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Using the Social Enterprise Intervention (SEI) and Individual Placement and Support (IPS) models to improve employment and clinical outcomes of homeless youth with mental illness¹

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Abstract

Prior research reveals high unemployment rates among homeless youth. The literature offers many examples of using evidence-informed and evidence-based supported employment models with vulnerable populations to assist them in obtaining and maintaining employment and concurrently addressing mental health challenges. However, there are few examples to date of these models with homeless youth with mental illness. The purpose of this article was thus to describe a methodology for establishing a university-agency research partnership to design, implement, evaluate, and replicate evidence-informed and evidence-based interventions with homeless youth with mental illness to enhance their employment, mental health, and functional outcomes. Data from two studies are used to illustrate the relationship between vocational skill-building/employment and mental health among homeless youth. The article concludes with a discussion of the implications of conducting community-based participatory employment and clinical intervention research. The author highlights the opportunities and tensions associated with this approach.

Keywords

supported employment; Individual Placement and Support (IPS); social enterprise; mental health; homeless youth; community-based participatory research (CBPR)

Introduction

Research with homeless youth suggests that their unemployment rates can be as high as 75% (Authors, 2008c, 2012; Whitbeck, 2009). Unemployment in this population is often chronic, with many averaging more than 8 months without work in a given year (Baron & Hartnagel, 1997). Recurrent homelessness is common and can be precipitated and prolonged by homeless youths' limited educational and employment skills, combined with histories of mental illness (Cauce et al., 2000; Whitbeck, 2009). Several studies indicate that over one third of these youth have dropped out of school, do not attend school regularly, or fail to earn a high-school diploma by age 18 (Thompson, Pollio, Constantine, Reid, & Nebbitt, 2002). Mental health research suggests that major depression, post-traumatic stress disorder (PTSD), and conduct disorder are 3 times higher in runaway youth than housed youth

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(Robertson & Toro, 1998) and co-morbidity is common (Cauce et al., 2000). Further, in comparison to their housed peers, homeless young people are 7 times more likely to use crack cocaine, 5 times more likely to use hallucinogens, and 4 times more likely to use heroin (Slesnick, Meyers, Meade, & Segelken, 2000).

Prior studies with housed youth with severe mental illness suggest that this population faces multiple illness-related obstacles, stigma, and poor service coordination, all of which can result in low rates of engagement and retention in employment. Findings from studies evaluating model demonstration transition programs for housed youth with emotional and behavioral disorders reveal that their unemployment rates can be as high as 46% (Carter & Wehby, 2003). In the case of homeless youth with mental illness, not only do they face the aforementioned employment barriers, but also the challenges inherent in living on the streets (e.g., lack of housing, personal hygiene issues, food insecurity, street-survival behaviors, criminal records, and limited education and job skills) (Cauce et al., 2000; Dachner & Tarasuk, 2002; Gaetz & O'Grady, 2002).

Despite high unemployment rates in *formal* employment, many homeless young people rely on informal sources of income, both legal (e.g., selling recycled materials or self-made items) and illegal (e.g., selling drugs; Gaetz & O'Grady, 2002; Kipke, Unger, O'Connor, Palmer, & LaFrance, 1997; Whitbeck, 2009). These income sources may be complementary to, or in lieu of, income from formal employment. Employment research with homeless young adults in four U.S. cities reveals that 31% reported earning an income exclusively from survival behaviors (i.e., prostitution, selling blood, dealing drugs, stealing, and panhandling) without participating in formal employment; 28% earned an income from full-time, part-time or temporary employment, without using survival behaviors; and 22% relied on both survival behaviors and formal employment for income (Ferguson, Bender, Thompson, Pollio, & Xie, 2011). In both formal employment and in the street milieu, homeless youth possess entrepreneurial skills, which they are able to employ toward legal ends (e.g., full- and part-time employment in the formal economy) and illegal ends (e.g., hustling, conning, dealing drugs in the street economy).

Employment is particularly important to homeless youth as it socializes them to the workforce, contributes to their identity formation, links them to conventional institutions, and provides income that facilitates their economic self-sufficiency (Baron & Hartnagel, 1997; Gaetz & O'Grady, 2002). Since the majority of these youth have emancipated from the child welfare system and their own biological families, economic self-sufficiency is often a matter of survival. Without access to employment training and opportunities during their transition to adulthood, homeless youth lack the income and resources needed to live independently, which can increase their risk of social and labor exclusion as well as chronic homelessness (Tyler & Johnson, 2006).

