

# A Controlled Trial of Supported Employment for People With Severe Mental Illness and Justice Involvement

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**Objective:** Employment is a key to participation in community life for people with severe mental illness, especially those who have been involved in the criminal justice system. Although the Individual Placement and Support (IPS) model of supported employment has been established as an evidence-based practice for helping people with severe mental illness attain competitive employment, little is known about whether IPS is effective for people with severe mental illness who have a history of arrest or incarceration. This study examined this question.

**Methods:** A randomized controlled trial examined competitive employment outcomes for 85 participants with severe mental illness and justice involvement who were assigned to IPS or to a comparison group that offered a job club approach with peer support.

**Results:** At one-year follow-up, a greater proportion of participants in the IPS group than in the comparison group had obtained competitive employment (31% versus 7%;  $p < .01$ ). The IPS and comparison groups did not differ significantly during follow-up in rates of hospitalization (51% versus 40%) or justice involvement—either arrests (24% versus 19%) or incarceration (2% for both groups).

**Conclusions:** Although IPS was shown to be an effective model for helping justice-involved clients with severe mental illness achieve employment, the outcomes were modest compared with those in prior IPS studies. The IPS model provided a useful framework for employment services for this population, but augmentations may be needed.

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Employment is a key to community reintegration for people with severe mental illness, especially those who have been involved in the criminal justice system. In the United States, criminal justice involvement among people with severe mental illness has been increasing (1), now exceeding half of those in the public mental health system (2,3). Arrests, court hearings, and other law enforcement actions undermine positive self-identity and decrease access to jobs, housing, and other community resources that promote recovery (4–6). Incarceration further exacerbates the negative impact of justice involvement. Justice involvement increases the likelihood of rearrest, stigma, reluctance of professionals to provide assistance, and difficulty accessing mental health and rehabilitation services (7,8).

Employment benefits individuals and society. Unemployment undermines community integration and contributes to a pattern of recidivism (9) and marginalization from mainstream society (10); leads to isolation, depression, substance abuse, increased institutionalization, and other negative outcomes (11); and diminishes self-confidence and perceived recovery (12).

The criminal justice literature offers little help identifying successful employment strategies. Employment approaches for former offenders have included counseling and case management services (13), training and apprenticeship programs in the construction industry (14), and job clubs (15).

Individual Placement and Support (IPS), the best-known model of supported employment for people with severe mental illness, incorporates eight principles: eligibility based on consumer choice, focus on competitive employment (that is, jobs in integrated work settings in the competitive job market at prevailing wages, with supervision provided by personnel employed by the business), integration of mental health and employment services, attention to client preferences, work incentives planning, rapid job search, systematic job development, and individualized job supports (16). The effectiveness of IPS has been well established in 20 randomized controlled trials (17). Overall, about two-thirds of IPS participants obtained competitive employment—twice the rate of those enrolled in other vocational programs (18). Most studies have found minimal impact of IPS on outcomes

outside the employment domain (19), although two studies have found that IPS reduced psychiatric hospitalization (20,21).

IPS has been shown to be effective regardless of psychiatric diagnosis, symptoms, co-occurring substance use, education level, age group, ethnoracial background, and work experience (22). One chart review study found that IPS clients who disclosed a criminal justice history had competitive employment outcomes similar to IPS clients who did not (23). On the basis of these findings, clients with justice involvement might also benefit from IPS.

A decade ago, a multisite supported employment study reported that only 3% of clients with severe mental illness disclosed a recent arrest or police detention (24). Such low rates of justice involvement do not fit current realities in the public mental health system. IPS employment specialists report that one of their greatest challenges is the increasing rate of justice involvement among their clients (25).

The study reported here compared the effectiveness of IPS to Work Choice (a job club approach) in helping clients with severe mental illness and justice involvement obtain competitive employment and integrate into mainstream society. We hypothesized that IPS would yield significantly better competitive employment outcomes. A series of exploratory hypotheses examined whether at follow-up IPS participants would have higher levels of self-reported recovery and lower rates of hospitalization and contact with the criminal justice system (fewer arrests and convictions) than Work Choice participants.

## METHODS

### Overview

We evaluated the effectiveness of IPS or Work Choice for unemployed clients with severe mental illness and justice involvement. After completing a baseline interview, participants were randomly assigned to either IPS or Work Choice and followed for one year. Participants in both conditions were eligible to receive the same mental health and residential services. The institutional review boards of Dartmouth College and Thresholds approved the study, which followed the principles outlined in the Declaration of Helsinki.

