Correlates of Long-Term Unemployment Among Inner-City Adults With Serious and Persistent Mental Illness

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This study identified demographic, clinical, and vocational rehabilitation-related correlates of long-term unemployment among 219 adults with severe mental illness. Fifty-one percent of the sample had been unemployed five or more years before enrollment. Older age, a diagnosis of psychosis, severity of negative symptoms, and more previous hospitalizations were all significantly related to long-term unemployment. Gender, race, education, substance disorder diagnosis, severity of negative symptoms, and vocational training experience were not. The findings underscore the relevance of clinical and neurocognitive impairments to long-term unemployment and point to the need to critically reevaluate the effectiveness of traditional vocational rehabilitation services. (*Psychiatric Services* 52:101–103, 2001)

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People with severe psychiatric disorders experience unemployment rates typically above 85 percent; chronic unemployment is common (1). Although numerous studies have investigated the relationship between clinical and demographic indicators and vocational outcomes, most of them focus on outcome and follow-up or on program evaluation rather than on work history trajectories (2,3). Given the longitudinal and episodic nature of employment among people with serious and persistent mental illness (4), it is important to move beyond recording employment status as a single-moment-in-time characteristic and to describe employment history over time.

This study compared two groups of unemployed adults living with serious and persistent mental illness—a group who had held one or more jobs during the past five years and a group who had not. The relationship between long-term unemployment and demographic and clinical characteristics and participation in vocational rehabilitation programming was evaluated.

Methods

The sample included 219 participants in the Baltimore sample of the multisite Employment Intervention Demonstration Program. The five-year program (1995–2000) was funded to evaluate new ways of enhancing employment opportunities for mental health care consumers. Prospective participants were identified through a randomized list of all consumers receiving psychiatric care in one of four programs serving persons with serious and persistent mental illness. Written informed consent was obtained from participants; all met criteria for serious and persistent mental illness (5).

Fifty-seven percent of the sample (124 participants) were men, and 165 participants (75 percent) were from minority groups (mostly African Americans). Ages ranged from 21 to 69 years (mean±SD=41±8.5 years). A total of 107 participants (49 percent) did not graduate from high school. A total of 195 (89 percent) received Supplemental Security Income, Social Security Disability Insurance, or both types of Social Security benefits.

Of the 219 participants, 162 (75 percent) had a psychotic disorder as their primary diagnosis, and 54 (25 percent) had a mood disorder—most had bipolar disorder. The mean±SD lifetime number of hospitalizations was 11.4±10.1; only two participants (1 percent) had never been hospitalized. A total of 165 (75 percent) had a lifetime substance use disorder diagnosis. Eighty-seven (40 percent) reported current use of alcohol or an il-

Table 1

Neurocognitive, clinical, substance use, and vocational variables predicting long-term unemployment among persons with serious and persistent mental illness

Variable	N persons[1]	–2LogL[2]	Coefficient	Odds ratio[3]
Neurocognitive				
Repeatable Battery for the Assessment of Neuropsychological Status	145	178.6***	0.29*	1.04
Estimated IQ	145	177.3***	0.32**	1.05
Clinical				
Negative symptoms	211	269.3***	–0.15*	0.96
N hospitalizations	206	252.9***	–0.33***	0.94
Age at first hospitalization	208	251.4***	0.39***	1.08
Substance use diagnosis				
With current use	211	271.9***	–0.04	0.87
With past-year use	211	271.1***	–0.09	0.73
With lifetime use	211	268.9***	–0.16	0.51
Vocational rehabilitation training[4]	211	268.6***	–0.15	0.53

[1] The numbers vary because of missing data.

[2] Chi square test for the full model with all covariates—age, gender, race, educational level, and psychiatric diagnosis

[3] For dichotomous variables the odds ratio represents the odds of having had at least one job during the past five years for one level of the variable of interest relative to the other level of that variable, adjusted for all of the covariates. For continuous variables, the odds ratio represents the extent to which the odds of having had at least one job during the past five years increase for every unit increase in the independent variable of interest adjusted for all of the covariates. For example, the odds of having had at least one job during the past five years increases 1.05 times for each point increase in IQ, adjusted for all of the covariates.

[4] Job skills training or job-finding skills training

*p<.05

**p<.01

***p<.005

licit substance; 110 (50 percent) reported some use of alcohol or an illicit substance in the past year.

Enrollment in the Employment Intervention Demonstration Program was restricted to those who were unemployed for at least three months before program entry. Of the 219 participants in the sample, 109 (51 percent) had been continuously unemployed for five or more years, and 105 (49 percent) had held one or more jobs during that time. No data were available for five participants. We obtained this information from responses to an item on a questionnaire that asked about work experience in the past five years. The dichotomous split was also selected to highlight the differences between those with a sporadic recent employment history and those who had not worked in several years. This dichotomous measure of long-term unemployment was the dependent variable.

