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Beyond Evidence-Based Practice: Nine Ideal Features of a Mental Health Intervention

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ABSTRACT

We identify 9 ideal attributes of a mental health practice (well defined, reflecting client goals, consistent with societal goals, effective, displaying minimum side effects, yielding positive long-term outcomes, reasonable costs, easy to implement, and adaptable to diverse communities and client subgroups). We summarize the evidence on the extent to which the Individual Placement and Support model of supported employment meets these criteria. The empirical evidence for the effectiveness of IPS is stronger than for any other psychosocial or pharmacological intervention for persons with SMI.

Keywords: supported employment, Individual Placement and Support, evidence-based practice

Overview

In this paper we examine a set of ideal characteristics of a mental health practice, using the case example of one important practice currently widely disseminated within the public mental health system. We present 9 ideal characteristics, giving a rationale for each. We then systematically review the literature on the Individual Placement and Support model of supported employment, which has been identified as an evidence-based practice for individuals with severe mental illness (SMI) (Lehman et al., 2004; New Freedom Commission on Mental Health, 2003). Clients with SMI have a psychiatric *diagnosis*, typically schizophrenia-spectrum disorder or affective disorder, are judged to have *disabilities* (i.e., role limitations in occupational, cognitive, interpersonal, and/or activities of daily living domains), and these conditions are of long-term *duration* (Schinnar, Rothbard, Kanter, & Jung, 1990). The purpose of IPS is to help clients attain competitive employment, defined as regular jobs in the community open to anyone, paying at least minimum wage.

What are the ideal characteristics of an evidence-based practice?

Many frameworks have been proposed for identifying evidence-based practices (EBPs) (Institute of Medicine, 2003). Some systems for designating practices as "empirically supported" have used criteria related to the number of methodologically rigorous studies supporting an intervention's effectiveness (Chambless & Ollendick, 2001). Meta-analysis is often used (Bero & Drummond, 1995; Lipsey & Wilson, 1993). While both the evidence for the effectiveness of an intervention and methods used to evaluate this evidence are fundamental to identifying an EBP, such frameworks fall short of fully encompassing the ideal criteria for a mental health intervention. To take one example, social skills training has often been designated as an EBP by virtue of the weight of evidence from multiple randomized controlled trials (RCTs)

(Wykes, 2003). What is overlooked by this designation is the fact that the most common outcomes measured in social skills training studies are intermediate outcomes – i.e., "micro-level" behaviors commonly measured in the therapy session (e.g., response to role plays) (Bellack, 2004) – not measures of intrinsically valued community functioning.

In this paper we draw on formulations of evidence-based practice that employ a broader set of practical and policy relevant criteria. Leff (2005) suggested 11 guidelines, including the *availability of fidelity scales, inclusion of outcomes that have clinical and policy significance, measurement of long-term outcomes, and collection of information on dissemination efforts.* Mueser and Drake (2005) suggested the following key elements in the process of defining an EBP: *transparency of the review process for deciding, standardization of the intervention, controlled research, replication, and meaningful outcomes.* Bond and Campbell (2008) proposed the following criteria for an EBP: *clearly defined, designates the target group for whom it is intended, shown effective in a set of rigorous research studies, independently replicated by at least two research groups, addresses important needs in the target population, and capable of implementation in a wide range of settings.*

Drawing from these three formulations, we propose 9 ideal features of a mental health intervention: It should (1) be well defined, (2) reflect client goals, (3) be consistent with societal goals, (4) demonstrate efficacy and effectiveness, (5) have minimum side effects, (6) have positive long-term outcomes, (7) have reasonable costs, (8) be relatively easy to implement, and (9) be adaptable to diverse communities and client subgroups.

Rationale for the 9 Criteria

1. <u>An intervention should be well defined</u>.

Examples abound of program models that are underspecified or based primarily on broad value statements (Brekke, 1988). In such circumstances, it is impossible to make sense of research findings or to build a cumulative science. A requirement for an EBP is that it is operationally defined. The operational definition must articulate the staffing, structure, and operation of the model, and specify the interventions used. To demonstrate that a model meets this criterion, developers must produce a practice manual specifying the model components.

A practice manual is not sufficient, however. The best way to ensure that a particular programs follow the standards of a practice is to develop and validate a fidelity scale, which measures adherence to a program model (Bond, Evans, Salyers, Williams, & Kim, 2000).