### Setting

Thresholds is a large psychiatric rehabilitation agency, providing comprehensive treatment and rehabilitation services (including IPS, case management, community outreach, individual and group supports, linkage to housing, and medication management) at multiple sites throughout the Chicago area. This study involved two of the agency's six IPS teams.

### Procedures

Clinicians were the primary source of study referrals. Twice weekly at two locations, research staff conducted research information groups (26) with referred clients to help ensure informed consent and enhance client choice. Participants

were required to attend two information group meetings, on the assumption that repeated exposure increases participant understanding and commitment to the project and promotes informed consent. The research assistant scheduled baseline meetings with clients who expressed interest and met eligibility criteria. The study enrolled participants between February 2011 and July 2012.

A biostatistician prepared a randomized list for each treatment site, which was based on an urn randomization technique with block size equal to four. After consenting to the study and completing the baseline interview, each participant opened the next consecutively numbered sealed envelope, which revealed the assigned study condition. The research assistant then contacted the participant's case manager and the employment team leader to which the participant had been assigned. The designated IPS specialist or the Work Choice coordinator promptly contacted the client.

The research assistant conducted face-to-face interviews at baseline, six-month follow-up, and 12-month follow-up, with brief telephone contacts at two, four, eight, and ten months, to determine self-reported employment status. She contacted program dropouts by phone when any refused face-to-face interviews. Participants were paid \$15 per interview for the baseline, six-month, and 12-month interviews.

### Participants

Study eligibility criteria were as follows: enrolled in a mental health treatment team served by one of the designated IPS teams; no competitive employment in the past three months; no prior IPS job search or support services; severe mental illness, according to state criteria (that is, diagnosis of schizophrenia spectrum disorder, bipolar disorder, or other psychotic disorder and either significant treatment history or significant functional impairments); age 18 years or older; expressed interest in a competitive job; self-disclosed criminal justice history; no legal, physical or other restriction that would prevent participating over the 12-month follow-up period, including pending criminal charges; attendance at two informational groups; and capacity and willingness to give informed consent.

Ninety clients met eligibility criteria and consented to participate, and 45 were randomly assigned to each group. Shortly after randomization, we administratively dropped two IPS participants (one with a severe health condition preventing participation and another with an undisclosed legal guardian overruling the participant's consent). We also removed one Work Choice participant who was accidentally offered IPS, reducing the final intent-to-treat sample to 87 clients. [A CONSORT diagram is available as an online supplement to this article.]

### Study Conditions

The study design compared two well-regarded but sharply contrasting approaches to helping people obtain competitive jobs. Differences between the two models are schematized in Table 1.

*IPS.* The IPS condition followed the principles of IPS supported employment, enhanced with a day-long training for IPS employment specialists on criminal justice issues. The employment specialists on the two IPS teams involved in the study received ongoing consultation, including twice-monthly conference calls from a senior IPS trainer (SJS) throughout the duration of the study.

*Work Choice.* The comparison condition, Work Choice, was based on the empirically validated job club model (27), tailored for persons with psychiatric disabilities (28). It facilitated a self-directed job search, helping clients with résumé preparation, interview skills, and job leads. Classes were scheduled weekly at two conveniently located sites. The curriculum included training in application procedures, job search strategies, and linkage services. The classes were held in a room with computer workstations for applying online for jobs. The Work Choice staff helped participants find job openings and navigate the online application process. Two half-time workers with lived experience of mental illness staffed the program. One was the program coordinator who designed the curriculum and led the training. Assisting her was a peer support specialist who had overcome her experiences in the correctional system and was now competitively employed. She made weekly phone reminders to participants to attend classes.

### Background Measures

We obtained data through participant interviews, reviews of electronic medical records and of employment records not included in medical records, and direct queries to agency staff.

In addition to demographic characteristics, we assessed the following variables. Employment history and income status were obtained with the Dartmouth Employment and Income Review (29), a structured interview with documented reliability and validity. Criminal justice history included number of times arrested, charged, and convicted and, if convicted, type of conviction (felony versus misdemeanor); number of days in a correctional facility (jail or prison) in the past year; number of months since last arrest, number of months since last conviction; and number of months since last jail or prison release. Psychiatric hospitalization admissions and days hospitalized were assessed for the year prior to enrollment on the basis of information from participant self-report and agency electronic medical records. Psychiatric diagnosis included chart information in the electronic medical records, determined by a psychiatrist using *DSM-IV*

