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Employment Outcomes From a Randomized Controlled Trial of Two Employment Interventions With Homeless Youth

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Abstract

Objective—Limited research exists on how employment interventions contribute to employment outcomes for homeless youth. This study examines the comparative efficacy of 2 interventions—Social Enterprise Intervention (SEI) and Individual Placement and Support (IPS)—provided to homeless youth with mental illness in a randomized controlled trial.

Method—Participants were recruited from 1 homeless youth agency in Los Angeles, CA, and randomized to the SEI ($n = 36$) or IPS ($n = 36$) conditions. Over 20 months, SEI participants received 4 SEI components, and IPS participants received IPS services based on 8 principles. Data were collected at baseline and follow-up for the primary employment outcome (paid employment) and 5 secondary employment outcomes.

Results—Over 20 months, 39% of SEI participants and 32% of IPS participants reported any paid employment. Across both groups, participants who reported working at baseline had nearly 8 times the odds of working at follow-up ($OR = 7.91$, $p < 0.05$). No statistically significant differences were detected across the full sample or between groups on the primary or secondary employment outcomes.

Conclusions—Future effectiveness research is needed to compare the long-term employment outcomes of the SEI and IPS with a more heterogeneous sample of homeless youth using customized homelessness support services and more nuanced employment outcomes.

Keywords

homeless youth; social enterprise; supported employment; individual placement and support; randomized controlled trial (RCT)

Unemployment rates among homeless young people range from 39% to 71% across various street- and shelter-living samples (Courtney, Piliavin, Grogan-Kaylor, & Nesmith, 2001; Ferguson & Xie, 2008; Lenz-Rashid, 2006; Whitbeck, 2009). These high rates surpass unemployment estimates for former foster youth and nationally representative samples of housed young adults (Courtney & Dworsky, 2006; Pecora et al., 2006). One main goal of homeless-youth-serving organizations is to help homeless young people to obtain and maintain employment, as stable employment is a nationally recognized outcome for

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supporting youth in successfully exiting homelessness (United States Interagency Council on Homelessness, 2013). Despite this important goal, employment intervention research with homeless youth has been limited by lack of randomization, weak methodological designs, small samples, and high attrition rates (Altena, Brilleslijper-Kater, & Wolf, 2010; Slesnick, Dashora, Letcher, Erdem, & Serovich, 2009; Xiang, 2012). As such, employment programming for homeless youth—and the outputs and outcomes obtained through them—remain elusive to the practice and research communities alike.

In homeless-youth-serving organizations across the United States, there are two main approaches to employment programming: prevocational training, referred to as the *train-and-place* model, and supported employment, referred to as the *place-and-train* model (Burns et al., 2007; Ferguson & Maccio, 2015; Hellström, Bech, Nordentoft, Lindschou, & Eplov, 2013). Common examples of homeless-youth programs adopting the prevocational training approach include YouthBuild and Job Corps, along with internships, apprenticeships, and sheltered workshops. Across these programs, prior to engaging in their job search, homeless youth typically learn employment and interpersonal skills, including professional behavior, work ethics, job-search techniques, and résumé-writing and interviewing skills. They also receive tutoring, mentoring, GED classes, and assistance with secondary and post-secondary school enrollment and completion (Barman-Adhikari & Rice, 2014).

The second approach—supported employment or specifically the Individual Placement and Support (IPS) model—assumes that the best source of employment training is on-the-job training; as such, it adopts a place-train approach (Burns et al., 2007). In this approach, individuals are supported first in obtaining competitive employment and subsequently in maintaining the job via ongoing, customized employment and clinical services (Drake, Bond, & Becker, 2012). IPS has been widely used with adults with severe mental illness (Drake et al., 2012) and young adults with first-episode psychosis (Nuechterlein et al., 2008; Rinaldi et al., 2004). Fewer IPS studies exist with adults and young adults experiencing homelessness and mental illness (Ferguson, Xie, & Glynn, 2012; Rosenheck & Mares, 2007). However, across studies, the IPS has demonstrated superiority to usual-case services (including prevocational training approaches) in employment outcomes.

A third approach, which is less common in homeless-youth-serving organizations, is the use of social enterprises (e.g., Social Enterprise Intervention; Ferguson, 2007), or agency-run businesses or social firms (Warner & Mandiberg, 2006). Similar to the prevocational training approach, social enterprise interventions commonly include an initial training phase. In this phase, participants identify the specific vocational and/or business skills they need to learn to support them in starting and/or maintaining a business (Ferguson, 2007). Yet unlike prevocational training, social enterprise interventions train participants while they are developing the business. In effect, this model uses a train-*while*-place (vs. train-*and*-place) approach. Social enterprise training is tailored to the specific business that is being developed/maintained and occurs while participants are taking steps to start/maintain a business. In this way, social enterprise participants are learning and applying simultaneously. This practice is consistent with other applied-learning pedagogies in which students are supported in their learning and personal development through a self-reflective and applied process that takes place outside of traditional institutions of learning (Ash & Clayton, 2009).

