

# Recent advances in supported employment for people with serious mental illness

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#### **Purpose of review**

Supported employment is a vocational rehabilitation approach that eschews prevocational training in favor of rapid job search for competitive work and follow-along supports to sustain employment, with the individual placement and support (IPS) model being the most standardized and researched model. This review covers recent research on the IPS model of supported employment.

#### Recent findings

The evidence base for IPS-supported employment continues to grow, with seven new randomized controlled trials published, most conducted abroad, resulting in a total of 23 controlled studies showing that IPS is effective at improving work outcomes. Several reviews have concluded that competitive work improves quality of life in persons with serious mental illness, and some research has suggested that employment may confer clinical benefits. Encouraging research has been published on modifications of the IPS model (such as inclusion of supported education), augmentations (such as cognitive remediation) and adaptations for underserved populations (such as persons with criminal justice involvement). Recent studies have also described the effective strategies for implementing and sustaining IPS; others have reported its cost-effectiveness.

#### Summary

Research continues to accumulate on the effectiveness of IPS-supported employment, adaptations of the model and overcoming programme and policy barriers to its widespread implementation.

#### **Keywords**

disability, employment, individual placement and support, schizophrenia

#### **INTRODUCTION**

Significant progress has been made since the last review of the literature on supported employment was published in 2014 [1]. Because the most established, thoroughly standardized and widely studied model of supported employment for people with serious mental illness is individual placement and support (IPS) [2,3], this review focuses primarily on research related to the IPS model. The principles of IPS include focus on competitive work, inclusion of all clients who want to work, no prevocational training, benefits counseling, rapid job search, integration of vocational and clinical services at the level of the team, attention to client preferences regarding all decisions, assistance with job development and provision of follow-along supports after attainment of a job [4].

## UPDATES ON THE INDIVIDUAL PLACEMENT AND SUPPORT EVIDENCE BASE

Several groups have reviewed the IPS literature, including two high-quality reviews focusing

specifically on randomized controlled trials. A narrative review of 12 systematic reviews and 17 randomized controlled trials found that IPS had consistently better employment outcomes than alternative vocational approaches, including more rapid entry into competitive employment, more hours and weeks worked, and higher wages [5\*\*]. A meta-analysis concluded that IPS was effective in a variety of international settings with varying economic conditions [6\*\*].

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#### **KEY POINTS**

- The evidence base of randomized controlled trials of IPS-supported employment for persons with serious mental illness continues to grow, with a total of 23 completed trials, including six trials conducted abroad since 2014.
- Recent work on IPS has focused on evaluating modifications of IPS to improve efficiency (such as limiting the duration-supported employment services provided), augmentations to improve effectiveness (such as adding cognitive remediation) and adaptations to address the needs of special populations (such as clients recovering from a first episode of psychosis or with criminal justice system involvement).
- Further evidence supports the cost-effectiveness of IPSsupported employment.
- Progress has been made in developing and implementing structures to facilitate the dissemination of high fidelity IPS services and their maintenance over time.

The growth in randomized controlled trials of IPS has accelerated, with the number of trials nearly doubling (from 11 to 20) during the period from 2008 to 2014 from the preceding period of 1996–2007 [7]. The accumulation of successful trials has continued, with seven trials published during this review period, all of which found significantly better competitive employment outcomes for IPS [8,9,10,11,11,14]. The current count of randomized controlled trials evaluating high-fidelity IPS programmes is 23, all of which have shown IPS to be superior to alternative approaches (www.dartmouthips.org).

All but one of the seven recent IPS trials was conducted outside the United States, in Australia [14"], Japan [12"], the Netherlands [11"], Sweden [8"], and Switzerland [10",13"]. Controlled trials of IPS outside the United States continue to be relevant because disability policies, labor practices and sociocultural conditions that differ from the United States may affect competitive employment outcomes [15]. For example, the welfare systems in Scandinavian countries make it difficult to reach competitive employment rates for people with serious mental illness comparable to those achieved in U.S. studies [8"], and hospital-based psychiatric service systems with underdeveloped community mental health services in Japan and neighboring Pacific Rim nations pose formidable barriers to implementing IPS [16].