2. An intervention should reflect client goals.

A program model should align with the reasons clients seek professional assistance, and the goals of the program should make sense to the clients receiving the services. The rationale for this criterion encompasses the pervasive problem of disengagement with mental health services; over half of the population of individuals with SMI receives no services whatsoever. The reasons are complex and diverse, including lack of access to and unacceptability of the services (Drake & Essock, 2009). For many clients, for example, day treatment services and group homes are contrary to their preferences and aspirations (Corrigan, Mueser, Bond, Drake, & Solomon, 2008); it is therefore difficult to view services delivered in these venues as EBPs. Mental health practices should reflect client goals and preferences, and is delivered within a shared decision making framework (Edwards & Elyn, 2009).

3. An intervention should be consistent with societal goals.

This criterion concerns the importance of congruence between societal goals and the goals of an EBP. When the impact of a practice has societal consequences, its value is greatly

enhanced. For example, a program that provides housing to homeless individuals not only can improve their quality of life, but also improves the community at large.

4. An intervention should be efficacious and effective.

The criteria for establishing efficacy and effectiveness have been widely discussed in the literature; they include the use of rigorous research designs and credible control groups, replication by different research groups, studies conducted in real world settings, low dropout rates, large effect sizes, and consistency of findings across studies.

5. An intervention should have minimum side effects.

Many medical interventions (such as medications) have the desired effects in terms of alleviating the presenting symptoms but are accompanied by undesirable side effects. Psychosocial programs can also have unintended negative effects. For example, day programs segregate people and convey messages that they do not belong in integrated settings and that they need professionals to help them function. For a psychosocial program to be considered an EBP, its side effects should not offset or exceed its benefits.

6. An intervention should have positive long-term outcomes.

A common finding for psychosocial interventions is that their impact attenuates over time, sometimes not enduring past the period in which the intervention is provided. One partial solution is to offer an intervention on a time-unlimited basis (Test, 1992). Within the framework of recovery from mental illness, the desired outcome is to reduce dependence on the mental health system over time (Anthony, Cohen, Farkas, & Gagne, 2002). In any case, services are clearly most valuable if they lead to stable and enduring changes.

7. An intervention should have reasonable costs.

From a practical standpoint, demonstrated positive outcomes are not sufficient grounds for adoption of an EBP. Provider agencies must consider the risks associated with adopting a new practice (Panzano & Roth, 2006). Financial considerations are a critical consideration in the adoption of any practice in the public mental health system (Hyde, Falls, Morris, & Schoenwald, 2003). From the standpoint of state mental health policy, the issue is often formulated in terms of cost effectiveness or cost offset. It has been widely argued, for example, that assertive community treatment, while expensive, results in long-term savings by reducing psychiatric hospital use (Latimer, 1999).

8. An intervention should be relatively easy to implement.

For an intervention to be maximally useful, it should be relatively easy to implement. By contrast, if the model is too complex, or requires advanced clinical skills, then its wide-scale adoption is more difficult, especially in service systems in which most practitioners lack advanced clinical training. Ease of implementation has become even more important with the rapid turnover of the mental health workforce (Woltmann et al., 2008).

9. An intervention should be adaptable to diverse communities and client subgroups.

Practices that are transportable to a wide range of communities and acceptable to a wide range of client subgroups are more useful than those that are effective only within a narrow context. Many EBPs have been mostly studied in urban areas, predominantly with Caucasian clients, and often in one country. For example, assertive community treatment was originally validated within a midsized city, and virtually all of the research on its effectiveness is based in more populous areas. Dissemination to rural areas has met with mixed success (Bond, Drake, Mueser, & Latimer, 2001). Some European researchers have questioned whether EBPs developed in the U.S. are applicable in their health care systems (Burns, 2000). With regard to

generalizability to different client groups, research on different ethno-racial groups is often nonexistent. EBPs are often implemented in diverse ethnic groups without modification and without consideration of culture.