Overview of Social Enterprise Intervention and Individual Placement and Support

The Social Enterprise Intervention (SEI) is a research-supported intervention using a team approach that engages homeless youth in paid employment as well as case-management and mental health services through involvement in an agency-run social enterprise (Ferguson, 2007; Ferguson & Xie, 2008). The underlying assumption is that homeless youth already possess entrepreneurial skills from the survival behaviors they develop and hone in navigating homelessness. *Survival behaviors* refer to various informal means of income generation, which can be both legal (i.e., selling clothing and possessions) and illegal (i.e., theft and selling drugs). These alternative sources of income also frequently complement homeless youths' income from formal or paid employment (Gaetz & O'Grady, 2002; Whitbeck, 2009). With both vocational and business training tailored to youths' entrepreneurial skills, and clinical and mentoring supports, homeless youth can transfer their survival skills into skills that help them start and maintain a business.

In contrast, the IPS model of supported employment is an individually focused, evidence-based intervention that provides individuals with severe mental illness with customized, long-term, and integrated vocational, case-management, and clinical services to help them gain and maintain competitive employment (Bond et al., 2001; Drake et al., 2012; Marshall et al., 2014). The underlying assumption is that homeless youth face numerous interrelated challenges related to finding and keeping paid employment. With integrated employment, clinical, and case-management services offered by trusted staff over a long period of time, homeless youth can address their life challenges and successfully obtain and maintain paid employment.

The Current Study

The feasibility of both the SEI and IPS models with homeless youth experiencing mental illness was first established in separate pilot studies. Each pilot study used a quasi-experimental design comparing the SEI or IPS interventions to usual-care agency services. The comparison group in each study was characteristic of the prevocational training approach (Ferguson & Xie, 2008; Ferguson et al., 2012). Subsequently, a randomized comparative efficacy trial of the short-term nonvocational outcomes of the SEI and IPS was conducted over 20 months with 72 homeless youth at a homeless-youth drop-in center in Los Angeles, CA. Whereas the nonvocational outcomes from this randomized controlled trial (RCT) are reported elsewhere (Ferguson, 2017), the current article uses secondary analysis of these data to examine the comparative efficacy of the SEI and IPS models on one primary employment outcome (paid employment) and five secondary employment outcomes (job tenure, hours worked, wages earned, total labor networks, and income from survival behaviors). The current study answered two research questions:

1. Do homeless youth with mental illness participating in an employment intervention integrated with clinical services (SEI or IPS) experience improvements in their (a) working at follow-up rate (paid employment), (b) ever-

worked rate, (c) job tenure, (d) weekly hours, (e) weekly income, (f) total labor networks, and (g) income from survival behaviors?

2. What are the differences between the SEI and IPS groups on these primary and secondary employment outcomes between baseline and follow-up?

Method

Study Setting, Sampling, and Recruitment Procedures

From November 2009 to June 2011, researchers conducted a randomized comparative efficacy study of the SEI and IPS with 72 homeless youth (ages 16–24) at one drop-in center for homeless youth in Los Angeles, CA. The research team used nonprobability quota sampling to select the SEI and IPS youth. During a 4-month period, the principal investigator (PI) and two trained research assistants spent 10 hours per week in the host agency to recruit homeless youth to the study. The researchers approached youths in three areas of the drop-in center where they commonly congregated (i.e., couch area, recreation tables, and outside area) and asked them if they wanted to participate in an employment-intervention research study. Researchers attempted to recruit one third of the sample from each of the three areas.

Youths were eligible to participate if they met four criteria:

- age 16–24;
- English speaking;
- primary clinical diagnosis in the past year (with at least one symptom in the past 4 weeks) using the Diagnostic Interview Schedule for Children (DISC) youth-informant interview for one of six mental illnesses (i.e., major depressive episode, manic episode, generalized anxiety disorder, post-traumatic stress disorder, antisocial personality disorder, and alcohol/substance-use disorders [Fisher, Shaffer, Lucas, & National Institute of Mental Health DISC Editorial Board, 2005]); and
- desire to work.

Of the 75 youths approached in the engagement phase, 72 agreed to participate in the study (a 96% response rate).

Randomization and Treatment Allocation

A power analysis was calculated to estimate the actual power achieved based on an assumed 40% attrition rate, medium-to-large effect sizes (d = 0.6–0.8, equivalent to f = 0.3–0.4, obtained in one of the two pilot studies examining nonvocational outcomes [see Ferguson & Xie, 2008]), and the proposed sample size. The estimated power was 0.85–0.97. The power analysis revealed that 44 subjects (22 per group) would be sufficient to achieve 80% power to detect a statistically significant treatment effect. Attrition analysis in the SEI pilot study revealed a 31% and 33% attrition rate in the SEI treatment and comparison groups, respectively (Ferguson & Xie, 2008). With over-recruitment of participants at enrollment in

anticipation of a 40% attrition rate in the RCT study, the planned sample size for each group was 36 participants per group (i.e., 72 in total).

