an initiative involved stakeholders from two mental healthcare agencies, UWV, a municipality, and a health insurance company. This collaboration included a multifaceted implementation strategy (MIS) for IPS, encompassing an organizational and a financial component. The organizational component comprised regular meetings at two levels among the professionals of the different organizations involved (i.e., two mental healthcare agencies, UWV, a municipality and a health insurance company): 1) at the management level, there were regular meetings among decision makers who had a managing or advising role within their organization. Their main goal was to facilitate involved practitioners and to ensure IPS sustainment; 2) at the practitioner level, there were regular meetings among IPS employment specialists and several vocational rehabilitation professionals (i.e., the labor expert and insurance physician from UWV, and the case manager from the municipality). Their main goal was to organize the IPS funding for new clients, and to provide improved benefits counselling as compared to usual IPS practice. The financial component consisted of secured IPS funding with a 'pay for performance' element, providing mental health agencies with extra payments for successfully placing IPS participants in competitive jobs.

The research in this thesis primarily focuses on IPS using a multifaceted implementation strategy (IPS+MIS). The objectives of this thesis are: 1) to gain insight into the implementation of IPS, the employment outcomes of IPS participants with SMI, and the factors that influence these employment outcomes; and 2) to evaluate the effectiveness and cost-effectiveness of IPS

implemented through a reimbursement strategy on a nationwide scale, in terms of achieving sustainable, competitive employment. By addressing these objectives, this thesis aims to contribute to improving employment outcomes for individuals with SMI by assisting stakeholders in making better-informed decisions regarding the implementation, funding, and organization of IPS.

**Objective 1: to obtain insight into the implementation of IPS, employment outcomes of IPS participants with SMI, and factors that influence these employment outcomes**

Motivation to work is crucial in most vocational rehabilitation programs, and in IPS, expressing a desire to work is actually the only criterion for participation. Chapter 2 reports on associations between self-reported work motivation and employment outcomes in people with SMI participating in IPS or traditional vocational rehabilitation (TVR). Data of 151 study participants, collected from a randomized controlled trial with a 30-month follow-up period, were used for a secondary data analysis. No associations were found between work motivation levels and employment outcomes in people with SMI participating in IPS or TVR. Chapter 3 provides insight into an organizational and a financial implementation strategy for IPS by exploring the perceived facilitators and barriers among participating stakeholders in mental health care and vocational rehabilitation. In this qualitative, exploratory study, semi-structured interviews were conducted among eight practitioners and seven decision makers to collect rich information about the possible facilitators and barriers with regard to the organizational and financial implementation strategy for IPS. Important perceived facilitators included regular meetings of stakeholders in mental health care and vocational rehabilitation, the mandate and influence of the decision makers involved, and secured IPS funding. Important perceived barriers were the temporary and fragmented character of the secured funding, lack of communication between decision makers and practitioners, and negative attitudes and beliefs among mental health clinicians. Changes in legislation were experienced as a facilitator as well as a barrier.

Chapter 4 describes the experiences with IPS+MIS, and competitive employment among IPS clients and employment specialists. In this qualitative, exploratory study, ten semi-structured interviews with IPS clients and two focus groups with seven and eight IPS employment specialists were conducted to collect rich information about their experiences with IPS+MIS and competitive employment. Themes related to experiences with IPS and the multifaceted implementation strategy were identified, including the importance of discussing the client's motivation and motives to work, facilitators and barriers to obtaining and maintaining employment, facilitators to collaboration between stakeholders,

barriers to benefits counselling, organizational barriers to IPS execution and collaboration between stakeholders, financial barriers to IPS execution and experiences with the pay for performance element.

Chapter 5 provides insight into associations between employment outcomes in people with SMI who participated in IPS+MIS and 1) the level of experience of mental health agencies with providing IPS+MIS and 2) the type of IPS funding. This observational cohort study showed that 46% of the individuals who participate in IPS+MIS obtained competitive employment within 30 months; 28% worked for six months or longer. The competitively employed participants obtained their job within about seven months, and worked for about nine months in total. Consistent with their educational level at baseline, participants obtained a variety of mostly entry-level jobs. The results of this study further suggested that both the level of experience of mental healthcare agencies with providing IPS+MIS, and funding may play a role in employment outcomes.

**Objective 2: to evaluate the effectiveness and cost-effectiveness of IPS implemented through a reimbursement strategy on a nationwide scale, in terms of obtaining sustainable, competitive employment**

Chapter 6 presents the economic evaluation of IPS implemented through a reimbursement strategy on a nationwide scale. This evaluation showed that IPS was more effective than TVR in helping individuals with SMI receiving sickness or disability benefits achieve competitive employment from 6 to 36 months after starting the intervention. From the societal and payer perspective, IPS was – on average – less costly and more effective than TVR and return-on-investment (ROI) estimates showed that IPS was – on average – cost saving. However, uncertainty surrounding the cost-effectiveness and ROI estimates was large.