The literature offers many examples of using evidence-informed and evidence-based³ employment models with homeless and other disenfranchised populations to address their social and labor exclusion. For instance, evidence-informed employment models, such as social enterprises, have been used with vulnerable populations to train and employ them, to

³SAMHSA has identified three criteria for defining an intervention as evidence-based: 1) is included in Federal registries of evidence-based interventions; 2) is reported (with positive effects on the primary targeted outcome) in peer-reviewed journals; and 3) has documented evidence of effectiveness, based on guidelines developed by SAMHSA/the Center for Substance Abuse Prevention (CSAP) and/or the State (<http://captus.samhsa.gov/prevention-practice/defining-evidence-based/samhsa-criteria>). In some cases, however, sufficient research knowledge may not be available for new interventions that have not been subjected to efficacy and effectiveness trials; these interventions are informed by evidence but do not yet meet SAMHSA criteria. In other cases, evidence-informed interventions are developed with new populations with whom existing evidence-based approaches have not been piloted. As suggested by Eap and Nagayama Hall (2008), these interventions are developed when existing evidence-based approaches with new populations are lacking.

provide them with a sense of community and peer support, and to offer them clinical and other social services (Krupa, LaGarde, & Carmichael, 2003; Teasdale, 2010b). Social enterprises can refer to a nonprofit organization, a socially minded commercial business, or a revenue-generating venture established to create positive social impact in the context of financial considerations (Dees, 1998). Common examples of social enterprises that are used with vulnerable populations to pursue joint social and commercial business goals include work integration social enterprises (WISEs), vocational cooperatives, affirmative businesses or social firms, community businesses/enterprises, and peer-lending institutions (Teasdale, 2010b, 2012; Warner & Mandiberg, 2006). Social enterprises have been used with homeless adults (Shaheen & Rio, 2006; Teasdale, 2010b, 2012), adults with severe mental illness (Krupa et al., 2003; Mandiberg & Warner, 2012; Warner & Mandiberg, 2006), disadvantaged inner-city residents (Teasdale, 2010a), gang-involved youth (Fremon, 2008), and homeless youth with mental illness (Authors, 2008c). Collectively, findings suggest that social enterprises equip individuals with vocational skills and clinical services needed to obtain and maintain a job, facilitate access to vocational skill-building and/or employment for clients experiencing homelessness and/or mental illness, and provide income to facilitate economic self-sufficiency for disenfranchised populations (Authors, 2008c; Krupa et al., 2003; Mandiberg & Warner, 2012; Teasdale, 2012).

Similarly, the evidence-based supported employment model (Individual Placement and Support [IPS]) aims to assist individuals with severe mental illness in gaining and maintaining competitive employment by offering individualized and long-term support through integrated vocational and clinical services (Becker & Drake, 2003; Drake, Bond, & Becker, 2012). The IPS model is based on eight principles: 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 co-located 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 benefits need personalized benefit planning when considering employment; 5) *Rapid job search*: The job search process begins within one month of the client meeting with an employment specialist and beginning a 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; and 8) *Systematic job development*: Employment specialists build an employer network based on clients' interests, developing relationships with local employers by making systematic contacts (Drake et al., 2012; Swanson, Becker, Drake, & Merrens, 2008). The IPS has been used with adults with severe mental illness (Bond et al., 2007; Mueser et al., 2004), with homeless adult veterans with psychiatric or addiction disorders (Rosenheck & Mares, 2007), with housed young adults with first-episode psychosis (Nuechterlein et al., 2008; Rinaldi et al., 2004), and with homeless young adults with mental illness (Authors, 2012). Considerable evidence from IPS studies indicates that clients who participate in vocational rehabilitation with integrated and coordinated clinical services report improvements in relationships, self-esteem, hope, and life satisfaction, in addition to gains in employability, work hours and income (Bond et al., 2007; Gold et al., 2005; Lehman et al., 2002; Mueser et al., 2004).

Review of the literature reveals complementary employment models integrated with clinical services that assist vulnerable populations in locating and maintaining employment, and concurrently addressing the mental health and life challenges that can hinder their employment success. In light of the aforementioned employment and mental health challenges of homeless youth, this article describes a methodology for establishing a university-agency partnership using community-based participatory research (CBPR). The author provides two examples of using CBPR to design, implement, evaluate and replicate

evidence-informed and evidence-based employment interventions with homeless youth with mental illness to enhance their employment, mental health, and functional outcomes. Data from two studies illustrate the relationship between vocational skill-building/employment and mental health among homeless youth. The article concludes with a discussion of the implications of conducting community-based participatory employment and clinical intervention research. The author highlights the benefits and limitations of using CBPR to integrate vocational and clinical services for homeless youth.

Methodology for Using CBPR to Establish University-Agency Partnerships for Employment Intervention Research

CBPR provides an appropriate method for partnering with social service agencies to design practice interventions that are responsive to client-identified needs and staff-identified service gaps as well as feasible in practice settings. Researchers suggest that effective CBPR partnerships are based on principles of shared power and leadership, two-way open communication, constructive conflict resolution, cooperative intervention development and evaluation, and participatory decision-making among researchers, agency staff and clients, and the community (Minkler & Wallerstein, 2003; Schultz, Israel, & Lantz, 2003).