Upon screening and having participants sign the consent/assent form, researchers randomly assigned 72 youths with mental illness to one of two conditions: the SEI group or the IPS group. Participants selected a sealed envelope containing the name of a study group that had been generated via computer algorithm. Blocking was used to ensure an equal number of subjects between the two study groups (Kirk, 1995). Once randomized, a rolling-start procedure was used because the SEI vocational and business-training courses were taught using a peer-based group format, whereas the IPS used an individualized format with each client. Once 24 participants were eligible and randomized (i.e., 12 to each group), SEI and IPS staff began their respective interventions.

SEI Condition

The SEI is an asset-based model of youth development that is tied to youths' clinical needs and treatment. The model draws on social support theory and the four internal developmental assets in youth: commitment to learning, social competencies, positive values, and positive identity. The developmental assets framework considers these internal assets to be protective factors that mediate risk and improve positive outcomes for youth (Benson, 2003). The underlying theoretical base of the SEI is that individuals who are embedded in a supportive group network are more likely to demonstrate a positive mood, which is likely to contribute to overall positive well-being (Wills, 1991). Further, the SEI model posits that individuals' economic and personal well-being are interrelated. Through employment, individuals benefit economically from wages, and they benefit intrapersonally and interpersonally from time structure, social contact, social context, and social identity (Harnois & Gabriel, 2000).

In the current study, the SEI model was implemented in four stages: (a) vocational skill acquisition (4 months), (b) small business skill acquisition (4 months), (c) SEI formation and product distribution (12 months), and (d) clinical/case-management services (ongoing for 20 months). SEI participants attended vocational and small-business classes 2 times per week for 1.5 hours each session (3 hours total) and received clinical/case-management services continuously throughout the 20-month study. Participants learned photography and silkscreening skills in the vocational skill acquisition stage. They then learned accounting, budgeting, marketing, and management skills in the small-business skill acquisition stage. Through these two courses, participants learned to silkscreen their photographic artwork onto apparel for sale. A social enterprise was developed in the host agency through which participants applied their vocational and business skills to create, market, and sell their apparel products. Clinical and case management services were offered weekly at the host agency, with the exception of referrals for medication, health care, and drug treatment, which were provided by specialized agencies in the community.

Fidelity to the SEI curriculum was assessed via quarterly meetings with agency administrative staff and SEI project staff. Dosage of the SEI intervention was assessed using weekly attendance sheets for the SEI vocational and business courses, the social enterprise phase, and the clinical and case-management services. The author has described elsewhere

the four SEI stages, their timeframe, characteristics, mechanisms of influence, and objectives (Ferguson, 2017).

IPS Condition

The IPS model follows eight supported-employment principles, which collectively draw from theories of psychiatric rehabilitation and recovery with individuals with severe mental illness (Drake et al., 2012). The theory of psychiatric rehabilitation is that individuals' functional adjustment can be improved by creating a supportive environment and enhancing their skills or abilities, such as those developed or strengthened in the workplace (Anthony, Cohen, & Farkas, 1990). Likewise, the theory of recovery is that individuals can recover from their illness and pursue meaningful life goals, such as employment (Deegan, 1988).

There are eight IPS principles of supported employment (Drake et al., 2012):

1. Zero exclusion: All clients who want to participate are eligible.
2. Integration of vocational and mental health treatment services: Vocational and mental health treatment staff are colocated, and frequent communication between team members is essential.
3. Competitive employment: Clients are assisted in obtaining community-based jobs at competitive wages.
4. Benefits counseling: People who receive government benefits need personalized benefit planning when considering employment.
5. Rapid job search: The job-search process begins within 1 month of the client meeting with an employment specialist and beginning a career profile or vocational assessment.
6. Follow-along supports: Individualized assistance to working clients is available for as long as needed.
7. Preferences: Client preferences influence the type of job sought and the nature and type of support offered.
8. Systematic job development: Employment specialists build an employer network based on clients' interests, developing relationships with local employers by making systematic contacts.

To implement the IPS in the original RCT, one employment specialist, two case managers, and two clinicians from the host agency were assigned among them the 22 available IPS cases at baseline. The IPS team and supervisor were all trained in the IPS model by a certified IPS trainer and the PI prior to the study. Over the 20 months, all IPS participants met individually with the employment specialist, one case manager, and one clinician at least weekly. Meetings took place either in person within the agency or in the community, by phone, or through social media check-ins. Fidelity to the IPS model was assessed via quarterly meetings with agency administrative staff and IPS project staff. Dosage of the IPS intervention was assessed using weekly attendance sheets for the meetings between IPS staff (employment specialist, clinician, and case manager) and the youth participants. The author

has previously described the eight IPS principles with their timeframe, characteristics, mechanisms of influence, and objectives (Ferguson, 2017).

