

Evidence-based supported employment for people with severe mental illness: Past, current, and future research

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Abstract.

BACKGROUND: Individual Placement and Support (IPS) is an evidence-based vocational rehabilitation intervention for people with severe mental illness. IPS emphasizes client choice, rapid job finding, competitive employment, team-oriented approaches, benefits counseling, and ongoing supports.

OBJECTIVE: This paper summarizes 20 years of research on IPS, describes studies in the field now, and proposes priorities for future research.

METHODS: To identify published and unpublished IPS research studies, we conducted an electronic search of qualitative and quantitative IPS studies, findings from recent reviews, and sought expert recommendation.

RESULTS: Past research indicates that IPS supported employment is the most effective and cost-effective approach for helping people with psychiatric disabilities find and maintain competitive employment. Employment improves clinical, social, and economic outcomes. Current studies on IPS address several research gaps: IPS modification, generalizability, program settings, international dissemination, cultural awareness, and supportive technology. Looking forward, the field needs studies that report long-term outcomes, financing mechanisms, cost offsets, and standardized supported education models.

CONCLUSIONS: While IPS is one of the most extensively studied of all vocational models, significant literature gaps remain.

Keywords: Supported employment, individual placement and support, vocational program, vocational rehabilitation, implementation, mental illness

An evidence-based practice of supported employment for people with mental illness is called Individual Placement and Support, or IPS supported employment. The eight core elements include: eligibility based on client choice, focus on competitive employment, integration of mental health and employment services, attention to client preferences, work incentives planning, rapid job search, systematic job development, and

individualized job supports (Drake, Bond, & Becker, 2012). In just 20 years, IPS supported employment has grown exponentially. Starting as a local program to improve vocational outcomes in rural New Hampshire (Becker & Drake, 1993), IPS has spread throughout the U.S. and in many other high-resource countries around the world (Drake et al., 2012). Research has expanded dramatically as well, including studies in other countries, with other populations, and with various clinical add-ons.

We aim to fulfill three goals in this paper: (a) to review past research on IPS and identify robust findings, (b) to

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describe current research studies that are in the field now, and (c) to propose future research topics.

1. Methods

Researchers have previously summarized the literature on IPS, see: (Drake et al., 2012) and (Bond, Drake, & Becker, 2012). We aimed to contribute to this literature by broadly summarizing previous reviews, providing an introductory preview to studies currently in the field that readers might not otherwise be aware of, and outlining significant gaps in the literature. To identify studies for inclusion, we conducted an electronic search of the literature and sought findings and suggestions from experts actively publishing in the field. We identified additional articles from the international literature on IPS by searching several computerized databases (MEDLINE/PubMed, PsycINFO, Cochrane Database of Systematic Reviews, and Google Scholar) using general search terms ‘Individual Placement and Support’, ‘IPS’, ‘vocational rehabilitation’, ‘supported employment’, and ‘IPS Supported Employment’. We also searched the indices of several journals that publish studies of psychiatric rehabilitation and examined reference lists from included papers for additional studies. We provide our interpretation of this broad and growing field by topic area.

2. Past research

Stepwise models of vocational services, such as day treatment centers, offer protected work experiences in set-aside jobs or prevocational training either prior to or in place of competitive employment. In contrast, the IPS model assists clients to directly seek competitive jobs. In this section, we briefly summarize published reviews, which report that IPS demonstrates superior efficacy and cost-effectiveness compared to every other form of psychiatric rehabilitation in every setting it has been tested. We also consider research suggesting that employment may lead to clinical and social improvements.