Beginning in 2003, the principal investigator (PI) solicited a small seed grant from the university designed for collaborative university-agency research to address local social problems. In preparing the proposal, the PI approached the executive directors of 12 community-based, non-profit organizations in Los Angeles that serve homeless youth to obtain their input and support for the proposal. The PI asked each director what he/she would like to accomplish with seed money designed to use research to address social problems among homeless youth. Directors unanimously responded that they had a clear idea of the programs they were using in their respective agencies, but they were unaware of what other agencies were doing as well as the existing best practices for effectively working with homeless youth. The PI included these findings into the seed grant proposal and received funding to prepare a monograph of best practices for homeless youth in community-based, homeless youth agencies in Los Angeles. Given the global scope of the street-youth phenomenon as well as the innovative work occurring with this population in cities around the world, the PI incorporated into the final monograph complementary data from additional homeless youth agencies in Mumbai and Nairobi. Findings across studies and countries suggest that vocational programs that offer clinical support, job skills and placement, and educational opportunities are successful in facilitating these youths' exit from the streets and entrance into formal employment and social services (Authors, 2008a).

The PI and collaborating researchers compiled these findings into a monograph of best-practice models for homeless youth in Los Angeles, Mumbai and Nairobi and distributed 2,500 copies across countries to practitioners, policymakers, and academics working in the field of youth homelessness (Authors, 2005). Subsequently, investigators conducted a series of focus-group discussions among agency administrators and practitioners in Los Angeles to disseminate and process the findings as well as to determine next steps for developing new and strengthening existing programs based on research data. This reciprocal process of practice informing research and research informing practice served as the catalyst for the university-agency research partnership between the PI and the two agencies that later hosted the two employment intervention studies described in this article (Gambrill, 1999). These partnerships are paramount for researchers to gain access to staff and clients with whom they can design, test and evaluate interventions, from whom they can collect data, and to whom they can hand over data, treatment manuals, and ultimately, the administration of the intervention itself.

During 2005, the PI worked with staff from two host agencies to collect employment and mental health pilot data from the youth and to develop grant proposals on the select employment model(s) in each agency. Participating in prolonged engagement in the field setting, the PI also spent 5–10 hours per week at the host agencies to gain credibility among the staff and youth clients (Padgett, 1998), often volunteering to lead youth workshops or participating in existing agency activities. In late 2005, the PI and one host agency received funding for a jointly prepared proposal to develop and pilot a vocational cooperative (the Social Enterprise Intervention) with homeless youth (Author, 2007). Subsequently in 2008, the PI and both host agencies received additional funding to adapt an existing evidence-based supported employment intervention (i.e., the Individual Placement and Support [IPS])—originally designed for adults with severe mental illness—with homeless youth with mental illness (Authors, 2012). The goal of both studies was to collect pilot data to later solicit larger grants from the National Institute of Mental Health.

Pilot Findings from Employment Intervention Research at Host Agencies

Findings from each pilot study are summarized below to illustrate the relationship between vocational skill-building/employment and mental health among homeless youth. In the first example, the PI and one host agency developed a new evidence-informed intervention with homeless youth—the Social Enterprise Intervention (SEI) model. In the second example, the PI and two host agencies adapted an existing evidence-based supported employment intervention—the Individual Placement and Support (IPS) model—with homeless youth with mental illness. Human subjects' approval was secured from the PI's university for both studies.

Developing Evidence-Informed Interventions: Social Enterprise Intervention (SEI)

Model SEI Intervention Overview

The *Social Enterprise Intervention* (SEI) is one example of a social investment approach that aims to impact homeless youths' mental health status, social support, functional outcomes, and service use by substituting their street behaviors with income-generating alternatives and providing clinical services. There are four stages in the 20-month SEI model: 1) *vocational skill acquisition* is a 4-month course in which youth receive technical training and education concerning specific vocational skills; 2) *small-business skill acquisition* is a separate 4-month course that focuses on business-related skills needed to start a social enterprise, such as accounting, budgeting, marketing and management; 3) *social enterprise formation and distribution* is the 12-month phase in which participating youth establish a social enterprise in a supportive, empowering, and community-based setting; and 4) *clinical services* is the mental health component provided by the SEI clinician and/or case manager, which is woven throughout all stages over 20 months.

To determine the specific products that would be created through the SEI, the PI held initial focus groups with the host-agency staff and youth, who identified that youth would make beanies (or wool caps) embroidered with logos they created using graphic design software. The host agency sponsored the project and provided space, computers, and clinical and case-management staff support. The graphic design instructor was recruited through a local arts' institute and hired by the PI with grant funding. Two project mentors, who were graduate students recruited through the university, were trained by the PI. Three master's in business administration (MBA) students from the university conducted a feasibility analysis with the youth of the vocational cooperative. Among other items, the feasibility analysis identified 1) a market for the youths' products, 2) cooperative marketing strategies, 3) capitalization

needs of the cooperative, 4) cooperative organizational structure, and 5) cooperative members' roles and responsibilities.

SEI Pilot Study Sampling Procedure

Convenience sampling was used to select the SEI and control-group youth from the homeless youth drop-in center that hosted this 9-month study. Participating youth met three inclusion criteria: 1) age 18–24 years old; 2) had attended the agency 2 or more times a week for the month prior to the study; and 3) committed to attending the SEI program for at least both the 4-month vocational and business training courses. Of the 100 youth approached during the one-month engagement stage, 20 signed up to participate. Of these 20, 16 participated in the intervention. Although the response rate for SEI participation was low, it approaches the typical response rate of 20 to 25% among the general population in intervention studies (Leonard et al., 2003). A separate control group of 12 youth was also used at the agency. These youth participated in regular agency services as well as the baseline and follow-up interviews. An attempt was made to match the SEI and control youth on age, gender and ethnicity.