Chapter 7 contains the general discussion. This final chapter summarizes and reflects on the main findings of this thesis. It also presents its methodological considerations and implications for policy, practice and future research. In conclusion, the results of this thesis show that IPS implemented through a reimbursement strategy on a nationwide scale is effective and seems cost-effective in individuals with SMI. The results also indicate that the organizational implementation strategy has positively impacted the implementation of IPS within usual mental healthcare. However, significant efforts are still required to address the remaining barriers at the socio-political level as highlighted in this thesis and to further improve both the implementation of IPS and the work participation of individuals with SMI. Other barriers can be addressed by intensifying collaboration between mental healthcare clinicians and social medicine specialists, and by increasing the involvement of these specialists within IPS services.

## Samenvatting

Betaald werk draagt bij aan de gezondheid en het herstel van mensen met ernstige psychiatrische aandoeningen (EPA). De arbeidsparticipatie van deze groep mensen is echter laag, waardoor ze vaak afhankelijk zijn van een bijstandsuitkering of van een arbeidsongeschiktheidsuitkering. Individuele Plaatsing en Steun (IPS) is een bewezen effectieve en kosteneffectieve aanpak om mensen met EPA te helpen bij het verkrijgen en behouden van betaald werk. Ondanks de effectiviteit en kosteneffectiviteit is de implementatie van deze methode wereldwijd complex gebleken. Onvoldoende financiering en gebrek aan samenwerking tussen geestelijke gezondheidszorg (ggz) en re-integratiediensten zijn belangrijke belemmeringen voor de implementatie van IPS binnen de reguliere ggz. Om de implementatie van IPS in Nederland te verbeteren, is het Uitvoeringsinstituut Werknemersverzekeringen (UWV) in 2012 begonnen met het landelijk vergoeden van IPS aan alle ggz-instellingen die IPS aanbieden. Verschillende zorgverzekeraars droegen ook bij door de intakefase van IPS-trajecten te financieren. Daarnaast werden verschillende nationale samenwerkingen tussen stakeholders in de ggz en re-integratiediensten geïnitieerd. Een voorbeeld van een dergelijk initiatief betrof stakeholders van twee ggz-instellingen, UWV, een gemeente en een zorgverzekeraar. Deze samenwerking omvatte een veelzijdige implementatiestrategie (VIS) voor IPS, bestaande uit een organisatorisch en een financieel component. Het organisatorische component bestond uit structureel overleg op twee niveaus tussen de professionals van de betrokken organisaties (d.w.z. twee ggz-instellingen, UWV, een gemeente en een zorgverzekeraar): 1) op managementniveau waren er regelmatige bijeenkomsten tussen beslissers die binnen hun organisatie een leidinggevende of adviserende rol hadden. Hun belangrijkste doel was om uitvoerende professionals betrokken bij IPS te faciliteren en zo de duurzaamheid van IPS te waarborgen; 2) op uitvoerend niveau waren er regelmatige bijeenkomsten tussen IPS-trajectbegeleiders en diverse re-integratieprofessionals (d.w.z. de arbeidsdeskundige en verzekeringsarts van UWV en de casemanager van de gemeente). Hun belangrijkste doel was om de IPS-financiering voor nieuwe cliënten te organiseren en verbeterde begeleiding rondom uitkeringskwesties te bieden in vergelijking met de gebruikelijke IPS-praktijk. De financiële component bestond uit gegarandeerde IPS-financiering met een 'pay for performance'-element, waarbij ggz-instellingen extra betalingen ontvingen voor het succesvol plaatsen van IPS-deelnemers in betaald werk. Het onderzoek in dit proefschrift richt zich voornamelijk op IPS, geïmplementeerd met een veelzijdige implementatiestrategie (IPS+VIS). De doelstellingen van dit proefschrift zijn: 1) inzicht verkrijgen in de implementatie van IPS, de werkuitkomsten van IPS-deelnemers met EPA en de factoren die deze werkuitkomsten

beïnvloeden; en 2) evalueren van de effectiviteit en kosteneffectiviteit van IPS, geïmplementeerd met een financiële strategie op nationale schaal, voor het verkrijgen van duurzaam, betaald werk. Door deze doelstellingen te adresseren, beoogt dit proefschrift bij te dragen aan het verbeteren van de werkuitkomsten voor mensen met EPA door stakeholders te ondersteunen bij het nemen van beter geïnformeerde beslissingen over de implementatie, financiering en organisatie van IPS.