**TABLE 1. Features of Individual Placement and Support (IPS) and Work Choice**

| Model component            | IPS   | Work Choice   |
|----------------------------|---|---|
| Origins of the model       | Community mental health   | Criminal justice  |
| Staffing                   | Team of full-time employment specialists  | Half-time recovery specialist and part-time peer support specialist   |
| Caseload ratio             | 20 clients per 1.0 FTE  | 40 clients per 1.0 FTE  |
| Main source of support     | Employment specialist   | Peer support  |
| Identifying jobs           | Individualized job search based on participant preferences  | Job pool developed from word of mouth (including from peers); job openings posted by employers known to hire people with criminal history |
| Preparation for job search | Brief vocational assessment followed by rapid job search  | Job club activities, including résumé preparation, practice interviewing, and rehearsal of what to say about criminal history             |
| Job search approach        | Job development done by employment specialist, who also accompanies participants to interviews (if participants choose) | Self-directed job search with job leads and referrals from recovery specialist  |

criteria. We based the substance use diagnosis for most participants on clinician-rated scales (30) and used chart diagnoses when these ratings were missing.

### Process Measures

*Program fidelity.* We assessed fidelity with the Revised Individual Placement and Support Fidelity Scale (IPS-25), a scale with predictive validity indicated by a significant association between fidelity ratings and competitive employment rates (31). Assessors followed a detailed protocol for conducting fidelity reviews (32).

We developed a 14-item Work Choice fidelity scale for the study that assessed the content dimensions summarized in Table 1. We used the same format and procedures used for the IPS-25. For example, one item assesses the role of peer supports, including availability at group meetings and frequent telephone outreach to clients who miss appointments. Items were scored on a scale ranging from 1 to 5.

*Satisfaction with vocational services.* We used a one-item measure of satisfaction with vocational services (33).

*Barriers to competitive employment.* Near the end of the study, the two vocational programs identified the top three barriers to employment for each participant by using a 16-item checklist adapted from a prior study (34).

### Outcome Measures

*Objective employment outcome measures.* Using the Dartmouth Vocational Update Form (29), we interviewed participants, corroborating employment outcomes through the agency's management information system and employment specialist logs. We tabulated the number of participants obtaining competitive, sheltered, and volunteer employment and recorded other employment outcomes (for example, days employed).

**TABLE 2. Background characteristics of study participants assigned to Individual Placement and Support (IPS) or to Work Choice**