SEI Data Collection and Measures

Researchers conducted two 60- to 90-minute, semi-structured interviews with the youth at baseline and follow up. Youth were compensated with gift cards at a local establishment. *Depression* was assessed using the Reynolds Depression Screening Inventory (RDSI, Reynolds & Kobak, 1998). The range of RDSI raw scores is 0 to 63. Scores of 10 or less indicate no depression; 11 to 15 indicate mild clinical severity; 16 to 24 indicate moderate clinical severity, and scores of 25 or more indicate severe clinical severity. The Cronbach's alpha for the 19 items on the RDSI was $\alpha = 0.84$. *Satisfaction with life* was assessed using the Satisfaction with Life Scale (SWLS, Diener, Emmons, Larsen, & Griffin, 1985). Each item is scored from 1 to 7, with a range from 5 to 35. The Cronbach's alpha for the 5 SWLS items was $\alpha = 0.74$. *Peer support* was a composite variable of the sum of four items on the Friends Subscale of the Adult Self Report (ASR, Achenbach, 1997). The response categories for each item range from *none* to *5 or more* for questions including: "About how many close friends do you have?" The range of scores is from 0 to 12; higher scores indicate greater peer support. *Family support* measured the frequency with which the youth reported that they see, write, or talk to their immediate family. Responses range from *less than 1–2 times per year* to *everyday*. The range of scores is from 1 to 5; higher scores reflect increased family support. Finally, *service utilization* measured the number of other agencies at which the youth were receiving services.

SEI Pilot Study Findings

Twenty-eight homeless youth participated in the 9-month SEI study (16 in the SEI and 12 in the control group). Participants were on average 21 years old ($SD = 1.41$). Twenty youth were male and 8 were female. Eleven youth identified as African American, 6 as Hispanic, 6 as Caucasian, 4 as mixed or other ethnicity, and 1 as Asian (Authors, 2008c). There were no significant differences between the SEI and control groups on baseline variables, nor on the rate of study attrition. Eleven of the 16 SEI youth (69%) and 8 of the 12 control-group youth (67%) were available at follow up. Retention rates for both groups were respectable, given that subject retention in intervention studies among the general population ranges from 25 to 85%, with most rates between 45 and 65% (Leonard et al., 2003).

The pilot study answered four research questions regarding whether the SEI influenced the youths' 1) mental health status; 2) high-risk behaviors; 3) social support; and 4) service use. Results from independent *t*-tests demonstrate that the SEI Program had a 6.45-unit increase in total life satisfaction from baseline to the end of follow-up, compared with a 2.25-unit

decrease in the control group ($p=.02$; See Table 1). The SEI Program also had a 0.50-unit increase in family support over the study period, as compared to a 1.20-unit decrease observed in the control group ($p=.03$). Two additional borderline-significant differences emerged. First, the SEI group experienced a 3.00-unit increase in peer support, whereas the control group had a 0.13-unit increase ($p=0.06$). Second, the SEI group experienced a 5.45-unit decrease in depressive symptoms, compared with no change observed in the control group ($p=0.10$). Although these latter two differences reflect trends in the data, there were statistically significant within-groups differences for the SEI youth between baseline and follow-up for both peer support ($p=.02$) and depression ($p=.005$). Overall, the SEI demonstrated initial success in improving the youths' satisfaction with life, family support, peer support, and depression (Authors, 2008c). Additional qualitative findings from focus groups with SEI youth during and after the intervention support these results. Youth noted that the SEI positively influenced their self-esteem, motivation, employability, peer and family relationships, and pro-social behaviors (Authors, 2008b).

Adapting Evidence-Based Interventions: Individual Placement and Support (IPS) Model IPS Intervention Overview

The Individual Placement and Support (IPS) model of supported employment is an evidence-based vocational intervention that targets individuals with severe mental illness with customized, long-term, and integrated vocational and clinical services to help them gain and maintain competitive employment (Becker & Drake, 2003; Drake et al., 2012). In this 10-month pilot study with two host agencies, the eight IPS supported-employment principles (Drake et al., 2012) were adapted to work with homeless youth with mental illness in a nonprofit, homeless-youth agency setting. First, all youth who met the study inclusion criteria were eligible (*zero exclusion*). Second, the host-agency employment specialist, case managers, clinicians, and supervisor began meeting weekly with the PI using a case-conference format to collectively discuss active client cases (*vocational/clinical service integration*). Third, the IPS employment specialist worked with study participants to obtain community-based jobs at competitive wages (*competitive employment*). Fourth, the IPS case managers worked closely with the Department of Public Social Services and the Department of Rehabilitation to educate IPS participants on the impact of paid employment on their public assistance benefits (*benefits counseling*). Fifth, the IPS employment specialist worked with participants to begin the job-search process within one month of the youths' vocational assessment/career profile (*rapid job search*). Sixth, the hostagency IPS staff continued to provide individualized assistance to participants who were working throughout and after the study (*follow-along supports*). Seventh, the IPS employment specialist used the participants' vocational assessment to guide the type of job sought and nature of support needed (*preferences*). Eighth, the employment specialist engaged in job development by spending about 40% of each week in the community to build relationships with new and existing employers (*systematic job development*). The IPS mental health components were developed in this study for homeless youth with mental illness. Clinical services included individual and group cognitive behavioral therapy, motivational interviewing, harm-reduction, and referrals to psychiatrists for medication.