## MODIFICATIONS, AUGMENTATIONS AND EXTENSIONS TO UNDERSERVED POPULATIONS

One continuing trend in supported employment research has been modifications of the standard IPS model or augmentations by providing additional interventions, both designed to enhance the effectiveness or efficiency. A second trend has been extending IPS to underserved populations.

#### **Modifications and augmentations**

To increase the efficiency, one study tested the effect of setting a time limit on active IPS services, using a randomized controlled trial [17\*\*]. The authors defined IPS-LITE by limiting service time to 9 months without a job or 4 months after obtaining a job. At 18 months, the employment rates for IPS-LITE (41%) and standard IPS (46%) were not significantly different, but a larger proportion of the IPS-LITE participants than standard IPS participants (97 versus 28%) were discharged from IPS services. Other employment differences were also nonsignificant. The authors argued that given limited resources, the IPS-LITE approach should be more efficient, allowing more clients to obtain competitive employment with the same number of IPS staff than in standard IPS programmes. But, small sample size, low statistical power and the lack of a full cost analysis limited the validity of this conclusion.

Cognitive remediation aimed at improving cognitive functioning, a common correlate of unemployment in persons with serious mental illness, has been one approach to increasing the effectiveness of vocational interventions. A meta-analysis of effects of computer-based cognitive remediation on work outcomes included nine controlled trials, including five trials in which cognitive remediation was added to supported employment, and three trials in which it was added to another vocational service [18\*]. Beneficial effects for adding cognitive remediation were reported for employment rate, duration of work and wages earned.

One recent study of cognitive remediation specifically targeted IPS participants who do not get or keep competitive jobs in IPS [19\*\*]. Using a randomized controlled design, it explored the effects of adding cognitive enhancement to IPS for participants who had not benefitted from IPS alone. By 2 years, more participants who received cognitive enhancement in addition to IPS achieved competitive employment compared with those who continued to receive usual IPS services (60 versus 36%), and other employment outcomes were also better with cognitive enhancement.

Another modification to IPS is supported education. Supported education, sometimes offered as a stand-alone programme, has increasingly been emphasized as part of IPS services. Supported education does not yet have a robust evidence base [20\*]. A pilot study described and evaluated one approach to providing both supported employment and supported education within an IPS programme [21]. See the next section for supported education modifications to IPS for the first episode psychosis population.

#### Underserved populations

IPS-supported employment continues to be extended to new populations. A controlled trial evaluated the effectiveness of IPS for people with serious mental illness and criminal justice system involvement (an increasingly prevalent complication in the United States) [9\*]. By 1 year, 31% of IPS participants, versus just 7% of participants in an active comparison model, had achieved competitive employment.

Although common in Australia and parts of Europe for decades, specialty treatment programmes for people experiencing early psychosis have until recently been uncommon in the United States. A systematic review showed that the common practice of adding supported employment to early psychosis teams increased the rates of competitive employment [22\*\*]. In eight studies, the mean competitive employment rate for supported employment participants was 49% compared with 29% for participants receiving clinical services only.

People with a recent onset of psychosis often have educational goals, which have led to a resurging interest in supported education, often combined with supported employment. Educational outcomes in early psychosis studies have sometimes been aggregated with employment outcomes, complicating interpretation. Overall, educational outcomes from early psychosis programmes with supported employment services (sometimes with educational components) have been mixed [22\*\*]. Three recent U.S. studies evaluating specialized early psychosis programmes with supported employment /education reported significant increases in work or school involvement, although the specific impact of these programmes on each area of functioning is unclear [23\*,24,25].