Evaluating Individual Placement and Support on the 9 Criteria

1. IPS is well defined.

Developed in the 1980s by Becker and Drake (2003), the Individual Placement and Support (IPS) model of supported employment is a systematic approach to helping individuals with SMI achieve competitive employment. It is based on 7 evidence-based principles (Bond, 2004):

- Available to anyone who wants to work
- Competitive employment is the goal
- Rapid job search
- Consumer preferences honored
- Individualized and long-term supports provided
- Employment specialists work closely with mental health treatment team
- Personalized benefits counseling is offered

The structure, organization, and day-to-day operation of an IPS team are specified in a variety of practice manuals (Becker & Drake, 2003; Swanson, Becker, Drake, & Merrens, 2008) and a comprehensive toolkit (Becker & Bond, 2002). These manuals explain the rationale for each of the components of the program model, provide case examples, and offer resource materials in the form of checklists, assessment tools, and helpful tips. The empirical foundations for IPS principles have been examined in two review articles (Bond, 1998, 2004). Within the psychiatric rehabilitation field there is growing awareness of the IPS model, and a 2002 survey

found a strong consensus among experts and practitioners regarding the critical ingredients (Evans & Bond, 2008).

The 15-item IPS Fidelity Scale (Bond, Becker, Drake, & Vogler, 1997) has been well validated and is used throughout the U.S. and internationally (Bond, Drake, & Becker, in preparation). A recent revised version improves its precision and utility (Becker, Swanson, Bond, & Merrens, 2008; Becker, Swanson, Bond, Carlson et al., 2008).

2. IPS reflects client goals.

Even though only 5% - 15% of clients with SMI in the public mental health system are competitively employed (Rosenheck et al., 2006; Salkever et al., 2007; West et al., 2005), most express a desire to work (McQuilken et al., 2003; Mueser, Salyers, & Mueser, 2001; Rogers, Walsh, Masotta, & Danley, 1991). For many clients, employment is their primary goal because work provides structure, activity, meaning, a normal adult role, social contact, community integration, self-esteem, increased income, and better quality of life (Bond, Resnick et al., 2001; Burns et al., 2009; Fabian, 1989, 1992; Mueser et al., 1997; Van Dongen, 1996, 1998). Personal accounts offered by individuals with mental illness underscore the central role of work in the recovery process (Bailey, 1998; Clevenger, 2008; Rogers, 1995; Steele & Berman, 2001). Moreover, more than two-thirds of individuals with SMI live in poverty (Cook, 2006; Draine, Salzer, Culhane, & Hadley, 2002). Employment income can help alleviate this source of misery.

Clients with SMI are often demoralized, fearful about losing benefits (MacDonald-Wilson, Rogers, Ellison, & Lyass, 2003), and hesitant to return to work because of fear of failure (Westermeyer & Harrow, 1987). Yet most yearn to lead normal lives, to be part of the general society, and to be productive. Maslow (1970) suggested that *being productive* is a basic human need and that it ranks high in the hierarchy of needs. As Beard (1982) so vividly pointed out, a

job is a place where you are *needed*; if no one depends on you showing up, then why even bother getting up in the morning?

Thus IPS reflects a central aspiration in the lives of most clients with SMI. The evidence is also overwhelming that without professional assistance in the form of services directed specifically at employment, most clients remain unemployed. In the absence of employment services, other mental health services, such as medications (Resnick et al., 2008), psychotherapy (Bond, 1992), and day treatment (Becker, Bond et al., 2001) have no measurable impact on employment outcomes.

3. IPS is consistent with societal goals.

Sometimes the goals of mental health clients are perceived as being at odds with societal goals. Societal priorities include protection from the social nuisance of homelessness and deviant behavior, leading to custodial solutions (e.g., institutionalization) that conflict with personal freedom and choice. Mirroring societal values, family members often give primacy to their loved one's safety and stability, even if this means, for example, the use of medications with severe side effects.

Working is a normal adult role for citizens in industrialized nations. Employment is not the only valued adult role, but for most adults in American society, it is the expectation. In this sense, programs to increase employment among people with SMI are congruent with societal expectations.

The broad goal of increasing the employment of individuals with SMI is consonant with the goals of family members (Noble, Honberg, Hall, & Flynn, 1997), employers, advocacy groups (Mental Health America, 2007), as well as many different federal agencies responsible for disability, rehabilitation, mental health, public health insurance, and labor. Endorsements of

IPS by federal task forces (New Freedom Commission on Mental Health, 2003; Sainsbury Centre, 2009) attest to the broad appeal among different stakeholder groups.

Employers have a stake in the employment of individuals with SMI. While the stigma of mental illness is a major barrier in the hiring and employment process (Corrigan, Larson, Watson, Boyle, & Barr, 2006; Diksa & Rogers, 1996), employers also recognize the huge economic costs of lost productivity in the workplace attributable to mental illness. The annual cost of lost productivity to the U.S. economy has been estimated to be $36.6 billion for bipolar disorder and $50.7 billion for major depression (Kessler et al., 2006).