One of the two agencies implemented the IPS model and the second agency served as the control condition. An agreement was made that the control agency would be able to implement the IPS model at the end of the study. In the IPS agency, we used host-agency staff (i.e., one employment specialist, three case-managers, and two clinicians), who were already known and trusted by the youth participants, to implement the IPS model. Staff were trained in the IPS model over 2 days by an experienced IPS trainer and the PI. To enhance the intervention's fidelity, the PI met with the IPS staff weekly and the IPS trainer also held biweekly conference calls with staff during the study. Once trained, IPS staff were assigned

20 cases among them for the pilot study. Agency staff handled the pilot cases in addition to their regular (non-IPS) caseloads. All study participants met individually with the employment specialist, one case manager, and one clinician at least weekly. The IPS clinicians and case-managers held their meetings with youth within the host agency, whereas the employment specialist held agency- and community-based meetings.

IPS Pilot Study Sampling Procedure

Convenience sampling was used to select the IPS and control-group youth from the two host agencies for the 10-month study. Participating youth met four inclusion criteria: 1) age 18–24 years; 2) English speaking; 3) primary clinical diagnosis in the past year using the Mini International Neuropsychiatric Interview (MINI, Sheehan et al., 1998) for one of six mental illnesses (Generalized Anxiety, Post Traumatic Stress Disorder, Major Depressive Episode, Mania/Hypomania, Antisocial Personality Disorder, and Alcohol/Substance Use Disorders); and 4) desire to work as expressed by a signed consent form. In the IPS agency, 22 youth were approached and screened with the MINI, 2 of whom did not meet the diagnostic requirement. At the control agency, clinicians conducted a pre-screening with 20 youth based on their clinical work with them and referred the 16 whom they thought would meet the diagnostic requirement. All 16 screened with the MINI were eligible. The control group received usual-care agency services. An attempt was made to match the SEI and control youth on age, gender and ethnicity.

IPS Data Collection and Measures

Researchers conducted 45–90-minute, semi-structured baseline and follow-up interviews with participating IPS and control youth, who were compensated with gift cards at a local establishment. The youths' *ever-worked rate* was determined by employment specialists, who reported during the final study month whether the youth had worked in any type of paid employment during the 10 months. Youth were considered to be “working at some point” if they had shown a pay stub to the employment specialists during the 10 months (0=*never held paid employment* and 1=*held paid employment*). A second variable, *working-at-follow-up rate*, was used to complement the staff-reported ever-worked rate. Youth were asked at baseline (*work1*) and at the 10-month follow up (*work2*) whether in the past month they had any form of employment, including both competitive and all forms of paid employment (0=*no* and 1=*yes*). *Monthly work rate* refers to whether the youth were working during a particular month over the 10-month study. Employment specialists were asked each month whether the study participants were working. Youth were considered to be working if they showed the employment specialists a pay stub (0=*no* and 1=*yes*). The proportion of monthly work rate was calculated as the total number of months worked over 10 months, divided by 10. *Weekly hours worked* was a continuous variable measuring the total hours per week worked at follow up as reported by the youth. Lastly, *weekly income* was a continuous variable measuring the total income per week reported by youth at follow up from all forms of paid employment.

IPS Pilot Study Findings

Thirty-six youth participated in the 10-month pilot study (20 IPS and 16 control youth). Across both groups, youth were on average 21.39 years old ($SD=1.70$). The majority (69.4%) were male. Close to half (44.4%) identified as Hispanic, 33.3% as African American, 11.1% as Caucasian, and 11.1% as other/mixed. Analysis of baseline differences reveals that compared to the control group, the IPS youth were younger (20.6 vs. 22.4 years) ($t=3.62$, $p=.001$) and less likely to live on the streets (5 vs. 43.8%) ($X^2=7.72$, $p=.012$). They were also significantly more likely to be diagnosed with Manic Episode (50 vs. 12.5%) ($X^2=6.42$, $p=.024$) and PTSD (50 vs. 12.5%) ($X^2=5.63$, $p=.032$). Attrition analysis reveals a significant difference between the IPS and control groups on the rate of study attrition

($X^2=7.09$, $p=.011$). Ninety percent of the IPS group (18/20) and 50% of the control group (8/16) were available at follow up.