Data Collection

The PI and research assistants collected data from the SEI and IPS groups within the host agency at two time points over 20 months: baseline (i.e., before entering intervention, study months 1–4) and follow-up (i.e., study months 20–24). Interviews lasted 45–60 minutes and included standardized and researcher-developed measures for demographics, homelessness history, social support, mental health status, housing status, and employment. All participants received gift cards to a local vendor in the amount of $10 for the baseline interview and $20 for the follow-up interview. A research assistant entered raw data from the interviews into a database created in SPSS 23. All research procedures were approved by the Institutional Review Board at the PI's university.

Measures

Employment outcomes and measures were adopted from existing IPS studies (Bond et al., 2001; Ferguson et al., 2012; Lehman et al., 2002; Poremski, Rabouin, & Latimer, 2017). The primary employment outcome was paid employment at 20 months. Participants were asked at baseline (*work1*) and at the 20-month follow-up (*work2*) whether in the past month they had any form of paid employment (0 = *no* and 1 = *yes*). The *working at follow-up rate* represents whether the participant reported working in any paid employment at 20 months.

Given the common variation in employment status among homeless youth, the *ever-worked rate* was created for the analysis as a complementary measure of any paid employment. Participants were considered to have ever worked if they reported working either at baseline or at the 20-month follow-up (0 = *never held paid employment* and 1 = *held paid employment*). In prior IPS studies with adults, the average ever-worked rate was 61% (Bond & Drake, 2008).

Job tenure measures the number of months the participant reported being employed in any paid position during the past 6 months and was collected at baseline and follow-up. *Weekly hours worked* is a continuous variable measuring the total hours per week the participant reported working in paid employment, which was collected at both baseline and follow-up. *Weekly income* is a continuous variable measuring the total income per week reported by the participant from all forms of paid employment, measured at both baseline and follow-up. We also collected data on the participant's *place of employment*.

Total labor networks is a composite-score variable representing the quantity of informal and formal supports (e.g., friend, partner, parent, sibling, grandparent, other relative, teacher or mentor, social worker or counselor, religious clergy, health professional) to whom the participant currently could turn if they needed help finding a job. Higher numbers denote a greater number of informal and formal supports.

Income from survival behaviors measures whether the participant reported receiving money or other resources to meet their basic needs from any of nine survival behaviors over the past 6 months: (a) selling self-made items, (b) selling clothes or personal possessions, (c) selling

bottles/cans, (d) selling blood/plasma, (e) panhandling, (f) dealing drugs, (g) prostitution or trading sexual favors (i.e., survival sex), (h) gambling, and (i) stealing (0 = *no*, 1 = *yes*). Responses to the nine types were combined into one continuous variable representing the variety of informal sources of income participants earned (range: 0–9). Higher numbers reflect a greater variety of informal sources from which the participant reported earning income using survival behaviors.

Data Analyses

Global empirical analyses—including frequency distributions, means, and standard deviations—were used to describe characteristics and relationships among the variables. Paired-samples *t*-tests and Chi-square tests were conducted to examine differences in baseline characteristics between groups. These tests were also used to compare baseline characteristics of participants available for analysis at follow-up with those who were missing to evaluate potential sampling biases. Changes in mean scores between baseline and follow-up were also compared across the SEI and IPS conditions. Binary logistic regression was used to compare the odds of holding paid employment at follow-up between groups, with adjustment for baseline working status. Subsequently, mixed ANOVA analyses were used to identify differences over time between SEI and IPS participants on the study's employment outcome variables. Lastly, the effect size using Cohen's *d* was calculated for outcome variables to interpret the practical meaning of intervention effects (Cohen, 1988) and to inform future meta-analyses (Gliner, Leech, & Morgan, 2002).

Results

Sample Characteristics

Table 1 displays background characteristics between the SEI and IPS groups at baseline. At baseline, 48 participants (ages 16–24) began the intervention (26 in the SEI group and 22 in the IPS group). Across both groups, participants averaged 22.17 years of age (*SD* = 1.58). Forty participants (83.3%) were male, and 8 (16.7%) were female. Eighteen participants (37.5%) were Black/African American, 16 (33.3%) were mixed race/ethnicity, 8 (16.7%) were Hispanic/Latino, 5 (10.4%) were White/Caucasian, and 1 (2.1%) was Asian/Pacific Islander. With respect to education, 29 participants (60.4%) had a high school diploma or GED. Fourteen participants (29.2%) reported working in paid employment at baseline. Regarding diagnoses of mental illness assessed at screening, 27 (56.3%) met the criteria for a major depressive episode, 21 (43.8%) met the criteria for antisocial personality disorder, 17 (35.4%) met the criteria for substance dependence, 15 (31.3%) met the criteria for generalized anxiety disorder, 13 (27.1%) met the criteria for post-traumatic stress disorder, 10 (20.8%) met the criteria for a manic episode, and 10 (20.8%) met the criteria for alcohol dependence.

Baseline and Attrition Analyses

There were no statistically significant differences between the SEI and IPS groups in the mental illness diagnoses at screening nor in the baseline characteristics in Table 1. In the SEI group, 26 participants began the SEI intervention, and 21 were available at follow-up (81%).