The Social Security Administration, which administers two disability programs (Social Security Disability Insurance [SSDI] and Supplemental Security Income [SSI], has an enduring interest in strategies to promote employment among people with disabilities, and recently has focused on individuals with SMI (Aron, Burt, & Wittenburg, 2005). The reasons are obvious: Individuals with a psychiatric disability are the largest and most rapidly growing subgroup of Social Security disability beneficiaries (Kouzis & Eaton, 2000). In 1999, 34% of working aged adults receiving SSI and 27% of SSDI recipients had a primary psychiatric impairment (Mechanic, Bilder, & McAlpine, 2002). These percentages keep growing, in part because beneficiaries with psychiatric impairments are generally younger than other beneficiaries when they become ill and therefore remain on Social Security rolls much longer (Ferron, 1995; Kennedy & Manderscheid, 1992; Rupp & Scott, 1998). Federal policy changes are needed to reverse the “disability trap,” which often leads to lifelong poverty (Drake, Skinner, Bond, & Goldman, 2009; GAO, 2007). Fortunately, beneficiaries with SMI can work if they have an interest in employment and if they receive IPS services. In fact, the gains in rates of competitive employment for SSI and SSDI beneficiaries enrolled in IPS compared to traditional vocational

services are similar to those for clients not receiving disability payments (Bond, Xie, & Drake, 2007).

4. IPS has strong and consistent evidence of efficacy and effectiveness.

The evidence for the effectiveness of IPS includes 3 types of studies: RCTs comparing IPS to alternative vocational models, quasi-experimental studies involving conversion of day treatment services to IPS, and correlational studies of the relationship between IPS fidelity and employment outcomes.

RCTs. Numerous reviews of RCTs of IPS and related supported employment approaches for clients with SMI have concluded that supported employment has far better competitive employment outcomes than alternative vocational approaches (Bond, 2004; Bond, Drake, & Becker, 2008; Burns et al., 2007; Cook et al., 2005; Crowther, Marshall, Bond, & Huxley, 2001; Lehman et al., 2004; Twamley, Jeste, & Lehman, 2003). One review, limited to high-fidelity IPS programs, found that IPS had significantly better competitive employment rates than alternative vocational services in all 11 studies, as shown in Figure 1 (Bond, Drake et al., 2008). Across the 11 studies, 61% of IPS participants obtained a competitive job during follow-up, compared to 23% of controls. Other competitive employment outcomes (rate of half-time employment, time to first job, and job duration) also favored IPS.

Day treatment conversion studies. Four studies evaluated the effectiveness of converting day treatment services to IPS (Bailey, Ricketts, Becker, Xie, & Drake, 1998; Becker, Bond et al., 2001; Drake et al., 1994; Drake, Becker, Biesanz, Wyzik, & Torrey, 1996) or a similar supported employment program (Gold & Marrone, 1998). These studies examined pre-post employment rates for 6 programs converting from day treatment to supported employment and for 3 comparison sites. During the baseline period, while clients were still attending day treatment,

the employment rate was 13% in the conversion sites and 12% in the comparison sites. During follow-up, after the converting sites had switched to supported employment, 38% of the client in the supported employment sites worked competitively, compared to 15% in comparison sites. Thus the employment rate for all former day treatment clients, including those not interested in working, nearly tripled after conversion.

Correlational studies of the fidelity-outcome relationship. Evidence for the effectiveness of IPS comes from a third line of research – studies examining the correlation between IPS fidelity and competitive employment outcomes (Bond et al., in preparation). Nine studies tested this hypothesis (Becker, Smith, Tanzman, Drake, & Tremblay, 2001; Becker, Xie, McHugo, Halliday, & Martinez, 2006; Catty et al., 2008; Henry & Hashemi, 2009; Hepburn & Burns, 2007; McGrew & Griss, 2005; McGrew, 2007, 2008; Resnick, 2009), 5 found statistically significant correlations between IPS fidelity and competitive employment outcomes, and 2 others had results approaching statistical significance.

Summary. The converging evidence of effectiveness of IPS from three research approaches suggests that the findings are robust. The multiple replications of significantly better outcomes for IPS, by several different research groups, conducting studies in different settings and using diverse control groups, strengthen the conclusion that IPS is an effective vocational model.