| Variable   | IPS<br>(N=43) |    | Work Choice<br>(N=44) |    | Test                     | df | p    |
|--|---------------|----|-----------------------|----|--------------------------|----|------|
|  | N             | %  | N                     | %  |                          |    |      |
| Age (M±SD)   | 42.9±11.5     |    | 44.6±11.6             |    | t=.50                    | 85 | ns   |
| Gender   | 33            | 77 | 36                    | 82 | χ <sup>2</sup> =.34      | 1  | ns   |
| Race   |               |    |                       |    | χ <sup>2</sup> =3.25     | 1  | .07  |
| White (reference: nonwhite)                        | 9             | 21 | 17                    | 39 |                          |    |      |
| African American                                   | 30            | 70 | 21                    | 48 |                          |    |      |
| ≥2 races   | 3             | 7  | 5                     | 11 |                          |    |      |
| Other  | 1             | 2  | 1                     | 2  |                          |    |      |
| Hispanic ethnicity                                 | 5             | 12 | 6                     | 14 | χ <sup>2</sup> =.08      | 1  | ns   |
| Marital status                                     |               |    |                       |    | χ <sup>2</sup> =.59      | 1  | ns   |
| Never married (reference: other)                   | 28            | 65 | 32                    | 73 |                          |    |      |
| Divorced, separated, or widowed                    | 8             | 19 | 8                     | 18 |                          |    |      |
| Married  | 3             | 7  | 1                     | 2  |                          |    |      |
| Education  |               |    |                       |    | χ <sup>2</sup> =3.53     | 1  | <.06 |
| Less than high school (reference: other)           | 13            | 30 | 22                    | 50 |                          |    |      |
| High school graduate or GED                        | 13            | 30 | 8                     | 18 |                          |    |      |
| Some college                                       | 16            | 37 | 12                    | 28 |                          |    |      |
| College graduate                                   | 1             | 2  | 2                     | 5  |                          |    |      |
| Current residence type                             |               |    |                       |    | χ <sup>2</sup> =5.11     | 1  | <.01 |
| Own apartment (reference: other)                   | 19            | 44 | 31                    | 71 |                          |    |      |
| Living with family                                 | 8             | 19 | 3                     | 7  |                          |    |      |
| Group home   | 11            | 26 | 8                     | 18 |                          |    |      |
| Nursing home or substance abuse treatment facility | 3             | 7  | 2                     | 5  |                          |    |      |
| Homeless   | 2             | 5  | 0                     | —  |                          |    |      |
| Diagnosis  |               |    |                       |    | χ <sup>2</sup> =6.07     | 1  | <.05 |
| Schizophrenia (reference: other)                   | 17            | 40 | 29                    | 66 |                          |    |      |
| Depressive disorder                                | 10            | 23 | 6                     | 14 |                          |    |      |
| Bipolar disorder                                   | 15            | 35 | 7                     | 16 |                          |    |      |
| Other  | 1             | 2  | 2                     | 4  |                          |    |      |
| Substance use diagnosis                            |               |    |                       |    |                          |    |      |
| Alcohol dependence or abuse                        | 8             | 19 | 11                    | 25 | χ <sup>2</sup> =.52      | 1  | ns   |
| Drug dependence or abuse                           | 15            | 35 | 11                    | 25 | χ <sup>2</sup> =1.01     | 1  | ns   |
| Work history                                       |               |    |                       |    |                          |    |      |
| Worked in past 5 years                             | 22            | 51 | 21                    | 48 | χ <sup>2</sup> =1.03     | 1  | ns   |
| N jobs in past 5 years (M±SD)                      | 1.00±1.23     |    | .90±1.21              |    | t=.12                    | 85 | ns   |
| Competitive job at any time                        | 41            | 95 | 42                    | 96 | Fisher's exact test=1.00 |    | ns   |
| Social Security status <sup>a</sup>                |               |    |                       |    | χ <sup>2</sup> =.99      | 1  | ns   |
| SSI only (reference: other)                        | 20            | 47 | 25                    | 57 |                          |    |      |
| SSDI only  | 12            | 28 | 8                     | 18 |                          |    |      |
| Both SSI and SSDI                                  | 5             | 12 | 7                     | 16 |                          |    |      |
| None   | 3             | 7  | 1                     | 2  |                          |    |      |
| Unknown  | 3             | 7  | 3                     | 7  |                          |    |      |
| Criminal justice history                           |               |    |                       |    |                          |    |      |
| Arrested <sup>b</sup>                              |               |    |                       |    | χ <sup>2</sup> =.47      | 2  | ns   |
| 1–5 times  | 22            | 51 | 22                    | 51 |                          |    |      |
| 6–10 times   | 8             | 19 | 9                     | 21 |                          |    |      |
| ≥11 times  | 12            | 28 | 12                    | 28 |                          |    |      |
| Incarcerated                                       |               |    |                       |    | χ <sup>2</sup> =.12      | 2  | ns   |
| 1–5 times  | 22            | 51 | 22                    | 51 |                          |    |      |
| 6–10 times   | 6             | 14 | 5                     | 11 |                          |    |      |
| ≥11 times  | 6             | 14 | 5                     | 11 |                          |    |      |
| Charges  |               |    |                       |    |                          |    |      |
| Violent offense                                    | 13            | 30 | 19                    | 43 | χ <sup>2</sup> =2.04     | 1  | ns   |
| Drug offense                                       | 24            | 56 | 20                    | 46 | χ <sup>2</sup> =.57      | 1  | ns   |
| Theft  | 17            | 40 | 21                    | 48 | χ <sup>2</sup> =.46      | 1  | ns   |
| Sex offense  | 4             | 9  | 3                     | 7  | χ <sup>2</sup> =.13      | 1  | ns   |
| Crime involving minor                              | 5             | 12 | 5                     | 11 | χ <sup>2</sup> =.00      | 1  | ns   |

continued

TABLE 2, continued

| Variable              | IPS<br>(N=43) |    | Work Choice<br>(N=44) |    | Test           | df | p  |
|-----------------------|---------------|----|-----------------------|----|----------------|----|----|
|                       | N             | %  | N                     | %  |                |    |    |
| Property damage       | 8             | 19 | 9                     | 21 | $\chi^2 = .07$ | 1  | ns |
| Trespassing           | 10            | 23 | 12                    | 27 | $\chi^2 = .25$ | 1  | ns |
| Seriousness of charge |               |    |                       |    |                |    |    |
| Felony                | 28            | 65 | 26                    | 62 | $\chi^2 = .10$ | 1  | ns |
| Misdemeanor           | 29            | 69 | 29                    | 71 | $\chi^2 = .03$ | 1  | ns |

<sup>a</sup> SSI, Supplemental Security Income; SSDI, Social Security Disability Insurance

<sup>b</sup> Missing data for one Work Choice participant

*Psychiatric hospitalization admissions and days hospitalized.* During follow-up interviews and phone contacts, we obtained participant self-report of hospitalizations. We corroborated these data with electronic medical records and clinicians' reports (35).