2.1. Vocational outcomes

The evidence for superior competitive employment outcomes in IPS is robust and consistent. One review found nine randomized controlled trials in the U.S. and showed that 65% of IPS clients obtain competi-

tive jobs, compared to 25% of those who receive other types of vocational assistance (Bond, Drake, & Becker, 2012). Randomized controlled trials internationally ($N = 6$) show similar outcomes; 50% of IPS clients achieve competitive employment compared to 20% of clients in control conditions (Bond, Drake, & Becker, 2012). For additional detail regarding these studies, see: (Bond, Drake, & Becker, 2012). Since that review was published, four more randomized studies have been conducted, which also show favorable outcome for IPS. These have been conducted in a diverse array of populations: one in a sample of patients with first-episode psychosis (Nuechterlein, 2010), one among older adults (Twamley et al., 2012), one in Japan (Oshima, Sono, Bond, Nishio, & Ito, submitted), and one in the People’s Republic of China (Wong et al., 2008b). Additionally, the results from a large-scale demonstration study involving over 2,000 Social Security Disability Insurance beneficiaries were recently published, finding that IPS more than doubled paid employment (Drake et al., 2013).

Other vocational outcomes consistently favor IPS over comparison programs. IPS clients achieve their first job several months faster than those in other conditions (Bond, Drake, & Becker, 2012). IPS clients work twice as many weeks and three times as many hours per year than clients in other vocational programs (Bond, Drake, & Becker, 2012). These studies suggest that supported employment researchers use standardized measures in four vocational domains: job acquisition, job duration, job intensity, and total hours or wages (Bond, Campbell, & Drake, 2012).

2.2. Non-vocational outcomes

No studies find that IPS programs, compared to day treatment models, increase rates of adverse events including: program dropouts, suicide attempts, hospitalizations, incarcerations, homelessness, or symptomatic relapses (Drake et al., 2012). Positive benefits such as improved psychiatric symptoms, higher quality of life, or fewer psychiatric hospitalizations are usually related to employment rather than to IPS supported employment services (Bond et al., 2007; Burns et al., 2008; Drake et al., 1999; Drake, McHugo, Becker et al., 2007; Gold et al., 2006; Latimer et al., 2006; Lehman et al., 2002; Mueser et al., 2004; Twamley, Narvaez, Becker, & Bartels, 2008). A few studies, however, have also found that well-integrated IPS and mental health services reduce hospitalizations (Burns

et al., 2008; Frey et al., 2011; Henry, Lucca, Banks, Simon, & Page, 2004). In studies of the general population, work is related to improvements across a variety of health and socioeconomic domains (Barr, Taylor-Robinson, Scott-Samuel, McKee, & Stuckler, 2012; Blustein, 2008; Fogg, Harrington, & McMahan, 2010; Warr, 1987). Similarly, IPS may mediate relationships between work and non-vocational outcomes by enabling more people with psychiatric disabilities to work.

Work correlates with economic (Cook et al., 2008), psychosocial (Arns & Linney, 1993, 1995; Fabian, 1989, 1992; Matthews, 1980; Van Dongen, 1998), and clinical (Cook & Razzano, 2000; Gaebel & Pletzcker, 1987) improvements among people with severe mental illness. In many studies, employment also correlates with short-term reductions in mental health costs (Bond et al., 1995; Burns et al., 2008; Clark, 1998; Henry, et al., 2004; Latimer, 2001; Perkins, Born, Raines, & Galka, 2005; Schneider et al., 2009). These savings can accumulate to large sums over time (Bush, Drake, Xie, McHugo, & Haslett, 2009). The alternative hypothesis that non-vocational benefits are artifacts of selection bias (i.e., employed people are healthier) has not been empirically supported in longitudinal IPS studies (Bond, Resnick, Drake, Xie, McHugo, & Bebout, 2001; Burns et al., 2008; Kukla, Bond, & Xie, 2012; Mueser, Becker, Torrey, Xie, Bond, Drake, & Dain, 1997).

2.3. Cost-effectiveness

Cost-effectiveness studies, which compare the costs of two programs relative to their outcomes, confirm that IPS is highly cost-effective. In studies that compare IPS costs and outcomes to other vocational services models, costs tend to be comparable, but IPS programs achieve vocational outcomes two to three times greater than alternative programs (Clark, Bush, Becker, & Drake, 1998; Dixon, Hoch, Clark, Bebout, Drake, McHugo, et al., 2002). Other studies comparing program outcomes before and after replacing sheltered services with IPS show that IPS both reduces costs and improves vocational outcomes (Clark, Bush, et al., 1998; Clark, Xie, Becker, & Drake, 1998; Knapp et al., 2013).