**Doelstelling 1: inzicht verkrijgen in de implementatie van IPS, de werkuitkomsten van IPS-deelnemers met EPA en de factoren die deze werkuitkomsten beïnvloeden**

Werkmotivatie is cruciaal bij de meeste arbeidsre-integratieprogramma's, en bij IPS is het uiten van een wens om te werken feitelijk het enige criterium voor deelname. Hoofdstuk 2 rapporteert over de associaties tussen zelfgerapporteerde werkmotivatie en werkuitkomsten bij mensen met EPA die deelnamen aan IPS of traditionele arbeidsre-integratie (TAR). Data van 151 studiedeelnemers, verzameld uit een gerandomiseerde, gecontroleerde studie met een follow-up-periode van 30 maanden, werden gebruikt voor een secundaire data-analyse. Er werden geen associaties gevonden tussen niveaus van werkmotivatie en werkuitkomsten bij mensen met EPA die deelnamen aan IPS of TAR.

Hoofdstuk 3 biedt inzicht in een organisatorische en financiële implementatiestrategie voor IPS door het verkennen van de ervaren bevorderende en belemmerende factoren onder de deelnemende stakeholders in de ggz en arbeidsre-integratie. In deze kwalitatieve, verkennende studie werden semi-structureerde interviews afgenomen bij acht uitvoerende professionals en zeven beslissers om uitgebreide informatie te verzamelen over de mogelijke bevorderende en belemmerende factoren met betrekking tot de organisatorische en financiële implementatiestrategie voor IPS. Belangrijke bevorderende factoren waren structurele bijeenkomsten van stakeholders in de ggz en arbeidsre-integratie, het mandaat en de invloed van de betrokken beslissers en gegarandeerde IPS-financiering. Belangrijke belemmerende factoren waren het tijdelijke en gefragmenteerde karakter van de gegarandeerde financiering, het gebrek aan communicatie tussen beslissers en uitvoerende professionals, en negatieve houdingen en overtuigingen onder ggz-behandelaren. Veranderingen in de wetgeving werden zowel als een bevorderende als een belemmerende factor ervaren.

Hoofdstuk 4 beschrijft de ervaringen met IPS+VIS en werk onder IPS-cliënten en trajectbegeleiders. In deze kwalitatieve, verkennende studie werden tien semi-structureerde interviews met IPS-cliënten en twee focusgroepen met zeven en acht IPS-trajectbegeleiders uitgevoerd om gedetailleerde informatie te

verzamelen over hun ervaringen met IPS+VIS en werk. Thema's gerelateerd aan ervaringen met IPS en de VIS werden geïdentificeerd, waaronder het belang van het bespreken van de motivatie en motieven van de cliënt om te werken, bevorderende en belemmerende factoren voor het verkrijgen en behouden van werk, bevorderende factoren voor samenwerking tussen stakeholders, belemmeringen voor begeleiding rondom uitkeringskwesties, organisatorische belemmeringen voor de uitvoering van IPS en voor de samenwerking tussen stakeholders, financiële belemmeringen voor de uitvoering van IPS en ervaringen met het 'pay for performance'-element.

Hoofdstuk 5 biedt inzicht in de associaties tussen werkuitkomsten bij mensen met EPA die hebben deelgenomen aan IPS+VIS en 1) het ervaringsniveau van de betrokken ggz-instellingen met het aanbieden van IPS+VIS en 2) het type IPS-financiering. Deze observationele cohortstudie toonde aan dat 46% van de mensen die deelnamen aan IPS+VIS binnen 30 maanden regulier, betaald werk verkreeg; 28% van de mensen werkte zes maanden of langer. De werkende deelnemers vonden hun baan binnen ongeveer zeven maanden en werkten in totaal ongeveer negen maanden. Passend bij hun opleidingsniveau aan het begin van het onderzoek, vonden de deelnemers een verscheidenheid aan voornamelijk instapbanen. De resultaten van deze studie suggereerden verder dat zowel het ervaringsniveau van de betrokken ggz-instellingen met het aanbieden van IPS+VIS als de financiering een rol zouden kunnen spelen bij deze werkuitkomsten.