Chi-square and Fisher's exact tests, independent *t*-tests, and logistic regression were used to test the five hypotheses. In comparison to the control group, IPS youth were expected to have greater improvement at follow up in their 1) ever-worked rate, 2) working-at-follow-up rate, 3) monthly work rate, 4) weekly work hours and 5) weekly income. Regarding the ever-worked rate reported by employment specialists, IPS youth were more likely to have worked at some point during the 10-month study ($X^2=8.69$, $p=.003$, $OR=9.4$). Eighty-five percent (17/20) of the IPS group and 37.5% (6/16) of the control group worked at some point during the study. For the youth-reported working-at-follow-up rate, while only significant at the $p=0.10$ level, the IPS group had 7.83 greater odds of working at follow up than the control group ($p=0.06$, $OR=7.83$) using logistic regression with adjustment for baseline working status and agency site. Two-thirds (66.7%) of the IPS and 25% of the control group reported working at follow up. For the monthly work rate, IPS youth worked a significantly greater number of months over the study ($t=-2.83$, $p=.008$, $d=0.95$). The IPS group worked on average 5.20 months ($SD=3.33$) compared to 2.19 months ($SD=2.97$) among the control group. Between 45–70% of IPS youth and 19–31% of the control group were working during any one month of the study (See Figure 1)

Since there were no significant differences in weekly working hours or weekly income at baseline between the IPS and control groups, these two outcomes were directly compared at follow up. No significant differences existed between groups. The IPS group averaged 33.43 hours per week ($SD=3.95$), whereas the control group averaged 32.50 weekly hours at follow up ($SD=10.61$). The effect size of Cohen's *d* for weekly work hours was 0.12. Regarding weekly income at follow up, the IPS group averaged \$263.57 ($SD=\147.61), whereas the control group averaged \$192.50 ($SD=\116.67). The effect size of Cohen's *d* for weekly income was 0.53.

Discussion and Implications

Findings from two employment intervention pilot studies suggest that social enterprise and supported employment models are feasible with homeless youth with mental illness as well as with staff administering them in community-based agencies. Collectively, SEI and IPS models demonstrate potential successful outcomes related to mental health (e.g., depression, life satisfaction, social support) and employment (e.g., ever-worked rate, working-at-follow-up rate, and monthly work rate). Both studies also support the use of CBPR to develop research-practice partnerships to design, implement, evaluate, and replicate these models. Further, these pilot efforts contribute to extant findings on the benefits of integrating employment and clinical services for populations with mental illness and other life challenges (Cook et al., 2005; Mueser et al., 2004; Nuechterlein et al., 2008; Rosenheck & Mares, 2007). Future CBPR studies using randomized clinical trials are warranted to confirm and generalize these initial findings.

Service design and delivery that are based on fundamental assumptions of segregated services will likely continue to produce separate employment and clinical services. In contrast, identifying and challenging these assumptions with pilot data supporting the therapeutic influence of vocational skill-building and employment on clients' mental health will likely produce more integrated services (Mandiberg, 2012). Drawing from this complementary assumption that employment is therapeutic for clients with mental illness (Harnois, Gabriel, WHO, & ILO, 2000), this article highlights the potential of integrated employment and clinical programming and offers examples of how vocational and mental

health services can be combined to accomplish positive outcomes for homeless youth with mental illness.

The underlying philosophy of programs that integrate employment and clinical services (e.g., the SEI and IPS models) is that clients' economic well-being impacts all dimensions of their personal well-being. Through employment, individuals benefit from time structure, social contact, social context, and social identity, all of which influence their mental health (Harnois et al., 2000). Combining employment and clinical services, the SEI model aims to help homeless youth develop job skills and motivation to change in order to make better informed life and employment choices. Likewise, the IPS model aims to assist homeless youth with severe mental illness in gaining competitive employment by offering individualized and long-term support through integrated vocational and clinical services.

Since integrated employment and clinical programs require ongoing communication and collaboration among separate groups of agency staff, who in many traditional agencies, may not customarily discuss clients' cases nor engage in collective treatment planning (Cook et al., 2005), CBPR can be an effective method for refashioning agency/community cultures and practices from segregated toward more integrated services. CBPR purports that all stakeholders and beneficiaries invested in the intervention (i.e., researchers, boards of directors, administrative staff, program staff, clients, and community members) engage in shared power and leadership using two-way open communication, cooperative strategies, and participatory decision-making (Minkler & Wallerstein, 2003; Schultz et al., 2003). CBPR partnerships are also consistent with the social work philosophy of involving both clients and service providers in the design, implementation, and evaluation of interventions (Gibbs & Gambrill, 2002).