In the IPS group, 22 participants began the IPS intervention, and 17 were available at follow-up (77%). Figure 1 details the flow of participants through the intervention study.

There also were no statistically significant differences between the SEI and IPS groups on the rate of study attrition nor on intervention dosage (i.e., number of participants' weekly meetings with SEI or IPS employment, clinical, and case-management staff). Further, no adverse events were reported by participants in either group during or after the RCT.

Descriptive Analysis of Primary Employment Outcome (Paid Employment)

Among the full sample ($N = 48$), 14 participants (29.2%) reported working in a paid position at baseline, and 7 participants (18.4%) reported working at follow-up. In assessing the rates of paid employment by condition and over time, 34.6% ($n = 9$) of SEI participants and 22.7% ($n = 5$) of IPS participants reported working at baseline. By follow-up, 19.0% ($n = 4$) of SEI participants and 17.6% ($n = 3$) of IPS participants reported working in a paid position. There were no statistically significant differences between groups in rates of paid employment at baseline or at follow-up.

The ever-worked rate across both groups was 35.4% ($n = 17$). Over the duration of the study, 38.5% of SEI participants and 31.8% of IPS participants reported ever working. No statistically significant difference was detected between groups on the ever-worked rate. Collectively, SEI and IPS participants reported working primarily in restaurants and retail.

For the working-at-follow-up rate, participants who reported working at baseline had 7.91 greater odds of working at follow-up ($OR = 7.91$, $p < 0.05$, 95% CI [1.15, 54.39]), using logistic regression with adjustment for baseline working status and condition (SEI vs. IPS). The condition to which participants were assigned was not associated with greater odds of working at follow-up ($OR = 1.68$, $p = 0.61$, 95% CI [0.23, 12.24]).

Analysis of SEI and IPS Intervention Efficacy

Table 2 displays the baseline and follow-up mean score differences for the 38 (of 48 total) SEI and IPS participants who completed their respective intervention and the follow-up interview. No statistically significant changes in employment outcomes were detected among participants across both conditions between baseline and follow-up.

Analysis of Employment Outcomes between SEI and IPS Groups Over Time

Within-subjects effects—Table 3 presents the mean score differences between baseline and follow-up for the 21 SEI and 17 IPS participants who completed the intervention and follow-up interview. There were no statistically significant time effects detected for any of the employment outcomes. Likewise, no statistically significant interactions were detected between condition (SEI vs. IPS) and time (baseline and follow-up). Neither group changed significantly over time, nor did they change in different ways over time on the employment outcomes.

Between-subjects effects—Between-groups tests indicated that there was no statistically significant effect for condition (SEI vs. IPS). Overall, neither group fared significantly better or worse than the other on the study's employment outcomes.

Discussion

This study was a first attempt to measure employment outcomes of two employment interventions—which draw from different theoretical frameworks (social support vs. psychiatric rehabilitation and recovery) and methodological approaches (train-while-place and place-and-train)—for homeless youth experiencing mental illness. The findings provide new knowledge about how homeless youth fare in paid employment (and secondary employment outcomes) after 20 months of participating in one of two employment interventions. No statistically significant differences were detected across the full sample or between groups on the primary outcome (paid employment) or secondary outcomes (job tenure, hours worked, wages earned, total labor networks, and income from survival behaviors).

It is noteworthy that despite the theoretical and methodological differences between the SEI and IPS, neither intervention was superior to the other in employment outcomes. There are several explanations for this finding. First, the two approaches offer similar services (i.e., customized and long-term employment, clinical, and case-management supports), and participants received similar doses. The comparable intervention components and doses might have prevented one model from achieving superior outcomes. Second, as with many small businesses that are costly to start up and sustain, employees in a social enterprise might engage in other paid employment in addition to a small business. In effect, social enterprises can function as a portal to competitive employment, a complement to competitive employment, or as one's sole employment (Ferguson, 2007). It might be that the SEI participants also held paid employment positions in addition to their work in the agency-run business. Future research would benefit from including assessments of job type (i.e., prevocational, supported employment, and social enterprise) as well as the concurrent positions of those holding multiple jobs.

Despite the lack of statistical significance between groups, one interesting finding that emerged from this study was that participants who reported working at baseline were close to 8 times more likely than those not working at baseline to be working at follow-up, regardless of the condition to which they were assigned. It is important to note that our logistic regression model was limited by sample size in the number of baseline covariates. Nonetheless, that neither the SEI nor IPS group differed on diagnoses of mental illness or background characteristics suggests a likely relationship between employment engagement and retention. Consistent with prior research, a history of work is associated with improvements in both employment outcomes (e.g., job tenure; Burns et al., 2007) and nonvocational outcomes (e.g., mental health and social functioning; Burns et al., 2008).