Articles in this review period did not include completed IPS studies of additional populations, but current IPS studies address people who have a variety of other disabilities related to intellectual/developmental problems, addictions, posttraumatic stress disorders, common mental disorders other

than those included as serious mental illness [26] and physical injuries.

## IMPACT OF EMPLOYMENT ON GENERAL HEALTH AND WELL-BEING

Four recent articles have reviewed the research on the effects of participation in vocational rehabilitation programmes or work on clinical, health and well-being outcomes. The largest was a narrative review that examined the associations between employment and environmental characteristics and client characteristics (e.g. quality of life) in 43 studies of schizophrenia [27<sup>\*</sup>]. A second narrative review examined the effects of employment on recovery-related outcomes (i.e. psychosocial functioning, clinical functioning and well-being or quality of life), which included 18 studies, six of which evaluated supported employment studies [28]. A third narrative review evaluated the longitudinal impact of obtaining employment in eight cohorts of majority schizophrenia studies [29]. The fourth was a meta-analysis of 16 randomized controlled trials comparing the effects of job placement interventions (12 of which included IPS programmes) to usual vocational rehabilitation services on healthrelated outcomes [30]. Despite different methods, these four reviews agreed that employment improves quality of life and well-being, with mixed findings as to its effects on clinical functioning.

A 5-year follow-up of a randomized controlled trial of IPS reported that in addition to better competitive employment outcomes over the study period, the IPS group also had significantly fewer hospitalizations than usual vocational services [10<sup>••</sup>]. In as much as the IPS and control groups did not differ in nonvocational outcomes at 2-year follow-up [31], the long-term aspect of this finding is important. In fact, a highly consistent finding in controlled trials of IPS with follow-up periods of 30 months or less is a general lack of impact on nonvocational outcomes (e.g. [11]). Two important exceptions have been studied showing lower hospital use for IPS participants than controls [32,33\*\*]. A secondary analysis of a large 23-site randomized study in the United States found reductions in emergency and hospital services for people who received a package of systematic medication management and other evidence-based treatments in addition to IPS, compared with those who were not offered services [33\*\*]. In this study, the hospital outcomes could not be attributed solely to IPS because of the multicomponent service package offered to those in the experimental condition.

In light of the inconsistent findings of the reviews on the effects of work on clinical

functioning [27,28,29,30], the findings of the 5-year controlled trial [10] and other long-term follow-up studies [34] suggest that long-term employment may be clinically beneficial and confer some protection against relapse and rehospitalization, outcomes not often found in short-term follow-up studies.

## DISSEMINATION, IMPLEMENTATION AND SUSTAINABILITY

With the effectiveness of IPS well established, the critical next step in research is to ensure the access to high-quality IPS services. Unfortunately, most people with serious mental illnesses do not receive IPS [35,36]. Researchers continue to identify barriers to implementing IPS, including organizational and system barriers [37,38] as well as barriers related to employment specialist competencies and attitudes [39].

The investigators of one study in the United Kingdom theorized that clinician ambivalence regarding the value and risks of competitive employment for their clients undermined the effectiveness of IPS-supported employment programmes [40\*]. To address this, the authors provided motivational interviewing to clinicians, using a cluster randomized trial involving four clinics that were providing IPS. Participants in the two clinics where clinicians received motivational interviewing had higher rates of employment over 12 months than those in the other two clinics (43 versus 18%).

One common approach to implementation and maintenance of high-quality IPS is the use of a fidelity scale. The IPS fidelity scale is a 25-item scale used by independent assessors during a site to evaluate adherence to the IPS model, using standardized assessment procedures [41\*], suitable for both rural and urban settings [42]. Studies have shown that higher IPS fidelity scores positively correlate with better competitive employment outcomes [43,44].