2.4. Current research

Many challenges inherent to implementing evidence-based practices in mental health, such as model improvement, scalability, user-centeredness, and dis-

semination, remain. Here we describe current studies that hold promise for addressing these and other important issues.

2.5. IPS modifications

Some researchers are attempting to change IPS by lessening the cost of service delivery (thereby allowing for increased capacity) or by adding components to the current approach (thereby increasing effectiveness). To reduce cost, in the U.K. and in Australia (Killackey, Allott, Cotton, Chinnery, Sun, Collins, et al., 2012), studies are using restricted IPS service duration (six months). Others are attempting to limit the total number of hours of IPS service (Nordt, Brantschen, Kawohl, Bärtsch, Haker, Rüscher, & Rössler, 2012) or follow-up support (Burgess, Yeeles, & Burns, 2011), but these strategies may be detrimental to program outcomes (Bond & Kukla, 2011; McGuire, Bond, Clendenning, & Kukla, 2011) and the service user experience (Koletsis et al., 2009). Key questions to address are: Is six months long enough to help people find employment? How are support services provided after six months? How might programs reduce costs without reducing effectiveness?

To enhance the effectiveness of IPS, other researchers are adding components to the current approach such as cognitive remediation, social skills training, and errorless learning. The most commonly studied enhancement strategy is cognitive remediation, which aims to improve cognitive skills associated with achieving and maintaining employment using a variety of methods (e.g., computer tasks, coaching, and group-based practice). Several studies have shown that adding a cognitive remediation strategy helps those who are not responding to IPS (McGurk, Twamley, Sitzler, McHugo, & Mueser, 2007).

Current research is attempting to clarify the type and amount of cognitive remediation. Other studies attempting to add social skills training (Mueser et al., 2005; Wallace & Tauber, 2004) or motivational enhancement (Larson, Barr, Kuwabara, Boyle, & Glenn, 2007) have resulted in little or no improvement in vocational outcomes. Another strategy under investigation is to improve specific job skills through errorless learning. Initial research shows modest improvement in work performance, but no significant improvement in job tenure, self-esteem, job satisfaction, or work stress (Kern, Liberman, Becker, Drake, Sugar, & Green, 2009). Other modifications have been suggested, such as integrating physical activity (Rixom, 2012), but these

await rigorous empirical testing. Thus, current research indicates that cognitive rehabilitation may hold more promise than other IPS modifications.

2.6. Cultural issues

Studies in the U.S. suggest that IPS is equally effective for men and women, and for ethno-racial groups: African Americans, Latino Americans, and Euro Americans (Campbell, Bond, & Drake, 2011). These conclusions are based on relatively small samples and need to be replicated with more diverse groups of Latino Americans, other minorities, and recent immigrants. Qualitative rehabilitation researchers are working to incorporate cultural awareness into IPS programs. Certain competencies important to employment specialist performance are probably inseparable from cultural awareness, including empathy, professionalism, and honoring client preferences (Glover & Frounfelker, 2011a, 2011b; Whitley, Kostick, & Bush, 2010). Whether or not cultural sensitivity training improves the effectiveness of services is uncertain (Solomon, 2008), but awareness of multicultural issues among service providers will likely enhance the service experience of IPS clients from diverse ethno-racial backgrounds.

Many questions remain: How might IPS address dual discrimination (racial discrimination and mental health stigma)? Which techniques best accommodate clients lacking English language fluency? And how can IPS ensure that it supports clients whose job expectations vary from majority norms? A first step is to investigate how specific groups experience IPS services. One ethnographic study found that IPS specialists needed to meet with Latino families rather than with individual participants to make decisions about employment (Alverson & Vicente, 1998); another ethnography discovered that socioeconomic disparities among African Americans impeded the effectiveness of IPS services (e.g., minimal work experience) (Quimby, Drake, & Becker, 2001). Future research needs to examine how other racial and cultural populations (e.g., Asian) experience IPS services and employment to improve IPS generalizability.