5. IPS has minimal side effects.

While acknowledging that employment is a valued client outcome, many professionals, family members, clients, and the general public also fear the consequences of working. Put simply, many believe that work is too stressful. Further, many assume that some clients are too fragile, believing that working will upset their equilibrium and that employment may lead to

relapse, contraindicating referral to a vocational program. Suggestive of these beliefs is the finding from a national survey of treatment practices among psychiatrists that *none* of the 107 unemployed patients with schizophrenia were currently receiving any form of vocational rehabilitation (West et al., 2005). Put simply, many psychiatrists are reluctant to encourage their patients to seek vocational help. Similarly, case managers harbor misgivings that clients with SMI are too ill to work (Braitman et al., 1995; Crane-Ross, Roth, & Lauber, 2000).

In fact, the demands of working *are* stressful, notably the fast-paced demands of entry-level work (Ehrenreich, 2001) typical of jobs that people with SMI obtain in resuming their work lives. However, clinical recommendations discouraging the pursuit of employment often neglect the consequences of *unemployment*. As Marrone and Golowka (1999) ask, "If work makes people with mental illness sick, what do unemployment, poverty, and social isolation cause?" In the general population, the effects of unemployment include increased substance abuse, physical problems, and psychiatric disorders, accompanied by reduced self-esteem, loss of social contacts, alienation, and apathy (Warr, 1987). Many of these outcomes, of course, are found in the psychiatric population. Some of the psychosocial sequelae attributed to severe mental illness are almost certainly related to "social exclusion" (Grove, Secker, & Seebohm, 2005), i.e., the cumulative effects of living outside the mainstream of society. Individuals with SMI who are not working spend significantly more time sleeping and engaged in passive leisure (e.g., watching television) – an increase of over 4 hours more per day compared to the general working population (Hayes & Halford, 1996; Krupa, McLean, Eastabrook, Bonham, & Baksh, 2003).

In the early years of deinstitutionalization, several influential studies suggested deleterious effects of "high expectation programs" for patients discharged after extended hospital stays (Goldberg, Schooler, Hogarty, & Roper, 1977). However, studies directly assessing the

potential adverse effects of IPS have consistently failed to detect negative outcomes. For example, two studies of the conversion from day treatment to IPS reviewed above also assessed changes in rates of suicide attempts, hospitalizations, incarcerations, homelessness, and program dropouts (Drake et al., 1994; Drake et al., 1996). A third study in this group examined psychiatric symptoms and hospitalization (Becker, Bond et al., 2001). The general hypothesis tested was that the replacement of supportive day treatment with the more demanding IPS program would be stressful and lead to negative outcomes. In fact, there were no changes supporting the hypothesis of negative outcomes from IPS; the only significant change was a *reduction* in the hospital rate in one study.

Another test of the hypothesis of the negative side effects of IPS comes from controlled trials (Bond, Drake et al., 2008). In some studies, the controls worked in more protected work settings (e.g., agency-run businesses and/or sheltered workshops), which theoretically would be less stressful. Moreover, the proportion of IPS participants who obtained competitive jobs far exceeded controls in every study. If working leads to deterioration, then we would hypothesize more negative outcomes for IPS participants. However, *none* of the IPS studies documented increased rates of psychiatric hospitalization for the IPS group, compared to controls. In one study, the IPS group had significantly fewer days hospitalized than controls (Burns et al., 2009). Another found significantly reduced hospitalization for both IPS and controls (Kukla, 2009). A third found fewer emergency room and psychiatric hospitalization visits for IPS clients compared to matched controls (Henry, Lucca, Banks, Simon, & Page, 2004).

The general conclusion from controlled studies is that IPS services per se have little direct impact, positive or negative, on nonvocational outcomes, including psychiatric symptoms, quality of life, social functioning, and self-esteem. A more refined hypothesis, however, has

received some support: Specifically, it has been hypothesized that the impact of IPS on nonvocational outcome is mediated by holding a competitive job. Secondary analyses of 4 IPS controlled trials examined the longitudinal impact of competitive employment on nonvocational outcomes within a longitudinal design (Bond, Resnick et al., 2001; Burns et al., 2009; Kukla, 2009; Mueser et al., 1997). These studies were observational designs, but each sought to control baseline characteristics to rule out baseline differences (i.e., selection biases). In general, these studies suggest that a meaningful period of competitive employment is associated with improvement over time in symptom control, quality of life, self-esteem, and social functioning as compared to not working. In other words, the "side effects" of competitive employment are positive rather than negative.