*Involvement with the criminal justice system.* We obtained participant self-report of arrests, convictions, and incarcerations during follow-up.

*Self-reported recovery.* We used the 24-item subscale of the 32-item Recovery Assessment Scale, a well-validated self-report instrument measuring hope, meaning of life, quality of life, symptoms, and empowerment (36,37).

### Interview Procedures and Follow-Up Rates

An experienced interviewer (IMK) conducted all research interviews. During the data collection phase of the study, three of the authors (GRB, DRB, and RED) held twice-monthly phone calls with the onsite research team.

The 87 participants in the intent-to-treat sample completed 83 (95%) six-month interviews and 80 (92%) 12-month interviews, with no statistical differences in completion rates between conditions. Together the interviews, chart review, employment reports, and case manager reports confirmed employment status for 85 participants (98%) in the intent-to-treat sample (42 IPS and 43 Work Choice participants).

### Statistical Analyses

We analyzed employment outcomes for all participants for whom data were available by using cumulative employment outcomes over the one-year period. Because of skewed distributions, we analyzed continuous outcome measures with the Mann-Whitney test. We used chi square tests to analyze categorical variables.

## RESULTS

### Sample Characteristics

As shown in Table 2, participants in the two conditions did not differ significantly on any baseline measure except for current residence and diagnosis. Diagnosis was not associated with employment outcome, nor was any other baseline measure listed.

### Implementation of IPS and Work Choice

*IPS fidelity.* In Illinois, the state vocational rehabilitation and mental health agencies conduct annual fidelity reviews for all IPS programs statewide. Fidelity reviewers from these state agencies and from the research team completed annual fidelity reviews for both IPS teams during the study period. All fidelity reviews met the criteria for good fidelity.

*Work Choice fidelity.* The project coordinator (RLF) assessed the Work Choice program in January 2012, near the end of the recruitment period. The total score was 4.6, indicating adequate fidelity. Most Work Choice participants attended five or fewer sessions: 17 (39%) attended zero to two sessions, 12 (27%) attended three to nine sessions, seven (16%) attended ten to 16 sessions, and eight (18%) attended 20 or more sessions.

*Satisfaction with vocational services.* Participants in both conditions reported satisfaction with vocational services: 77 (96%) of 80 participants at six months and 66 (88%) of 77 at 12 months. IPS and Work Choice did not differ at either assessment.

*Barriers to employment.* Barriers were similar for the two groups, with the six most common being failure to engage (N=30, 34%), disengagement (N=30, 34%), substance abuse not well controlled (N=19, 22%), general medical problems (N=15, 17%), lack of work skills (N=14, 16%), and criminal justice system problems (N=13, 15%). Not having a job goal was a more common barrier for Work Choice (N=8, 18%) than for IPS (N=1, 2%) participants (N=87,  $\chi^2 = 5.90$ ,  $df = 1$ ,  $p < .05$ ).

### Outcomes

Over the 12-month period, 31% of IPS participants versus 7% of Work Choice participants obtained a competitive job (N=85,  $\chi^2 = 7.99$ ,  $df = 1$ ,  $p < .01$ ) (Table 3). Some participants obtained noncompetitive or volunteer jobs, but the numbers were small. Multiple jobs of any kind during follow-up were also rare, with only one participant (in IPS) obtaining two competitive jobs. The mean  $\pm$  SD days of competitive employment during follow-up was  $40.5 \pm 99.2$  for IPS participants and  $15.9 \pm 65.7$  for Work Choice participants (N=85, Mann-Whitney U test = 2.67,  $p < .01$ ). Among those who gained a competitive job, IPS and Work Choice did not differ in mean days worked.

**TABLE 3. Most independent job held during follow-up by Individual Placement and Support (IPS) and Work Choice participants<sup>a</sup>**

| Type of job        | IPS<br>(N=42) |    | Work Choice<br>(N=43) |    |
|--------------------|---------------|----|-----------------------|----|
|                    | N             | %  | N                     | %  |
| Paid employment    |               |    |                       |    |
| Competitive job    | 13            | 31 | 3                     | 7  |
| Agency-run job     | 1             | 2  | 1                     | 2  |
| Sheltered work     | 0             | —  | 1                     | 2  |
| Casual labor       | 0             | —  | 2                     | 5  |
| No paid employment |               |    |                       |    |
| Volunteer          | 6             | 14 | 6                     | 14 |
| No employment      | 22            | 52 | 30                    | 70 |

<sup>a</sup> Missing data for one IPS participant and one Work Choice participant

As shown in Table 4, during the 12-month follow-up period, the IPS and Work Choice groups had similar rates of adverse outcomes. Twenty-four percent of IPS participants and 19% of Work Choice participants were arrested, and 51% of IPS participants and 40% of Work Choice participants were hospitalized.