2.7. Client populations

IPS has always been non-specific regarding diagnosis. Across many studies, people with diagnoses as diverse as schizophrenia, bipolar disorder, and depression benefit similarly (Bond, Drake, & Becker, 2012).

While research shows that comorbid substance use disorders do not decrease the effectiveness of IPS (Mueser, Campbell, & Drake, 2011), no past studies specifically focus on people with addictions. One recent study showed that people with post-traumatic stress disorder achieved similar outcomes (Davis et al., 2012), and another showed positive results with participants who had spinal cord injuries (Ottomanelli, Goetz, Suris, McGeough, Sinnott, Toscano, et al., 2012). Larger studies in the field are investigating these two disability groups in greater detail (Davis, 2013; Ottomanelli, 2013). Homeless young adults with less serious mental disorders may also benefit from IPS (Ferguson, Xie, & Glynn, 2012). Other proposed studies may examine participants with primary substance use disorders, affective disorders, and chronic back pain. Populations with other chronic physically or mentally disabling conditions may also benefit from IPS, but these await study.

2.8. Implementation and sustainability

Research discovery must be translated to service delivery change to impact health and well-being. Implementing IPS with high fidelity is feasible within one year from start up (Bond, McHugo, Becker, Rapp, & Whitley, 2008). Programs with good fidelity have better employment outcomes than programs with poor fidelity (Bond, Becker, & Drake, 2011; Bond, Peterson, Becker, & Drake, 2012). Successful IPS implementation depends on adequate leadership, funding, and attention to fidelity using validated scales (Bond, Becker, Drake, & Vogler, 1997; Bond, Peterson, et al., 2012). Researchers and practitioners have outlined specific strategies to surmount barriers to implementation in public mental health systems (Becker et al., 2007; Becker, Lynde, & Swanson, 2008; Bond et al., 2001, 2008; Dreher, Bond, & Becker, 2010; Swanson, Burson, Harper, Johnson, Litvak, McDowell, & Weinstein, 2011). Much of this research was conducted as part of a private-public-academic collaboration between Johnson & Johnson, state departments of mental health and vocational rehabilitation, and the Dartmouth Psychiatric Research Center, a large and growing national network of IPS programs (Drake, Becker, Goldman, & Martinez, 2006).

Among agencies that have invested in IPS, most program leaders worry about their IPS program's survival (Bond, Becker, Drake, McHugo, Peterson, & Greene, 2013). IPS programs can be sustained with good fidelity over the course of many years (Bond, Drake, McHugo, Peterson, Jones, & Williams, 2012),

but no studies have identified practical, malleable factors leading to the long-term continuation of IPS services. Researchers recently launched the first in-depth investigation of factors influencing IPS sustainability, a two-year prospective study of 130 sites participating in the IPS learning collaborative and their state leadership (Bond et al., 2013). The relationships between sustainability and factors such as program organization or financing are under investigation. The central goal is to inform program planning in a variety of routine settings around the U.S. to ensure IPS program longevity.

2.9. *Delivery sites*

Because IPS is client-centered, new opportunities to involve people living with mental illness in the employment process continue to emerge. IPS was originally designed for community mental health centers, but peer-run agencies, housing programs, and general health centers are embedding IPS programs into their menu of services. Programs in New Jersey (Swarbrick, 2009) and elsewhere (Whitley, Strickler, & Drake, 2012) are devising these new arrangements. While most peer centers offer some type of employment assistance, most do not provide evidence-based IPS (Whitley et al., 2012). Early evidence shows mixed results in other settings, including hospitals, assertive community treatment teams, and comprehensive rehabilitation agencies (Campbell, Bond, Gervy, Pascaris, Tice, & Revell, 2007; Kirsh & Cockburn, 2007; Latimer, Lecomte, Becker, Drake, Duclos, Piat, Lahaie, St. Pierre, et al., 2006). Many of these new delivery settings are isolated from community mental health centers physically or philosophically, posing challenges to integration with mental health services. Several pertinent research questions remain: How will services provided by peers be reimbursed? What are the best techniques for integrating peer services with more traditional mental health service systems?