In the SEI pilot study, notably the host-agency executive director, staff and youth shared leadership and power in the conceptualization of the SEI model, the pilot-study proposal development, the implementation of the SEI pilot study from 2005–2006, and the development of the subsequent NIMH R34 proposal, which was funded from 2009–2011 to compare outcomes between the SEI and IPS models in a randomized clinical trial. To secure the initial support of the host-agency board of directors and agency staff for the SEI pilot proposal, the PI attended multiple meetings with the agency board members and staff to discuss the project, solicit input, and incorporate the boards', director's and staffs' feedback into the proposal. The PI also coordinated several meetings among faculty from the university's School of Business and agency staff to discuss the business and legal aspects of developing a for-profit vocational cooperative within a non-profit. Business students also regularly met with agency staff and youth during their 3-month feasibility analysis of the vocational cooperative. Homeless youth were equally participatory in the decision-making processes. To incorporate the youths' perspectives into the SEI design, the PI held focus groups with clients to determine the most appropriate vocational skills of interest to this population. Finally, community members with expertise in graphic design were also involved in the SEI implementation through responding to solicitations over *Craigslist* and the host-agency website for guest lectures by local social entrepreneurs, technical assistance with the vocational cooperative, and donations of materials for the SEI courses.

Similarly in the IPS pilot study, the agency administration, division director, staff, and youth collaborated in the pilot-study proposal development, the implementation of the IPS pilot study from 2009–2010, the adaptation of the IPS model principles, and the development of several subsequent federal and foundation proposals. One of these proposals was funded in 2012 to institutionalize the IPS at one agency as their primary employment program. New agency staff are now regularly trained using the pilot-study IPS training materials and treatment manual. Staff involved in the original IPS study (i.e., supervisor, employment

specialist, clinicians, and case managers) also continue to meet weekly to discuss IPS cases in this agency.

In preparation for the pilot study, the PI also met with board members and staff on multiple occasions to discuss the project, solicit feedback, and incorporate the agency's input into the proposal. To incorporate the staff's and youths' perspectives on the IPS supported employment principles, the PI held multiple focus groups throughout the project with agency staff and clients to determine which IPS principles needed to be adapted for working with homeless youth with mental illness. For instance, IPS with housed adults with mental illness frequently incorporates immediate family members in clients' treatment plans (i.e., *follow-along supports*). In the IPS with homeless youth clients, we used the youths' natural support systems (i.e., street families, street peers, and youth-identified supportive staff) to offer follow-along supports.

To ensure fidelity to the IPS model, the PI and IPS trainer introduced evidence-based materials to staff during a 2-day IPS training held at the host agency. Open, two-way communication was fostered among IPS staff, the PI, and the IPS trainer through weekly meetings with the PI and biweekly phone calls with the IPS training consultant to discuss specific cases and troubleshoot issues. Throughout the study, the PI and IPS trainer observed and provided feedback to staff on inter-staff and staff-client interactions. Staff were highly participatory in adapting the IPS model in their agency and with their population by integrating several of their existing employment and mental health agency practices into the study, such as taking the IPS youth on biweekly field trips to search for jobs in the community. During these community outings, experienced IPS youth frequently modeled for less-experienced youth their initial interactions with employers and solicitations of job openings and applications.

Finally, the IPS employment specialist met frequently with local employers and community members to strengthen ties between the agency and the community as well as to develop potential employment and internship linkages for IPS youth. These job-development efforts resulted in securing competitive employment and paid internships for some IPS youth. For other youth, these efforts led to job-preparation activities, such as mock interviews with local employers and community volunteers, employment workshops offered by volunteer employers and community members at the agency, and field trips to local companies for IPS youth.

The complementary SEI and IPS examples provided in this article suggest potential for using CBPR to develop new evidence-informed and adapt existing evidence-based employment interventions with homeless youth. For individuals experiencing homelessness and related social and labor exclusion, there is no "wrong path" to employment (Shaheen & Rio, 2007). When conceptualizing interventions with new populations with whom existing evidence-based approaches have not been piloted, it is optimal to consider the population being studied, rather than relying solely on theories or practices that have not yet been applied to this population (Eap & Nagayama Hall, 2008). For instance, the SEI model was developed inductively using CBPR among researchers, agency staff, clients, and community members in the absence of similar social investment models used with homeless youth. In contrast, when there are considerable data from studies using evidence-based models with similar populations, it is fitting to adapt existing interventions. In addition to myriad studies examining IPS outcomes with adults with severe mental illness, for whom the IPS model was developed, the IPS model has also been adapted to work with homeless adult veterans with psychiatric or addiction disorders (Rosenheck & Mares, 2007), with housed young adults with first-episode psychosis (Nuechterlein et al., 2008; Rinaldi et al., 2004), and with homeless youth with mental illness (Authors, 2012).