6. IPS results in long-term positive outcomes.

Most IPS evaluations have had follow-up periods of two years or less. However, two long-term interview studies of IPS participants have been completed. A 10-year study of 36 IPS participants found that 86% had paid jobs during follow-up, 47% were currently employed, and 33% were classified as "steady workers" (employed at least 50% of the follow-up period) (Salyers, Becker, Drake, Torrey, & Wyzik, 2004). In a second study of 38 IPS participants interviewed 8-12 years after enrollment, 100% had worked during follow-up (including 82% in competitive employment), 71% were currently employed, and 71% were steady workers (Becker, Whitley, Bailey, & Drake, 2007). Others studies also suggest durable long-term outcomes from supported employment (Bond, Dietzen, McGrew, & Miller, 1995; McHugo, Drake, & Becker, 1998; Test, Allness, & Knoedler, 1995).

The implications of these findings are especially significant in light of two general findings. First, as noted earlier, the competitive employment rate for individuals with SMI in the

public mental health system is 15% or less. Therefore, a steady employment rate of 50% or more in this population is far above the norm. Second, these findings are in stark contrast to the attenuation effects found for many psychosocial interventions. These findings suggest that IPS promotes a life trajectory that differs from that of patienthood and dependence.

7. IPS has reasonable costs.

A 2004 cost analysis of 7 high-fidelity IPS programs representing different regions of the U.S., including both rural and urban sites, estimated that annual direct costs per client served varied from $1,400 to nearly $7,000 (Latimer, Bush, Becker, Drake, & Bond, 2004). The most influential variable in determining cost was caseload size; assuming a typical caseload of 18 clients, the annual per-client direct costs of IPS was estimated to be $2,500. While a useful point of departure, this descriptive study does not answer the question of cost effectiveness: How expensive is IPS compared to alternatives? Compared to day treatment services, it would appear that IPS is less labor intensive and therefore less expensive, although the cost analyses have not been definitive (Clark, Bush, Becker, & Drake, 1996).

Focusing on the state-federal vocational rehabilitation system, Cimera (2008) estimated annual per capita expenditures for supported employment clients to range from $2,579 to $3,846 for clients with psychiatric disabilities, compared to $4,683 for all supported employment clients served by vocational rehabilitation. This analysis suggests that it is less expensive to fund supported employment services for clients with psychiatric disabilities than other disabilities.

The most promising line of research examines the hypothesis of a long-term reduction in mental health treatment costs when clients with SMI return to work, which has been demonstrated in one study (Bush, Drake, Xie, McHugo, & Haslett, 2009). An early short-term supported employment study also suggested a reduction in mental health treatment costs,

primarily day treatment costs (Bond, Miller, & Dietzen, 1992). Another source of major cost savings is reduced psychiatric hospitalizations, as reviewed in the last section. A study of "community-based vocational rehabilitation" found a precipitous drop in psychiatric hospitalization after enrollment in vocational services (Jaeger et al., 2006), adding further credence to this hypothesis.

Another current hypothesis is that assertive intervention for early psychosis will reduce disability and related costs (Hsiao, 2008). A centerpiece of this approach is IPS (Killackey, Jackson, & McGorry, 2008; Major et al., 2009; Nuechterlein et al., 2008; Rinaldi et al., 2004). One previous study suggested significant costs savings with early intervention with this group (Mihalopoulos, Harris, Henry, Harrigan, & McGorry, 2009).

Economic modeling was used to estimate the impact on the federal budget if IPS was made available on a wide scale (Drake et al., 2009). Several economic scenarios were considered; under some assumptions, the economic model suggested modest savings.

In summary, few cost analyses of IPS have been completed. Compared to many mental health services, IPS is relatively inexpensive. Nevertheless, it is clear that the economic benefits of reduced dependence on the mental health system may yield significant cost savings over time.

8. <u>IPS is relatively easy to implement</u>.