This finding underscores the importance of getting homeless youth into the workforce—whether through social enterprises or supported employment programming—and supporting them in their job tenure while employed. One key feature of employment programs with

demonstrated efficacy in helping individuals with mental illness obtain and maintain competitive employment is the integration of employment and clinical services (Cook et al., 2005). Both the SEI and IPS interventions focus not only on helping people find jobs but also on retaining the jobs they find (or transitioning to jobs they prefer) through ongoing case-management and clinical services (Drake et al., 2012; Ferguson, 2007).

The overall paid employment rate (ever-worked rate) was 39% for the SEI group and 32% for the IPS group. These rates are comparable to other employment rates obtained in similar RCT studies of the IPS with populations who were formerly homeless (34%; Poremski et al., 2017) or currently homeless (44%; Rosenheck & Mares, 2007). Nonetheless, our rates are considerably lower than employment rates reported by other IPS programs with housed populations (61%; Bond & Drake, 2008). Given that the IPS model was developed with housed individuals experiencing mental illness, it might be that conditions related to experiencing homelessness (e.g., housing instability, food insecurity, transience, victimization risk, legal involvement, and difficulty maintaining personal hygiene; Dachner & Tarasuk, 2002) pose additional barriers to obtaining and maintaining competitive employment.

The discrepancy in overall employment rates (paid or competitive) between homeless and housed populations identified in this and other studies indicates a need to integrate more comprehensive and customized homelessness-support services (e.g., housing, legal, mental health, substance abuse, basic needs, etc.) into employment programming for individuals experiencing homelessness. These customized support services could then replace the generic case-management and clinical services offered by the SEI and IPS models.

Despite disproportionately high unemployment rates among homeless youth reported in the literature, it is promising that participants in this study engaged in employment services designed to support them in obtaining and maintaining paid employment. In the current study, 96% of youths approached to participate agreed to be randomized to one of two employment interventions integrated with clinical services. At 20 months, 81% of participants who began the SEI intervention and 77% of those who began the IPS intervention continued in their respective intervention. These high engagement and retention rates among homeless youth in employment services (vs. in health, substance-use, and mental health services) are consistent with prior research. One study with homeless youth (ages 13–24) in Los Angeles, CA, found that nearly half of the sample (47%) participated in employment services in the month prior to the study (Barman-Adhikari & Rice, 2014). In comparison, a separate study of homeless youth who also were residing in Los Angeles reported very low utilization rates for medical services (28%), substance-abuse treatment (10%), and mental health services (9%; De Rosa et al., 1999). Recognizing these high engagement/retention rates in employment services, researchers should continue to measure the employment outcomes associated with such services in order to understand which interventions most effectively contribute to positive employment outcomes.

Limitations

This study had several limitations that should be acknowledged when interpreting the results. First, although we oversampled by 40% to factor in likely attrition, the sample size

was small, and even smaller when considering those participants who reported working at baseline and follow-up. Our decreasing sample size over time contributes to low statistical power and limits the types of data analysis we could perform. Small samples and high attrition rates are common limitations in intervention research with this population (Altena et al., 2010; Slesnick et al., 2009; Xiang, 2012). Further, underpowered studies contribute to unreliable findings due to the reduced likelihood of detecting a true effect. Even when a true effect is identified, it is less likely that it reflects a true effect and more likely that the effect will be exaggerated (Button et al., 2013).

Despite limited power, this study attempted to address some of the limitations in prior intervention research with homeless youth, such as lack of randomization and weak methodological designs. This study also provides valuable new insights on employment outcomes among homeless youth. There have been few RCT studies of the IPS with homeless youth experiencing mental illness (see Poremski et al., 2017), nor of the IPS as it compares with other research-supported employment interventions integrated with clinical services, such as the SEI (see Ferguson, 2017).

Regarding a second limitation, the use of one agency as the study site limits generalizing the findings to the larger population of homeless youth (e.g., those who do not use drop-in centers). It is possible that more service-engaged youths with higher functioning chose to participate and that these qualities influenced employment outcomes. To address this limitation, a randomized comparative effectiveness trial is needed to compare the employment outcomes between the SEI and IPS models with a more heterogeneous population of homeless youth. This would then provide a better understanding of which subpopulations of homeless youth are more likely to engage in different employment interventions and how subpopulations fare in their employment outcomes.

Third, we did not collect more detailed employment variables, such as the number and type of jobs held concurrently and cumulatively or the specific sources of income. This oversight hindered our ability to make sense of the multiple between-group discrepancies we detected in job tenure, weekly hours, and weekly income. In a future effectiveness trial of the SEI and IPS with homeless youth, it will be vital to collect data on additional employment variables, such as *employment type* (competitive vs. noncompetitive; and full time, part time, temporary, or day labor), *number of jobs concurrently held*, *frequency of job transitions*, *days to first job* (number of days from entry into the SEI/IPS to first competitive job), *days on each job*, *earnings from other sources* (e.g., public assistance, street-survival behaviors, social enterprises), and *satisfaction with vocational services* (Bond, Campbell, & Drake, 2012; Poremski et al., 2017). Similarly, we observed variations in job tenure throughout the 20-month study, yet we only assessed outcomes at two time points (baseline and at 20 months). In a future effectiveness study, it also will be important to collect employment outcomes on a monthly basis, as young adults' job tenure undoubtedly changes over time (Arnett, 2004).