Self-reported recovery, rated on the Recovery Assessment Scale, did not differ between IPS ( $4.14 \pm .57$ ) and Work Choice ( $4.14 \pm .49$ ) participants at 12 months. Neither group changed from baseline to follow-up on this scale.

## DISCUSSION

IPS was more effective than a job club approach with peer support for helping people with severe mental illness and justice involvement gain employment. Overall, however, the competitive employment rate and total days employed were lower than in prior IPS studies (18). One possible conclusion is that justice-involved clients generally achieve modest employment outcomes regardless of the employment services offered. We assume that better outcomes are possible and seek to understand the reasons for these suboptimal outcomes.

**TABLE 4. Criminal justice involvement and hospitalizations during follow-up among Individual Placement and Support (IPS) and Work Choice participants<sup>a</sup>**

| Outcome                      | IPS<br>(N=41) |    | Work Choice<br>(N=43) |    | Test          | df | p  |
|------------------------------|---------------|----|-----------------------|----|---------------|----|----|
|                              | N             | %  | N                     | %  |               |    |    |
| Justice involvement          |               |    |                       |    | $\chi^2=.42$  | 1  | ns |
| Arrest                       | 10            | 24 | 8                     | 19 |               |    |    |
| Felony conviction            | 0             | —  | 0                     | —  |               |    |    |
| Misdemeanor conviction       | 1             | 2  | 1                     | 2  |               |    |    |
| Incarceration                | 1             | 2  | 1                     | 2  |               |    |    |
| Hospitalization              |               |    |                       |    | $\chi^2=1.16$ | 1  | ns |
| Psychiatric                  | 11            | 27 | 12                    | 28 |               |    |    |
| Substance use                | 5             | 12 | 2                     | 5  |               |    |    |
| General medical condition    | 9             | 22 | 7                     | 16 |               |    |    |
| Total (all types)            | 21            | 51 | 17                    | 40 |               |    |    |
| N of hospitalizations (M±SD) | 1.20±1.58     |    | .70±1.04              |    | t=1.71        | 83 | ns |
| Days hospitalized (M±SD)     | 10.44±23.07   |    | 4.93±7.59             |    | t=1.48        | 83 | ns |

<sup>a</sup> Missing data for two IPS participants and one Work Choice participant

Contrary to expectations, the barriers to employment often occurred prior to employer contact. Employment staff identified a lack of engagement in employment services as a common barrier. Many clients were dealing with more pressing priorities, such as housing, financial, and medical problems, especially those recently released from incarceration, who were preoccupied with obtaining or reinstating financial, health care, and transportation benefits before immersing themselves in the job search. Consistent with these results, a previous study found that clients with justice involvement had delayed entry into employment services compared with those without justice involvement (2). Thus, in determining IPS eligibility for clients with justice involvement, a critical question to ask is, "If interested in employment, how soon would you like to begin the job search?"

This study did not show any protective effect of IPS on forestalling justice involvement or hospitalization, consistent with prior research (19). Self-reported recovery did not change over time and did not differ between study conditions, as also found in a prior IPS study (21).

## Study Limitations

The study had a small sample and short follow-up period. The sample was heterogeneous with regard to justice involvement, and the small size precluded stratification of the sample for justice involvement characteristics, such as felony and misdemeanor convictions, type of crime, or recency of justice involvement. Criminal justice history was limited to self-report. Recruiting clients who had not spontaneously expressed an interest in employment prior to study invitation may have contributed to the lack of engagement, as other studies have found (38). We recruited clients across a large geographic area, inhibiting integration of the IPS and treatment teams.

## Future Directions

This study suggests that IPS may be a starting point for developing an effective employment model for people with severe mental illness and justice involvement, but augmentations may be needed to achieve optimal employment outcomes. One suggestion is to focus ongoing training and technical assistance to both IPS teams and treatment teams on overcoming barriers to employment for justice-involved clients. For example, motivational strategies are critical for engaging justice-involved clients, many of whom despair of ever finding a decent job (4).