**Doelstelling 2: evalueren van de effectiviteit en kosteneffectiviteit van IPS, geïmplementeerd met een financiële strategie op nationale schaal, voor het verkrijgen van duurzaam, betaald werk**

Hoofdstuk 6 presenteert de economische evaluatie van IPS, geïmplementeerd met een financiële strategie op nationale schaal. Deze evaluatie toonde aan dat IPS effectiever was dan TAR om mensen met EPA die een arbeidsongeschiktheidsuitkering ontvingen te helpen regulier, betaald werk te verkrijgen tussen 6 en 36 maanden na aanvang van de interventie. Vanuit maatschappelijk perspectief en betalersppectief was IPS gemiddeld minder duur en effectiever dan TAR, en return-on-investment (ROI) schattingen toonden aan dat IPS gemiddeld kostenbesparend was. Echter, de onzekerheid rond de kosteneffectiviteits- en ROI-schattingen was groot.

Hoofdstuk 7 bevat de algemene discussie. Dit laatste hoofdstuk vat de belangrijkste bevindingen van de studies in dit proefschrift samen en reflecteert erop. Het presenteert ook de methodologische overwegingen en implicaties voor beleid, praktijk en toekomstig onderzoek. Concluderend tonen de resultaten van

dit proefschrift aan dat IPS, geïmplementeerd met een financiële strategie op nationale schaal, effectief is en kosteneffectief lijkt bij mensen met EPA. De resultaten laten daarbij ook zien dat de organisatorische implementatiestrategie een positieve impact heeft gehad op de implementatie van IPS binnen de reguliere ggz. Er zijn echter nog aanzienlijke inspanningen vereist om de resterende belemmeringen op sociopolitiek vlak, die in de studies van dit proefschrift worden belicht, aan te pakken om zowel de implementatie van IPS als de arbeidsparticipatie van mensen met EPA verder te verbeteren. Andere belemmeringen kunnen worden aangepakt door de samenwerking tussen ggz-behandelaren en sociaal geneeskundigen (verzekeringsartsen en bedrijfsartsen) te intensiveren, en door de betrokkenheid van deze specialisten binnen IPS te vergroten.

## About the author



Miljana Vukadin was born on October 24, 1985, in Foča, Bosnia and Herzegovina. She completed secondary school (gymnasium) in 2004 and began her medical studies at Erasmus University in Rotterdam. During her scientific internship at the Department of Psychiatry at Erasmus Medical Center in Rotterdam she developed an interest in scientific research. This internship resulted in her first publication in an international, peer-reviewed medical journal. After obtaining her medical degree in 2010, she worked as a medical doctor at Bavo Europoort (now known as Antes Kliniek Poortmolen) in Capelle aan den IJssel, and later as a psychiatry resident at Erasmus Medical Center. In 2012, Miljana started her residency in insurance medicine at the Dutch Social Security Institute: the Institute for Employee Benefits schemes (UWV). Driven by her interest in scientific research, psychiatry, and enhancing the participation of individuals with mental health problems, she embarked on her PhD trajectory in 2014, focusing on Individual Placement and Support at the Department of Public and Occupational Health at the Amsterdam University Medical Centers. She completed her residency in insurance medicine in 2018. Since 2014, Miljana has been combining her scientific work with various roles in the field of insurance medicine at UWV.

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*Vi ste moji uzori*

*Volim vas najviše*

*Ta ljubav ne može da se opise*

*A i tesko je da se o njoj zbori*

*Vase srce se uvijek otvori*

*Bez zadrške i bezuslovno – volite me najviše*

*Ta ljubav ne može da se opise*

*A i tesko je da se o njoj zbori*

*Sa vasom podrskom osjećam se jaka*

*Dajete mi povjerenje i snagu –*

*Duh pravog junaka*

*Hvala vam za sve, dragi deda i bako*

*Bez vas mi ne možemo*

*Roditelj bitići, iskusila sam, stvarno nije lako*

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*Ik hoef geen gulden vlies*

*Ik hoef geen gulden vlies,  
geen mantel en geen keizerskroon,  
en ook geen almachtige spiegel.*

*Ik zou geen vrede kunnen vinden in weelde.*

*Ik hoef geen hof en geen dienaren  
en ook geen volk van onderdanen  
om over hen te heersen.*

*Ik zou geen vrede kunnen vinden  
in de gedachte groter dan anderen te zijn,  
of een Nieuwe Heilige  
met een gulden mond  
die in zijn hart een zonde draagt,  
maar die goed verborgen houdt.*

*Ik zou geen vrede kunnen vinden  
in gebed.*

*Ik hoef geen weg en geen rijtuig  
om de wereld en haar wonderen  
te kunnen bereizen.*

*Ik zou geen vrede kunnen vinden  
in dat wonder.*

*Ware het mij gegeven in deze menselijke hel  
een mens te ontmoeten  
en met hem openhartig van gedachten te wisselen –*

*Dan zou ik vrede kunnen vinden  
in menselijkheid.  
Dan zou ik eindelijk vrede vinden.*

*Vjekoslav Vukadin*



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