Fourth, we acknowledge that in the current study, we did not measure IPS program fidelity using the established 25-item Supported Employment Fidelity Scale (Bond, Peterson, Becker, & Drake, 2012). Rather, we assessed IPS and SEI program fidelity qualitatively

through separate quarterly meetings with agency administrative staff and IPS/SEI project staff. Because we did not use the existing Supported Employment Fidelity Scale for the IPS program, we cannot conclude that our IPS program operated with at least fair or good fidelity.

Lastly, we lacked a no-treatment or placebo control group as an additional study condition. As such, the lack of differences found between the SEI and IPS could also be consistent with the hypothesis that neither treatment was better than no treatment or a placebo in achieving the desired employment outcomes. A future comparative effectiveness trial of the SEI and IPS should include a third no-treatment or placebo group to test this hypothesis, using established fidelity measures to ensure that interventions operate with good (or better) fidelity.

Implications for Practice and Research with Homeless Youth

This study produced two important findings that have implications for practice and research with homeless youth experiencing mental illness. First, despite the lack of statistical significance between the SEI and IPS groups on primary and secondary employment outcomes, participants who were working at baseline were more likely to be working at follow-up, regardless of condition. Once homeless youths locate employment, it becomes equally important for the practice community to continue providing individualized support services (i.e., employment, case-management, and clinical services) to help them sustain this employment. Such support services must be customized to address the employment barriers specific to individuals experiencing homelessness (e.g., housing instability, food insecurity, transience, victimization risk, legal involvement, and difficulty maintaining personal hygiene).

Second, this study and other similar employment intervention studies with young people experiencing homelessness are limited in drawing more nuanced conclusions regarding their varied employment types and income sources. To remedy this limitation, it is urgent that the practice and research communities adopt a standardized measurement system that recognizes the various combinations of employment types and income sources common with this population. Practitioners, researchers, policymakers, and funders should consider adopting a common employment language among homeless youth. Toward this goal, agency assessment forms and intervention research interviews should, at minimum, collect data from youths on their employment type, number of jobs concurrently held, frequency of job transitions, days on each job, and earnings from other sources. Likewise, recognizing the frequent job transitions and short job tenures common among this population, assessments should be made regularly (at least monthly) and longitudinally over time. Email, phone, and/or text check-ins with working youths offer an important mechanism for collecting employment-related outcome data.

Future effectiveness research is needed to compare the SEI and IPS employment interventions that offer comprehensive and customized support services using more nuanced measures over a longer period of time. Only then will we better understand which interventions are most effective in helping homeless youth obtain and maintain paid employment.

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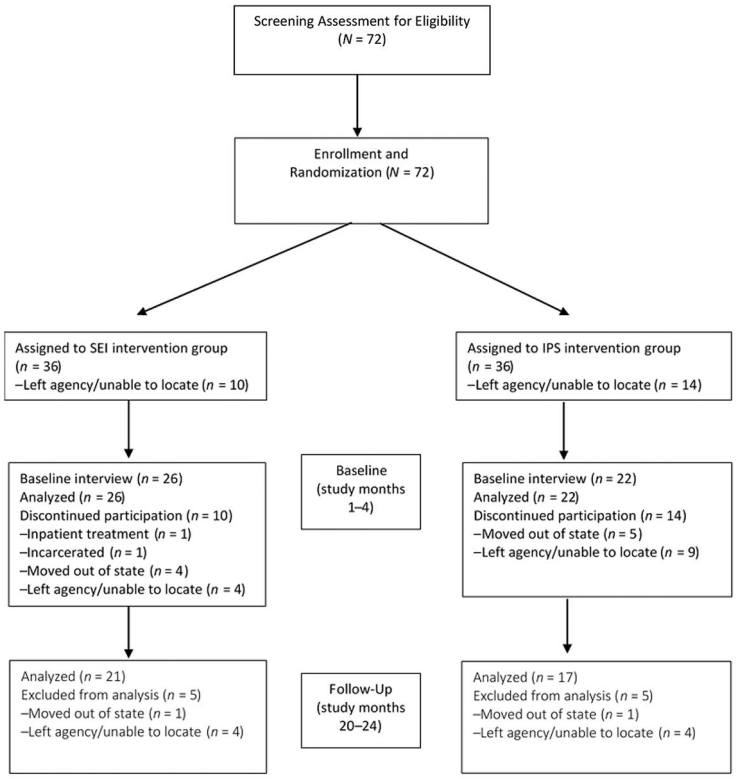

Figure 1.

Flow of participants through intervention study. SEI = social enterprise intervention; IPS = individual placement and support.