A useful enhancement of IPS specific to this population might be to develop IPS teams with expertise in serving justice-involved clients. Such a team would devote a regular portion of the weekly meetings to justice involvement issues and might be better positioned to integrate with treatment teams serving justice-involved clients and to coordinate

employment and treatment plans with the legal and correctional systems.

Ultimately, changes to the federal and state legal systems may be the most direct way to increase employment prospects for this population. As widely noted, the U.S. incarceration rate greatly exceeds that of every other nation, prompted largely by draconian sentencing laws for drug possession. Furthermore, people with mental illness are overrepresented in our correctional systems (39). Reforms are long overdue. Other legislation may be helpful in improving employment prospects for former offenders. Employer background checks are powerful deterrents to employment (40). Legislation banning criminal background checks may improve prospects for legal gainful employment (5).

## CONCLUSIONS

This study is the first controlled IPS trial for justice-involved clients. It joins more than 20 published controlled trials demonstrating better employment outcomes for IPS than for other vocational models. Given the prevalence of justice involvement in the psychiatric population, IPS employment specialists need to increase their competence in working with justice-involved individuals. To promote optimal levels of employment in this population, further augmentations of the IPS model may be needed, as well as changes to federal and state legal systems.

## AUTHOR AND ARTICLE INFORMATION

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## REFERENCES

1. Fisher WH, Roy-Bujnowski KM, Grudzinskas AJ Jr, et al: Patterns and prevalence of arrest in a statewide cohort of mental health care consumers. *Psychiatric Services* 57:1623–1628, 2006
2. Frounfelker RL, Glover CM, Teachout A, et al: Access to supported employment for consumers with criminal justice involvement. *Psychiatric Rehabilitation Journal* 34:49–56, 2010
3. Robertson AG, Swanson JW, Frisman LK, et al: Patterns of justice involvement among adults with schizophrenia and bipolar disorder: key risk factors. *Psychiatric Services* 65:931–938, 2014
4. Baron RC, Draine J, Salzer MS: "I'm not sure that I can figure out how to do that": pursuit of work among people with mental illnesses leaving jail. *American Journal of Psychiatric Rehabilitation* 16:115–135, 2013
5. D'Alessio SJ, Stolzenberg L, Flexon JL: The effect of Hawaii's Ban the Box Law on repeat offending. *American Journal of Criminal Justice* (Epub ahead of print, June 24, 2014)
6. Tschopp MK, Perkins DV, Hart-Katuin C, et al: Employment barriers and strategies for individuals with psychiatric disabilities and criminal histories. *Journal of Vocational Rehabilitation* 26:175–187, 2007
7. McGuire JF, Rosenheck RA: Criminal history as a prognostic indicator in the treatment of homeless people with severe mental illness. *Psychiatric Services* 55:42–48, 2004
8. Osher F, Steadman HJ, Barr H: A best practice approach to community reentry from jails for inmates with co-occurring disorders: the APIC Model. *Crime and Delinquency* 49:79–96, 2003
9. Faupel CE: Heroin use, crime and employment status. *Journal of Drug Issues* 18:467–479, 1988
10. Bartley M: Unemployment and ill health: understanding the relationship. *Journal of Epidemiology and Community Health* 48:333–337, 1994
11. Blustein DL: The role of work in psychological health and well-being: a conceptual, historical, and public policy perspective. *American Psychologist* 63:228–240, 2008
12. Lloyd C, King R, Moore L: Subjective and objective indicators of recovery in severe mental illness: a cross-sectional study. *International Journal of Social Psychiatry* 56:220–229, 2010
13. Bellotti J, Derr M, Paxton N: Giving Ex-Offenders a Choice in Life: First Findings from the Beneficiary Choice Demonstration. Contract no DOLJ061A20351 (0009). MPR reference no 6381-710. Princeton, NJ, Mathematica Policy Research, 2008
14. Schaeffer CM, Henggeler SW, Ford JD, et al: RCT of a promising vocational/employment program for high-risk juvenile offenders. *Journal of Substance Abuse Treatment* 46:134–143, 2014
15. LePage JP, Lewis AA, Washington EL, et al: Effects of structured vocational services on job-search success in ex-offender veterans with mental illness: 6-month follow-up. *Journal of Rehabilitation Research and Development* 50:188–192, 2013
16. Drake RE, Bond GR, Becker DR: Individual Placement and Support: An Evidence-Based Approach to Supported Employment. New York, Oxford University Press, 2012
17. Marshall T, Goldberg RW, Braude L, et al: Supported employment: assessing the evidence. *Psychiatric Services* 65:16–23, 2014
18. Bond GR, Drake RE, Becker DR: Generalizability of the Individual Placement and Support (IPS) model of supported employment outside the US. *World Psychiatry* 11:32–39, 2012
19. Kukla M, Bond GR: A randomized controlled trial of evidence-based supported employment: nonvocational outcomes. *Journal of Vocational Rehabilitation* 38:91–98, 2013
20. Burns T, Catty J, Becker T, et al: The effectiveness of supported employment for people with severe mental illness: a randomised controlled trial. *Lancet* 370:1146–1152, 2007
21. Hoffmann H, Jäckel D, Glauser S, et al: Long-term effectiveness of supported employment: 5-year follow-up of a randomized controlled trial. *American Journal of Psychiatry* 171:1183–1190, 2014
22. Campbell K, Bond GR, Drake RE: Who benefits from supported employment: a meta-analytic study. *Schizophrenia Bulletin* 37:370–380, 2011
23. Frounfelker R, Teachout A, Bond GR, et al: Criminal justice involvement of individuals with severe mental illness and supported employment outcomes. *Community Mental Health Journal* 47:737–741, 2011
24. Anthony WA: Supported Employment. Bethesda, Md, National GAINS Center, May 2006
25. Whitley R, Kostick KM, Bush PW: Supported employment specialist strategies to assist clients with severe mental illness and criminal justice issues. *Psychiatric Services* 60:1637–1641, 2009
26. Drake RE, Becker DR, Anthony WA: A research induction group for clients entering a mental health research project. *Hospital and Community Psychiatry* 45:487–489, 1994
27. Azrin NH, Philip RA: The job club method for the job handicapped: a comparative outcome study. *Rehabilitation Counseling Bulletin* 23:144–155, 1979
28. Corrigan PW, Reedy P, Thadani D, et al: Correlates of participation and completion in a job club for clients with psychiatric disability. *Rehabilitation Counseling Bulletin* 39:42–53, 1995