Despite the potential for using CBPR to create effective and sustainable intervention research partnerships, this approach is not without its challenges. First, incorporation of multiple stakeholders and beneficiaries in the process of designing, implementing and evaluating interventions in the best cases can lead to a synergistic partnership in which all perspectives are heard, valued, and included (Minkler, Blackwell, Thompson, & Tamir, 2003). However, the presence of multiple actors, who often have competing ideas, interests, and strengths can create tensions that if left unaddressed, can derail the intervention's process and outcomes. In the IPS pilot study, tensions arose with differential perspectives of the youths' employability among agency staff and employers. For example, some non-employment staff (i.e., agency psychiatrists and clinicians on the youths' IPS support teams) held the belief that the youth were "too sick to work" or that work would exacerbate their mental health symptoms. This protectionist mentality of clients with severe mental illness by clinical staff is noted as a frequent barrier to supported employment programs, even when clients themselves express the desire and willingness to work (Cook, 2006). Similarly, some local employers noted that because the youth were homeless (i.e., in cases in which the youth chose to disclose this life challenge), the youth would be unable to demonstrate punctuality, attend to their personal hygiene, and otherwise meet the responsibilities of the position. In these cases of competing perspectives among stakeholders in the IPS intervention, the PI and IPS staff used relevant data and literature to train clinical staff and employers on the therapeutic nature of work for clients with mental illness (Cook, 2006; Harnois et al., 2000) and on successful employment outcomes for persons experiencing mental illness and homelessness (Mueser et al., 2004; Rosenheck & Mares, 2007).

Second, as with any new community-based intervention, SEI and IPS programs require startup funding, staff training, and considerable time to gain credibility and support from the host agency and community as well as from the broader scientific community and funders (Christopher, Watts, McCormick, & Young, 2008; Minkler et al., 2003). Similarly, in the nonprofit agencies and low-income communities of color in which considerable CBPR is conducted, indigenous resources may be lacking and front-end funding may be necessary to build local knowledge and capacity before interventions can be developed and implemented (Minkler et al., 2003). In the SEI pilot study, tensions arose between the demands for legal and technical assistance for the non-profit and the availability of qualified professionals in the agency and community. To respond to this challenge, the PI and agency staff solicited pro-bono legal representation from a legal aid organization outside the community. Technical assistance was solicited from faculty at the university (also outside the community), who taught courses in social entrepreneurship and offered groups of students during their semester-long courses to conduct agency consultation as graded course assignments. A more sustainable CBPR approach would have been to solicit funding to invest in developing, training, and growing indigenous (internal) agency and community legal and technical supports. For example, a foundation grant for board development such as those offered by the Heckscher Foundation for Children (<http://www.heckscherfoundation.org>) would have allowed us to grow the agency's board of directors to include an employment attorney (vs. using an employment attorney outside the community). Additionally, partnership with the university's Society and Business Lab (<http://www.marshall.usc.edu/faculty/centers/sbl>) would have allowed us to train agency staff or local community entrepreneurs in technical skills and marketing software (vs. having business students conduct the feasibility analysis themselves). Whereas we were effectively able to address the aforementioned legal and technical hurdles in the short term in the IPS study, a long-term CBPR approach would have accomplished the goal of developing and strengthening local capacity-building knowledge and skills to respond to emerging needs over time.

Conclusion

In light of high rates of both chronic unemployment and mental illness among homeless youth, integrated services for this population that address their employment and clinical needs are needed to assist them in transitioning to adulthood. The societal and economic impact of failing to address the needs of homeless young people is a short-term concern because they require a disproportionate amount of health, mental health and social services; yet there is also a long-term concern. Without access to employment during the transition to adulthood, homeless youth lack the income and resources needed to survive, which can lead to social and labor exclusion as well as chronic homelessness. Community-based participatory research is one method through which researchers and practitioners can partner to design, implement, evaluate, and replicate evidence-informed and evidence-based employment interventions for this population. Despite the noted challenges of this approach, CBPR is a promising way to incorporate the perspectives, skills and strengths of multiple stakeholders into addressing youth homelessness. Not only does this approach develop and expand the capacity-building knowledge and skills in clients, staff, agencies, and communities, it also financially empowers each of these entities in an era of limited public funding by connecting homeless youth to social enterprises and competitive employment in the community.

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Figure 1. Percent of homeless youth employed by study month

Note: Adult IPS model monthly work rate = 35–45% (Twamley, Jeste, & Lehman, 2003)

Table 1
Baseline, Follow-up and Change Scores of Outcome Measures for SEI and Control Groups

Variable	Baseline Mean (SD) ^a		Follow-up Mean (SD)		Change Score Mean (SD) ^b		p (1- tailed)	Cohen Effect Size ^c
	SEI	Ctrl	SEI	Ctrl	SEI	Ctrl		
Satisfaction with Life (SWLS)	18.81 (7.16)	20.58 (8.69)	22.27 (6.36)	17.13 (10.11)	6.45 (5.89)	-2.25 (11.61)	0.02	0.954
Family Support	2.91 (0.83)	3.50 (1.51)	3.22 (1.48)	3.17 (1.47)	0.50 (1.05)	-1.20 (1.64)	0.03	1.155
Peer Support (ASR)	6.50 (3.92)	7.83 (4.04)	8.64 (2.20)	7.50 (3.82)	3.00 (4.20)	0.13 (3.14)	0.06	0.722
Depression (RDSI)	12.13 (8.63)	14.00 (9.53)	9.27 (7.71)	12.25 (12.65)	-5.45 (5.56)	0.00 (12.02)	0.10	0.590

^aSEI: *n*=16; Ctrl: *n*=12;

^bChange scores available only for subjects who had valid observations for both baseline and follow-up interviews;

^cStandardized effect size corrected for small sample size.