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Table 1

Baseline Characteristics for SEI and IPS Groups (N = 48)

	SEI (*n* = 26)		IPS (*n* = 22)	
	n	**%**	***n***	**%**
Gender				
Male	19	73.1	21	95.5
Female	7	26.9	1	4.5
Race/ethnicity				
Black/African American	12	46.2	6	27.3
Hispanic/Latino	4	15.4	4	18.2
Caucasian	3	11.5	2	9.1
Asian/Pacific Islander	1	3.8	0	0.0
Mixed	6	23.1	10	45.5
Educational level				
High school degree/GED (yes)	15	57.7	14	63.6
Working status (paid employment)				
Working	9	34.6	5	22.7
Income from survival behaviors (yes)[a]				
Selling self-made items	7	26.9	2	9.1
Selling personal possessions	9	34.6	7	31.8
Selling bottles/cans	9	34.6	3	13.6
Selling blood/plasma	0	0.0	3	13.6
Selling drugs	8	30.8	5	22.7
Panhandling	8	30.8	7	31.8
Gambling	5	19.2	3	13.6
Stealing	5	19.2	2	9.1
Survival sex/prostitution	0	0.0	0	0.0
Housing status (past 3 months)[b]				

	SEI (*n* = 26)		IPS (*n* = 22)		
	n	**%**	***n***	**%**	
Streets	10	38.5	10	45.5	
Shelter	9	34.6	12	54.5	
	SEI		IPS		
	M	*SD*	*M*	*SD*	*d*
Age	22.19	1.60	22.14	1.58	−0.03
Job tenure[c]	4.00	2.18	3.10	2.13	−0.42
Hours per week	30.61	16.44	19.20	13.85	−0.75
Weekly income (U.S. dollars)	$271.67	$162.25	$240.00	$100.93	−0.23
Total labor networks	5.31	9.19	4.64	7.46	−0.08
Total survival behaviors	1.96	2.05	1.45	1.10	−0.30

Note. SEI = social enterprise intervention; IPS = individual placement and support; *M* = mean; *SD* = standard deviation; *d* = Cohen's measure of effect size.

[a]Whether the participant had received any income from survival behaviors over the past 6 months (*no* or *yes*).

[b]Where participant reported she/he had lived over previous 3 months.

[c]Number of months participant was employed in paid position over past 6 months.

J Soc Social Work Res. Author manuscript; available in PMC 2019 April 01.

Table 2

Change in Employment Outcomes Between Baseline and Follow-Up Across SEI and IPS Conditions (N = 38)

	Baseline		Follow up				
	M	***SD***	***M***	***SD***	***t* (*df*)**	***d* [95% CI]**	***p***
Paid employment (primary)	0.28	0.45	0.17	0.38	1.44 (35)	−0.26 [−0.903, 0.375]	0.16
Job tenure[a]	4.00	2.45	3.00	2.94	0.61 (3)	−0.37 [−1.011, 0.272]	0.58
Hours per week	35.00	18.71	24.25	15.78	0.63 (3)	−0.62 [−1.272, 0.030]	0.57
Weekly income (U.S. dollars)	$400.00	$147.20	$1,095.00	$889.25	−1.62 (3)	1.09 [0.409, 1.772]	0.20
Total labor networks	4.66	6.38	4.75	4.79	−0.08 (31)	0.02 [−0.620, 0.652]	0.94
Total survival behaviors	1.59	1.34	1.75	1.22	−0.67 (31)	0.13 [−0.512, 0.761]	0.51

Note. SEI = social enterprise intervention; IPS = individual placement and support; *M* = mean; *SD* = standard deviation; *t* (*df*) = *t*-statistic (degrees of freedom); *d* = Cohen's measure of effect size.

[a]Number of months employed in paid position over past 6 months.

Table 3

Group Differences in Employment Outcomes Between SEI and IPS Groups Over Time (N = 38)

	SEI (*n* = 21)				IPS (*n* = 17)					
	Baseline		Follow-Up		Baseline		Follow-Up			
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F* (*df*)	*p*
Paid employment (primary)	0.30	0.47	0.20	0.41	0.25	0.45	0.13	0.34	2.03 (1, 34)	0.16
Job tenure[a]	4.33	2.89	2.00	2.65	3.00	_[b]	6.00	_[b]	0.06 (1, 2)	0.83
Hours per week	41.67	16.07	17.33	9.29	15.00	_[b]	45.00	_[b]	0.04 (1, 2)	0.86
Weekly income (U.S. dollars)	$466.67	$76.38	$1,060.00	$1,085.73	$200.00	_[b]	$1,200.00	_[b]	1.84 (1, 2)	0.31
Total labor networks	3.56	3.05	4.61	3.90	6.07	9.00	4.93	5.89	0.01 (1, 30)	0.97
Total survival behaviors	1.56	1.54	1.61	1.33	1.64	1.08	1.93	1.07	0.51 (1, 30)	0.48

Note. SEI = social enterprise intervention; IPS = individual placement and support; *M* = mean; *SD* = standard deviation; *F* (*df*) = *F* statistic (degrees of freedom).

[a]Number of months employed in paid position over past 6 months.

[b]*n* = 1.

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