29. Drake RE, McHugo GJ, Becker DR, et al: The New Hampshire study of supported employment for people with severe mental illness. *Journal of Consulting and Clinical Psychology* 64:391–399, 1996
30. Drake RE, Mueser KT, McHugo GJ: Clinician rating scales: Alcohol Use Scale (AUS), Drug Use Scale (DUS), and Substance Abuse Treatment Scale (SATS); in *Outcomes Assessment in Clinical Practice*. Edited by Sederer LI, Dickey B. Baltimore, Williams and Wilkins, 1996
31. Bond GR, Peterson AE, Becker DR, et al: Validation of the Revised Individual Placement and Support Fidelity Scale (IPS-25). *Psychiatric Services* 63:758–763, 2012
32. Becker DR, Swanson S, Bond GR, et al: *Evidence-Based Supported Employment Fidelity Review Manual*, 2nd ed. Lebanon, NH, Dartmouth Psychiatric Research Center, 2011
33. Kukla M, Bond GR: The working alliance and employment outcomes for people with severe mental illness enrolled in vocational programs. *Rehabilitation Psychology* 54:157–163, 2009
34. Milfort R, Drake RE, Bond GR, et al: Barriers to employment among Social Security Disability Insurance beneficiaries in the Mental Health Treatment Study. *Psychiatric Services*, in press
35. Clark RE, Ricketts SK, McHugo GJ: Measuring hospital use without claims: a comparison of patient and provider reports. *Health Services Research* 31:153–169, 1996
36. Corrigan PW, Salzer M, Ralph RO, et al: Examining the factor structure of the Recovery Assessment Scale. *Schizophrenia Bulletin* 30:1035–1041, 2004
37. Salzer MS, Brusilovskiy E: Advancing recovery science: reliability and validity properties of the Recovery Assessment Scale. *Psychiatric Services* 65:442–543, 2014
38. Drake RE, Frey W, Bond GR, et al: Assisting Social Security Disability Insurance beneficiaries with schizophrenia, bipolar disorder, or major depression in returning to work. *American Journal of Psychiatry* 170:1433–1441, 2013
39. Teplin LA: The prevalence of severe mental disorder among male urban jail detainees: comparison with the Epidemiologic Catchment Area Program. *American Journal of Public Health* 80:663–669, 1990
40. Haimowitz S, Rio J: Assisting people in recovery who have criminal records to reach their employment goals. *Psychiatric Services* 65:410–413, 2014

## Submissions by Residents and Fellows Invited

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Submissions should address the planning and delivery of psychiatric services in any setting, including those of special interest or concern to trainees. Submission of original research is encouraged. Literature reviews will be considered if they are mentored or coauthored by a senior scholar in the field.

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