2.10. *International dissemination*

The global dissemination of IPS is well underway. Within the IPS research literature, we found evidence of implementation in Canada (Latimer, Lecomte, Becker, Drake, Duclos, Piat, Lahaie, St-Pierre, et al., 2006), the U.K. (Rinaldi, Miller, & Perkins, 2010; Schneider & Akhtar, 2012), the Netherlands (Michon, Busschbach, van Vugt, Stant, Kroon, Wiersma, & van Weeghel, 2011; Michon, van Vugt, & van Busschbach, 2011;

van Erp et al., 2007b), Belgium (Knaeps, DeSmet, & Van Audenhove, 2011, 2012), Germany (Burns et al., 2007), Bulgaria (Burns et al., 2007), Italy (Burns et al., 2007), Spain (Sala & Dalmau, 2013), Switzerland (Hoffmann, Jäckel, Glauser, & Kupper, 2011), Sweden (Bejerholm, Larsson, & Hofgren, 2011; Nygren, Markstrom, Svensson, Hansson, & Sandlund, 2011), Australia (Waghorn, Collister, Killackey, & Sherring, 2007), New Zealand (Browne, Wright, Waghorn, & Stephenson, 2009), China (Wong et al., 2008a), and Japan (Oshima, 2011). International IPS employment outcomes have been slightly lower than employment outcomes among U.S. programs (Bond, Drake, & Becker, 2012). Laws and regulations outside of the U.S. often discourage employers from hiring people with mental illness (Burns et al., 2007; van Erp et al., 2007a) and provide strong work disincentives (Bejerholm et al., 2011; Burns et al., 2007; Hasson, Andersson, & Bejerholm, 2011; Kamp, 2012; Latimer et al., 2006; van Erp et al., 2007a). Researchers in England (Boyce, Secker, Floyd, Schneider, & Slade, 2008; Rinaldi, Miller, & Perkins, 2010) and Australia (Waghorn et al., 2007; Waghorn et al., 2012) are developing strategies to address these barriers.

The Johnson & Johnson-Dartmouth Community Mental Health Program supports the development and expansion of an international learning community to promote the implementation and sustainability of effective employment services using a long-term quality improvement approach (Becker et al., 2011). Fourteen states and regions in the U.S. joined the learning community since its inception in 2001. In 2011, the Emilia Romagna region in Italy joined, in 2012, the Netherlands joined, and in 2013, the Catalonia region in Spain joined. Over 4,000 people have achieved employment through programs affiliated with the learning collaborative annually. All sites submit quarterly employment and education outcomes. By examining quarterly data, the international IPS learning community is addressing several research questions. For example, will routine agencies outside of the U.S. achieve similar outcomes as sites in the U.S.? And will the methods of implementation need adjustment in countries with different cultures, labor markets, and health systems?

2.11. *Technology*

Efforts to enhance IPS with technology are rapidly expanding. On tablets, people learn about IPS services, engage in shared-decision making, and self-refer

to IPS programs (Haslett, 2012). Online, peer support network communities normalize challenges faced throughout the employment process by providing multimedia featuring peers' perspectives on work (A Day in Recovery, 2013; Deegan, 2013); trainers prepare the next generation of IPS employment specialists and supervisors (Becker & Swanson, 2012); and data management systems facilitate the fidelity review process (Fidelity Reports, 2013). In the near future, mobile phones might provide follow-up support for IPS clients as they have for other interventions (Ben-Zeev, Davis, Kaiser, Krzsos, & Drake, 2012).