At enrollment in the Employment Intervention Demonstration Program, participants completed the Structured Clinical Interview for DSM-IV (SCID-IV) Patient Version and the Positive and Negative Symptoms Scale (PANSS). They were interviewed about their clinical history and experiences with vocational programming. During the first 18 months of the demonstration program, all enrollees completed a full neuropsychological battery, which included the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) and four subscales of the Wechsler Adult Intelligence Scale, which were used to estimate full-scale IQ scores. A total of 150 of the participants in our study completed the neuropsychological battery.

Results

Of the 219 participants, 208 (95 percent) reported at least one paid job during their lifetime. However, the tenure of work was relatively brief; the mean±SD number of months employed at the longest-held job was 40.9±46.8; median=24 and mode=12). Among the 105 participants (49 percent) who held at least one job in the past five years, recent employment experiences were usually part-time. Among these participants, the mean±SD number of hours worked a week was 29.9±17.57. Job tenure was brief—a mean±SD of 20±45.06 months. The jobs held were low paying, with a mean±SD hourly wage of $5.14±$2.62.

Gender, race, and educational status were not significantly related to long-term unemployment. Older people, however, were more likely to have been unemployed; the mean± SD age of those who had been unemployed for more than five years was 43.13±8.7 years. The mean age of those who had held at least one job was 38.72±7.4 years (t=–3.99, df=108, 104, p<.001).

Those with a psychotic disorder were more likely to have been unemployed for five or more years than those with a mood disorder—87 of the participants with a psychotic disorder (55 percent) versus 20 of those with a mood disorder (38 percent) (χ^2=4.77, df=1, p<.05).

Table 1 present the results of logistic regression models used to test relationships between long-term unemployment and a variety of clinical, neurocognitive, and vocational training variables. Diagnosis (psychotic disorder versus mood disorder), age, gender, education level, and race were entered as covariates. More hospitalizations and earlier age at first hospitalization were significantly associated with five-year unemployment. More pronounced negative symptoms were associated with a greater likelihood of long-term unemployment; however, the relationship fell just short of significance. Lower RBANS scores, indicating greater neurocognitive deficits, and lower estimates of global IQ were also both significantly associated with longer-term unemployment.

Current, past year, and lifetime *DSM-IV* diagnoses of alcohol and drug use disorders were not associated with long-term unemployment, nor was vocational training in the past five years—either job skills training or job-finding skills training.

Discussion

This study examined longitudinal employment histories rather than considering employment as a single-moment-in-time characteristic. The only demographic characteristic associated with long-term unemployment was age. The lack of relationship of gender, race, and education to long-term unemployment suggests that the varied and deleterious effects of long-term serious mental illness may overshadow the impact of demographic factors on unemployment.

This hypothesis is reinforced by the positive correlation between indicators of illness severity, including more lifetime hospitalizations and younger age at first hospitalization, and the likelihood of long-term unemployment. The positive correlation between neurocognitive deficits, including lower RBANS scores and lower estimated IQ, are consistent with research demonstrating the importance of neurocognitive performance for various functional outcomes (6). Together they highlight the importance of vocational programs' carefully attending and responding to the neurocognitive and clinical deficits associated with serious and persistent mental illness.

The lack of a significant relationship between substance use diagnoses and long-term unemployment was surprising given the robustly documented ways that substance use impairs functioning across a variety of domains (7). This finding may suggest that substance abuse alone is not very useful as a screening measure for employment readiness.

Further, unlike most past studies, which evaluated relationships between specific vocational services and prospective employment outcomes, this investigation considered whether previous rehabilitation experience was related to employment history, and it found no correlation. There are several possible explanations. First, study participants came from a population of consumers with severe and long-standing psychiatric illnesses who may have needs that are not being met by traditional vocational interventions.

Second, because all study participants were drawn from the same treatment system, the vocational programming they received and the employment environment in which they lived may not be representative of other locales and systems, warranting caution in generalizing beyond the study sample. Third, the vocational services available to people with serious and persistent mental illness have long been criticized. Only 27 percent of the sample in this study, for example, reported ever having received such services, despite the fact that most people living with serious and persistent mental illness regard employment as a top priority (8).

In addition, the specific vocational rehabilitation services study participants received in the past simply may not have been effective. In Maryland and elsewhere during the time span of this study, vocational rehabilitation focused on psychosocial support and preemployment transitioning models and generally was not well integrated with clinical services. More recently, supported employment and "place and train" programs have been showing greater success (9,10). Thus the results of this study raise questions about what services would lead to more positive long-term employment outcomes; effective programs may include integrated services and more supported employment models.

The effects of long-term serious mental illness may overshadow the impact of demographic factors on unemployment.

Overall, the findings underscore the relevance of clinical impairments and neurocognitive deficits to long-term employment and highlight the need to critically reevaluate the effectiveness of traditional vocational rehabilitation services. ♦

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