The National Implementing EBP Project examined strategies and barriers to implementing 5 EBPs, including IPS, in 55 community mental heath centers in 8 states (McHugo et al., 2007). Among 9 sites implementing IPS, 8 (89%) reached high fidelity within a 6-12 month period and maintained high fidelity at 2-year follow-up (Bond, McHugo, Becker, Rapp, & Whitley, 2008; Marshall, Rapp, Becker, & Bond, 2008). IPS had greater success in implementation than 3 of the 4 other EBPs and had similar success in implementation as the

remaining EBP. At 4-year follow-up 78% of the IPS programs were still in operation (Swain, Whitley, McHugo, & Drake, 2009).

Other large-scale IPS dissemination projects have also reported positive results. An ongoing national study has achieved and maintain high IPS fidelity in over 90% of the 23 sites (Frey et al., 2008). Another ongoing IPS dissemination effort has grown to over 100 IPS programs throughout the U.S. (Drake, Becker, Goldman, & Martinez, 2006). All participating sites are regularly assessed on IPS fidelity. In a 2006 study of 26 sites participating in this network, 65% had achieved high fidelity, 31% achieved fair fidelity, and only one site was rated as not providing IPS (Becker et al., 2006). Several major initiatives outside the U.S., including the U.K. (Boyce, Secker, Floyd, Schneider, & Slade, 2008), the Netherlands (van Erp et al., 2007), and Australia (Waghorn, Collister, Killackey, & Sherring, 2007), have reported encouraging progress in implementing the model. In summary, widespread implementation of IPS with high fidelity is attainable when there is committed state and local leadership, adequate resources, skilled supervisors, and knowledgeable and skilled staff.

9. <u>IPS is adaptable to diverse communities and client subgroups</u>.

Two national projects (Drake et al., 2006; Frey et al., 2008) and other published reports have amply documented the success in implementing IPS throughout the U.S. IPS has been successfully implemented with good employment outcomes in large cities, such as Washington, DC (Drake et al., 1999), Chicago (Bond, Salyers et al., 2007), Baltimore (Lehman et al., 2002), San Diego (Twamley, Narvaez, Becker, Bartels, & Jeste, 2008), and Los Angeles (Nuechterlein et al., 2008), many mid-sized cities, and in rural communities. IPS is as effective in rural areas as in cities. In one study, mean IPS fidelity was virtually identical in 12 urban sites as in 14 rural sites, with a statistical trend favoring rural sites in competitive employment rates ($r = -.36$, $p <$

.07) (Becker et al., 2006). An early statewide survey of vocational services (not specifically IPS) in 10 New Hampshire centers also found better competitive employment rates in rural sites than in urban sites (Drake et al., 1998).

IPS has been adopted internationally, with successful projects in Canada (Latimer et al., 2006), the UK (Boyce et al., 2008; Rinaldi et al., 2008), the Netherlands (van Erp et al., 2007), Australia (Waghorn et al., 2007), Japan (Nakahara & Nakatani, 2007), and Hong Kong (Wong et al., 2008). A recent 6-nation European study also suggests the transportability of IPS to different nations, with different labor laws, disability policies, and sociocultural conditions (Burns et al., 2007). This is not to say, however, that IPS has equal success in every country; where the unemployment rates are high, the labor and disability laws unfavorable, and/or the economic system less receptive to open employment, IPS is more difficult to implement. There are no reports of IPS in developing nations.

Different ethno-racial groups appear to benefit from IPS, including African Americans (Bond, Salyers et al., 2007; Drake et al., 1999) and Latinos (Mueser et al., 2004). IPS studies of both young adults (Killackey et al., 2008; Major et al., 2009; Nuechterlein et al., 2008; Rinaldi et al., 2004) and older adults (Twamley et al., 2008) reported favorable results. In Canada, major projects are under way targeting homeless persons with mental illness (Eric Latimer, personal communication, May, 2009).

The aforementioned studies suggest the viability of IPS in a wide range of populations and settings. One pivotal question is whether IPS is equally effective, regardless of client background characteristics. A recent meta-analysis of 4 RCTs examined the influence of 17 client characteristics on competitive employment outcomes, to determine if certain client subgroups might benefit less from IPS (Campbell, Bond, & Drake, 2009). This study generated