Each of these platforms appears to have complementary advantages—point-and-touch tablet interfacing requires minimal computer literacy, websites allow for significant background data collection, and mobile applications easily integrate into daily life. Building on the advantages of each, researchers are designing a multi-function platform that integrates many supportive technologies into one system (Lord, 2012–2017). An integrated system might include training for employment specialists, activity data for supervisors, fidelity and outcome reports for agency management, and de-identified cross-agency data for researchers. Researchers will need to demonstrate the effectiveness, cost-effectiveness, and feasibility of implementing technology-based IPS enhancements in routine settings with limited resources.

2.12. Future research

The bulk of current research is devoted to making adjustments to the IPS intervention model (in new settings, new populations, new countries, and with novel technologies). We suggest that these efforts prioritize client-driven goals, such as education. However, the potential impact of efforts to improve the IPS model pales in comparison to the potential influence of lessening the existing need-access disparity. Thus, we recommend rehabilitation researchers target the long-term course of employment, financing structures, cost offsets to policymakers, and models of supported education.

2.13. Long-term course

Long-term follow-up studies of IPS participants make a critical contribution to our understanding of rehabilitation. Typically clients try multiple jobs before settling into a lasting position. Without substantial

follow-up periods, we learn little about how IPS clients develop careers and how work influences adjustment over time. Only two such long-term studies have been reported in the literature. Both were small studies conducted in largely Caucasian rural New Hampshire (Becker, Whitley, Bailey, & Drake, 2007; Salyers, Becker, Drake, Torrey, & Wyzik, 2004). To date, no long-term studies have been conducted in urban settings with more ethnically and racially diverse populations. Thus the long-term course of employment for IPS participants is uncertain.

The dearth of long-term outcome data is a significant weakness in the literature. One proposed study would begin to close this gap by comparing short-term and long-term employed IPS clients. This study would be a first step in addressing the many key questions related to long-term IPS outcomes, including: What proportion of IPS participants become steady employees over time? What kinds of professional and non-professional supports do participants need to sustain employment? Does steady employment over a significant period of time lead to improvements in self-esteem, self-confidence, and other psychological areas? Does it lead to other functional gains, such as a more diverse social network and community integration? And how does it affect service use, health costs, and disability benefits? One unpublished study by Hoffman et al. in Switzerland extends the length of the randomized controlled trial of IPS to five years. It should shed light on the longer-term effects of IPS.

2.14. Financing

IPS programs in the U.S. lack a clear funding mechanism, the most significant barrier to IPS service delivery (Karakus, Frey, Goldman, Fields, & Drake, 2011). Programs must combine funds from Medicaid, Vocational Rehabilitation, state mental health general funds, and other federal, state, and local programs to support IPS. Consequently, the great majority of rehabilitation programs continue to provide ineffective interventions rather than IPS because the funding is more straightforward and secure.

Federal and state agencies continue to protect their funding silos rather than integrate funds and change services to improve outcomes. Research on the most straightforward solutions, such as funding IPS completely through Medicaid options or increasing the budgets of the federal-state Vocational Rehabilitation programs to fund local IPS programs, suggest workable, cost-effective solutions. Requiring states to meet