A recent strategy for disseminating and sustaining evidence-based practices uses a learning community, defined as a network of organizations providing a specific service and sharing a long-term commitment to quality improvement. A national IPS learning community (predominantly in the United States) has helped state and regional mental health and vocational rehabilitation agencies develop infrastructure and leadership, training, technical assistance and monitoring of fidelity and outcomes to foster the growth and sustainment of IPS programmes within their jurisdictions [45\*\*]. This learning community currently includes over 225 IPS teams in 19 states and three European countries. The learning community ensures training

and technical assistance through web-based resource materials (www.dartmouthips.org) and three online courses for IPS supervisors and employment specialists and vocational rehabilitation counselors. Continuous learning and quality improvement occur through teleconferences, a national conference held annually, a quarterly newsletter and several ongoing research projects. The learning community has enhanced the probability that participating sites are sustained over the long-term (96% of 129 sites sustained over a 2-year period), while maintaining high fidelity to the IPS model and obtaining consistently strong employment rates [46\*,47\*\*].

A New York initiative modeled on the IPS national learning community provides technical assistance and a process for monitoring fidelity and employment outcomes [48]. By the end of 2014, 59 (69%) of 86 eligible programmes had joined the New York initiative.

#### **POLICY ISSUES**

The 1990 Americans with Disabilities Act aimed to include all Americans in mainstream society, especially employment. The 1999 Olmstead decision mandated community-based services for psychiatric patients, and recent Olmstead settlements have required several states to substantially increase supported employment services to formerly institutionalized psychiatric patients [49\*]. The 2003 New Freedom Commission Report [50] reinforced the support for these changes. Public skepticism regarding the effectiveness of community-based services must be overcome using supported employment as one important change mechanism [49\*].

The penetration of IPS-supported employment in the United States remains extremely low (> 5% of eligible adults with a psychiatric disability access IPS), and one essay argued that lack of a clear and simple payment mechanism is the major barrier [51\*]. The authors also described new options and waivers under Medicaid and the Affordable Care Act that should allow states to fund supported employment more easily, though few states that have taken advantage of these changes so far.

A case study using qualitative methods examined the switch in a Canadian province from fee-for-service to outcome-based funding for vocational services [52]. Fee-for-service shifted activity from preemployment services to job development and placement, with higher employment rates, but may have de-emphasized attention to job matching and career development. These findings reinforce the need to emphasize model fidelity as well as outcomes.

Policy makers want to know if IPS and employment are cost-effective and may save costs to the healthcare system. We previously described the 5-year results of a randomized controlled trial in which IPS participants had both superior work outcomes and fewer hospitalizations than those in traditional vocational services [10\*\*]. Primarily, as a result of the reduced rate of psychiatric hospitalization, IPS yielded a better return on investment (employment earnings/treatment and rehabilitation costs) of 54¢ per dollar for IPS, compared with 18¢ per dollar for usual vocational services.

Policy makers in the United States demand cost-effectiveness. But, they have also been reluctant to enhance rather than decrease services for people who are poor and stigmatized by mental illness, particularly during the economic recession when nearly all states cut services for public mental health [53].

#### CONCLUSION

IPS-supported employment has continued to spread broadly, in terms of states and countries, but only a few regions have made IPS available to a large portion of eligible people with psychiatric disabilities. The national IPS learning community, with its attention to quality as well as outcomes, has stimulated most of the existing implementations. The major barriers to widespread implementation appear to be financing and neglect of people who are poor and stigmatized by mental illness. Meanwhile, the research support for IPS around the world has continued to become stronger, with an abundance of randomized trials and other studies. Employment clearly improves quality of life and income for people with psychiatric disabilities; clinical outcomes may also improve; and mental health treatment costs decrease over time. In addition, IPS is increasingly used with new populations, for example, people with psychosis in early intervention studies and those who experience developmental disabilities, addictions and physical disabilities, in other studies. Researchers are also developing and testing a variety of modifications and augmentations to IPS. Nevertheless, the IPS model remains remarkably robust.

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#### **Conflicts of interest**

There are no conflicts of interest.

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