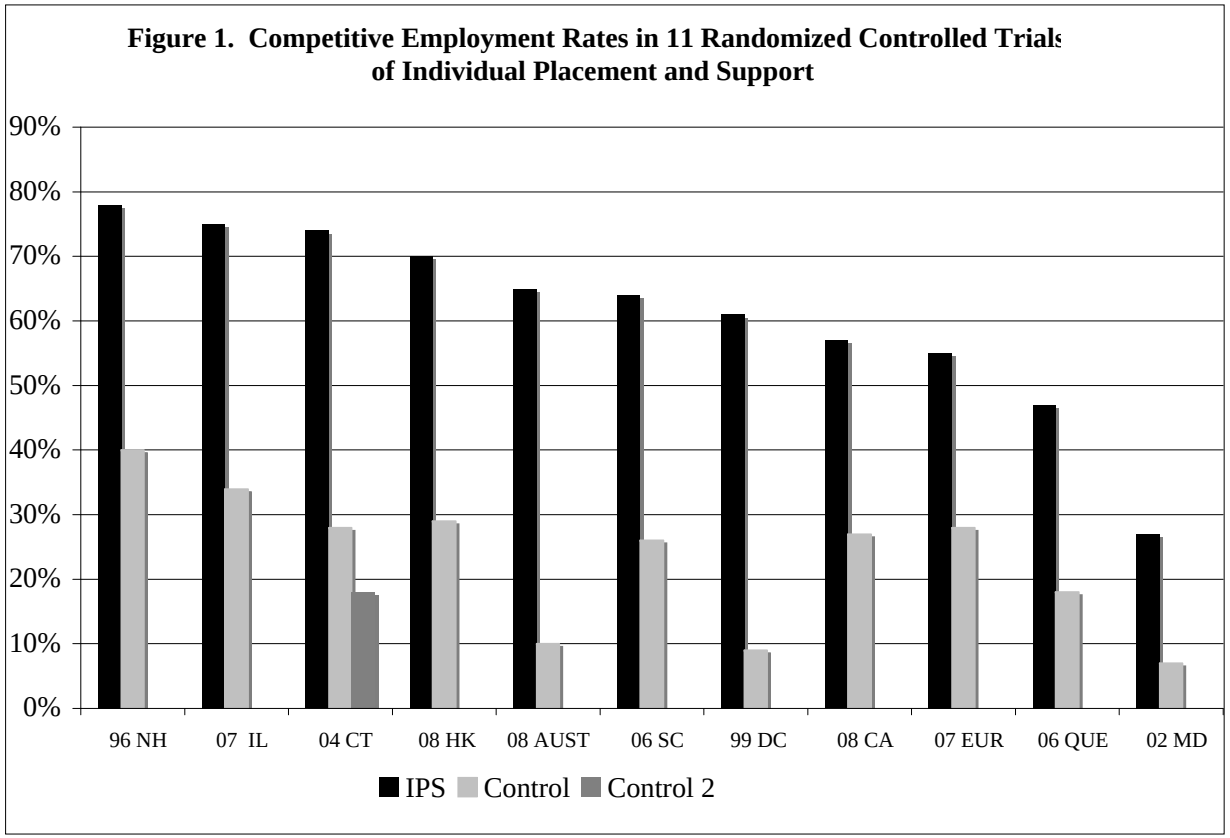
effect sizes between IPS and controls for client subgroups defined by these variables. The general conclusion was that IPS produces better competitive employment outcomes for persons with SMI than alternative vocational programs regardless of background demographic, clinical, and employment characteristics.

Conclusions

This paper has examined the degree to which IPS is an effective, ecologically useful, and economical intervention that meets the goals of multiple stakeholders. *The empirical evidence for the effectiveness of IPS is stronger than for any other psychosocial or pharmacological intervention for persons with SMI.* On most criteria, the evidence is compelling, but with regard to some criteria (ease of implementation, long-term outcomes, and cost savings), the evidence is promising, but more research is needed.

We have suggested that IPS is relatively easy to implement, based on results from several large-scale projects. However, the challenges of implementing IPS with high fidelity are far from trivial, and some states have struggled to achieve widespread adoption of the model. In one state, for example, even though a technical assistance center was funded to assist centers implement supported employment services, less than 10% of community mental health centers achieved high fidelity (McGrew, 2008).

Given the positive features of IPS presented in this paper, an obvious question would be whether IPS is available on a wide scale. Unfortunately, access to IPS is far more limited than would be warranted by the strong case made in this paper. Despite apparent cost savings for IPS, the current sources of funding in the U.S. (and elsewhere) are fragmented, insufficient, and unpredictable (Bond, Becker et al., 2001). As is true for EBPs in general, the evidence for its effectiveness and utility far exceeds its implementation in routine mental health practice.



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