Table 1
IPS evidence summary and recommendations for future research

Topic	Evidence summary	Key recommendations
<i>Past research</i>		
1. Vocational outcomes	IPS is substantially more effective than other vocational programs for people with serious mental illness.	Further evidence that the IPS model is effective among people with serious mental illness is no longer a research priority. Future IPS studies should use standardized measures in four vocational domains: job acquisition, job duration, job intensity, and total hours or wages.
2. Non-vocational outcomes	IPS does not negatively impact symptoms or other clinical outcomes. Rather, clients who obtain employment often show economic, psychosocial, and clinical improvements.	IPS studies should examine non-vocational outcomes prospectively over time to determine if work status change is related to non-vocational improvements.
3. Cost-effectiveness	IPS programs are more cost-effective than many alternative vocational rehabilitation programs.	Cost-effectiveness needs to be tested in a variety of different settings and from various stakeholder perspectives.
<i>Current research</i>		
1. IPS modifications	Increasing service intensity with cognitive remediation or social skills training results in little or no improvement in vocational outcomes. Some research has suggested promising outcomes for cognitive remediation as an augmentation strategy for vocational rehabilitation.	Modifications should be tested against the current gold standard of vocational services, IPS without modifications
2. Cultural issues	IPS is more effective than alternative vocational approaches regardless of gender and for every ethno-racial group in which research has been conducted.	Test whether IPS is equally effective among other minority groups and recent immigrants and develop strategies to accommodate clients lacking English language fluency.
3. Client populations	IPS is effective among people with a variety of mental disorders (regardless of comorbid substance use disorder), including schizophrenia spectrum, bipolar disorder, major depressive disorder, and post-traumatic stress disorder. IPS is also effective among people with spinal cord injuries.	Investigate IPS generalizability among people with primary substance use disorders, chronic back pain, and other disabling mental and physical illnesses.
4. Implementation and sustainability	High fidelity IPS implementation is feasible within one year from start up. Fidelity to the IPS model improves outcomes.	Systematically evaluate promising implementation strategies that might secure IPS programs' sustainability
5. Delivery sites	IPS is effective in community mental health centers and community rehabilitation provider agencies. IPS is being implemented in peer-run agencies, housing programs, and general health centers.	Investigate reimbursement schemes for new delivery sites. Consider how these sites will integrate their IPS services with traditional mental health systems.
6. International dissemination	IPS has been implemented in Canada, the UK, the Netherlands, Belgium, Germany, Italy, Spain, Switzerland, Sweden, Australia, New Zealand, China, and Japan.	Assess whether outcomes are similar across countries. Report how each country addresses unique disability laws and regulations, cultures, and health systems.
7. Technology	Using technology, clients can more efficiently self-refer to IPS programs, practitioners can engage in coursework training, and administrators can submit standardized reports.	Demonstrate the effectiveness, cost-effectiveness, and feasibility of implementing technology-based IPS enhancements in routine settings.
<i>Future research</i>		
1. Long-term course	It takes IPS clients months on average to achieve employment, yet most trials only follow participants for two years.	Longitudinal research is critical to understanding job tenure and the impact of long-term work on other aspects of clients' lives, such as self-esteem, community integration, or service use.
2. Financing	Financing for IPS is complicated and vulnerable to federal and state policy changes.	Experiment with federal policies that might incentivize simpler, more constant funding mechanisms, especially via Medicaid.
3. Cost offsets	Early studies show that IPS decreases mental health costs (especially over the long term) and disability enrollment rates (especially for young adults)	Establish estimates of societal savings to insurance programs, disability benefits programs, and managed care organizations of returning to work among IPS clients.
4. Supported education	Many IPS clients have both education and employment goals. More than half of IPS programs provide some form of supported education, despite the fact that there is no evidence base for any model of supported education.	Test various educational supports, intervention settings, funding mechanisms, and outcomes. Determine the extent to which educational attainment translates into improved vocational outcomes.

federally-defined work goals might incentivize them to test simpler funding mechanisms for supported employment (Burkhauser & Daly, 2011).

2.15. Cost offsets

Better financing of vocational services requires better understanding of potential cost offsets. IPS generates two main cost offsets: reduced costs for mental health treatment and reduced participation in disability systems. Several studies demonstrate that supported employment services decrease mental health costs (Bond et al., 1995; Burns et al., 2008; Clark, Xie et al., 1998; Frey et al., 2011; Henry et al., 2004; Knapp et al., 2013; Latimer, 2001; Perkins et al., 2005; Schneider et al., 2009). While the preliminary evidence is encouraging for cost offsets exceeding the direct costs of IPS services, some economists remain cautious about overstating savings (Salkever, 2012).

International longitudinal studies suggest that young adults experiencing first episodes of psychosis who gain employment delay or avoid entry into the disability system altogether (Alvarez-Jimenez et al., 2012; Cougnard, Goumilloux, Monello, & Verdoux, 2007; Drake, Xie, Bond, McHugo, & Caton, 2013; Krupa et al., 2012; Norman et al., 2007). In the U.S., including IPS services in early intervention programs for young adults may result in substantial savings to the Social Security trust fund by preventing disability enrollment (Drake, Skinner, Bond, & Goldman, 2009). IPS services are well received and effective with young adults (Bond, Drake, & Campbell, 2012; Killackey, Jackson, & McGorry, 2008; Killackey et al., 2012; Nuechterlein, 2008a; Rinaldi, Killackey et al., 2010). To encourage reform, policy makers need data describing the preventive effect of IPS services within early intervention programs on disability enrollment. The first large study among young adults, the Recovery After Initial Schizophrenia Episode (RAISE) aims to answer fundamental questions about whether providing evidence-based services early in the course of schizophrenia will alter functional outcomes (National Institute of Mental Health, 2013).

2.16. Supported education

Advancing work careers sometimes necessitates further education or training, and younger clients often choose education as a next goal (Nuechterlein et al., 2008b). Researchers developed supported education in the early 1990s to increase access to higher edu-

cation for people with mental illness (Unger, 1998). Supported education evolved in a similar way to supported employment – from stepwise, segregated experiences to integrated, regular classes for credit – but has not yet crystallized into one model (Mueser & Cook, 2012). Heterogeneous selection criteria, intervention models, protocols, and outcome measures, lack of randomized controlled trials, and small samples limit knowledge regarding the effectiveness of supported education (Chandler, 2008; Nuechterlein, 2010; Rogers, Farkas, Anthony, & Kash-MacDonald, 2009).

Future research must test specific models with clearly defined outcomes in a rigorous fashion. Despite the absence of empirical knowledge, one survey found that more than half of IPS programs provide some form of supported education service (Manthey, Rapp, Carlson, Holter, & Davis, 2012). Rehabilitation researchers need to determine the relationship between supported education and supported employment (many clients have both goals); the relationships between health care, vocational rehabilitation, and education; and the specific procedures for finding and supporting educational placements.

2.17. Implications for key stakeholders

Previous research indicates that clinicians should remain hopeful about the possibility of employment for people with mental disorders. IPS is effective regardless of clients' mental health diagnosis, symptom severity, substance use behavior, or ethnoracial background, and regardless of programs' local unemployment rate and urbanicity. Importantly, no evidence has supported the hypothesis that work is too stressful for people living with serious mental illness. Relatedly, clinicians should demand implementation of IPS services at their agencies, rather than sheltered workshops or day treatment centers, which are no longer considered evidence-based models of vocational rehabilitation. Researchers have developed implementation strategies, validated fidelity assessments, and documented long-term sustainability to help in this pursuit. In addition to practitioners, policy makers will play a large role in determining the extent of IPS implementation. Political leaders need to devise simple, streamlined funding mechanisms that will incentivize agencies for improving positive, client-centered outcomes, like employment. Pursuing Medicaid options to pay for IPS will be a critical task in overcoming the existing science-to-service gap.

3. Conclusion

After 20 years of clinical development and empirical testing, research conclusively proves that IPS supported employment increases labor force participation among people with psychiatric disabilities through individualized, cost-effective, and evidence-based services. Participants work more and use mental health services less; many pursue long-term employment; and most experience better quality of life. New findings regarding IPS modifications, cultural and diagnostic generalizability, delivery settings, technological enhancements, international dissemination, and program survival strategies are imminent.

We challenge vocational rehabilitation researchers to more fully describe the long-term course of workforce participation, to examine rational funding schemes, to test disability enrollment prevention strategies, and to experiment with various supported education models. Although ambitious, findings from these and other research pursuits will prevent lifetimes of unrealized ambition.

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