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Early psychosis and employment ☆

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ABSTRACT

Background: Employment may be an important factor in helping patients with early psychosis to recover rapidly and to avoid involvement in disability and welfare programs.
Methods: This study followed 351 patients with early psychoses, either primary psychoses or substance-induced psychoses, for two years to examine their patterns of competitive employment in relation to service use, psychosocial outcomes, and disability and welfare payments.
Results: Workers differed from non-workers at baseline and over two years. At baseline, they had better educational and employment histories, were more likely to have substance-induced psychoses rather than primary psychoses, were less likely to have drug dependence, had fewer negative symptoms, and had better psychosocial adjustment. Over two years, baseline psychosocial differences persisted, and the workers used fewer medications, mental health services, and disability or welfare payments.
Conclusions: Employment predicts less service use and fewer disability claims among early psychosis patients. Thus, greater attention to supported employment early in the course of illness may reduce federal insurance costs and disability payments.

1. Introduction

Epidemiologic data (Kessler and Frank, 1997) as well as numerous clinical studies (Rinaldi et al., 2010) show that employment rates decline rapidly after the onset of psychosis. For people with long-term psychotic illnesses, employment rates are often dismally low, for example, 10–17% (Lindamer et al., 2003; Bertram and Howard, 2006; Rosenheck et al., 2006; Salkever et al., 2007). These studies are, however, often restricted to people with the most serious diagnoses, such as schizophrenia, and do not follow people longitudinally as psychiatric disorders evolve. People with less severe disorders may return to the workforce in higher numbers.

Several findings suggest that employment may have a healthful effect on people with mental disorders. First, employment provides structure, meaning, income, and positive mental health in the general population (Warr, 1987; Blustein, 2008; Butterworth et al., 2011). Second, many people who have been disabled by mental illness report that employment was an essential feature of their recoveries (Rogers, 1995; Bailey, 1998; Steele and Berman, 2001; Clevenger, 2008; Strickler et al., 2009). Third, several studies of supported employment for people with serious mental illness have found that improvements in non-vocational areas, such as self-esteem, friendships, and symptom control accrue to those who become workers (Mueser et al., 1997; Bond et al., 2001; Burns et al., 2009). Finally, studies of early psychosis patients have found that early returns to education and employment may delay or prevent disability (Cougnard et al., 2007; Álvarez-Jiménez et al., 2012; Krupa et al., 2012).

The purpose of this report was to examine employment outcomes in a large and diverse sample of early-psychosis patients who presented to emergency departments in upper Manhattan and were followed carefully for two years in the Columbia University Study of Early Psychosis. Previous reports on this study (Caton et al., 2005, 2006, 2007; Drake et al., 2011) have not focused on employment. We hypothesized that the patients who were employed would fare better on other psychosocial outcomes, would use fewer mental health services over time, and would be less likely to use disability and welfare programs.

2. Methods

2.1. Participants

Following previous studies (Bromet et al., 1992), we defined early psychosis as experiencing psychosis for less than six months (including hospitalizations or untreated psychotic symptoms) prior to presentation in emergency departments. Research interviewers recruited 400 consenting patients who presented in five psychiatric emergency departments of upper-Manhattan with initial diagnoses of primary psychosis plus substance use or substance-induced psychosis between 2000 and 2002 (Caton et al., 2005). Of these, 15 did not meet study criteria. Interviewers collected data on 385 at baseline, 319 at one year, and 273 at two years. Of the 351 patients who were interviewed at baseline and had at least one follow-up interview, 217 (61.8%) had

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research diagnoses of early-phase psychosis plus substance use, 100 (28.5%) had diagnoses of substance-induced psychoses, and 34 (9.7%) had original diagnoses of substance-induced psychoses but changed to primary psychoses at the 12-month follow-up interview. No further diagnostic changes occurred in these categories between months 12 and 24.

Among the 217 with a diagnosis of primary psychotic disorder, the diagnoses were schizophrenia (N = 80, 36.9%), psychotic mood disorder (N = 73, 33.6%), psychotic disorder not otherwise specified (N = 32, 14.7%), schizophreniform disorder (N = 18, 8.3%), schizoaffective disorder (N = 8, 3.9%), and delusional disorder (N = 6, 2.8%). The most common substances used by the primary psychotic disorder group were cannabis (N = 120, 55.3%), alcohol (daily or near daily use for at least one month) (N = 50, 23.0%), cocaine (N = 35, 16.1%), and hallucinogens (N = 11, 5.1%).

Among the 134 patients initially diagnosed with a substance-induced psychotic disorder, the specific diagnoses were psychosis induced by two or more substances (mostly cannabis and one other drug) (N = 54, 40.3%), alcohol-induced psychosis (N = 25, 18.7%), cocaine-induced psychosis (N = 24, 17.9%), cannabis-induced psychosis (N = 18, 13.4%), hallucinogen-induced psychosis (N = 5, 3.7%), sedative-induced psychosis (N = 3, 2.2%), heroin-induced psychosis (N = 2, 1.5%), stimulant-induced psychosis (N = 1, 0.7%), and uncertain (N = 2, 1.5%).

2.2. Measures

Research interviewers assessed current competitive employment every six months (yes/no) using the Quality of Life Interview (Lehman, 1988). Competitive employment denotes mainstream jobs, owned by the worker and paying regular wages, and excludes sheltered and set-aside jobs. The number of follow-up assessments in which the participant was competitively employed (range 0–4) measured amount of employment.

The interviewers established diagnoses using the Psychiatric Research Interview for Substance and Mental Disorders (PRISM) (Hasin et al., 1996), an instrument specifically developed to assess psychiatric and substance use comorbidity according to DSM-IV criteria (American Psychiatric Association, 1994). According to DSM-IV, a psychotic symptom must be persistent or repetitive and not an isolated experience, and a primary diagnosis of psychosis is given only if there is no evidence of heavy substance use or withdrawal, if the full psychiatric syndrome is established prior to heavy substance use, or if the syndrome persists for more than four weeks after the cessation of acute intoxication or withdrawal. In contrast, a substance-induced psychosis diagnosis is given for disorders occurring only during periods of heavy substance use or soon thereafter, provided the substance was capable of causing the psychotic symptom. During these periods, the psychotic symptoms must exceed the expected effects of intoxication or withdrawal and be sufficiently severe to warrant independent clinical attention. DSM-IV lists the expected intoxication and withdrawal symptoms for each class of drug. For substance-induced psychotic disorders, the DSM-IV does not include minimum duration or symptom requirements as it does for a primary psychotic disorder.

Data for the PRISM included patient self-reports obtained during the interview, observations and diagnostic assessments of clinical staff, hospital medical records, family/collateral reports of patterns of substance use and onset of psychosis, and urine toxicology screens conducted routinely on all emergency department admissions. Reliability for diagnoses relevant to this report was good to excellent for current and lifetime primary and substance-induced psychosis and schizophrenia (k = 0.59–0.86) and for current and lifetime alcohol, cannabis, cocaine and heroin dependence (k = 0.63–0.96) (Hasin et al., 1996). Further details of PRISM diagnostic procedures are described elsewhere (Hasin et al., 1996, 2006b).

Interviewers used the Positive and Negative Syndrome Scale (PANSS) to assess psychotic symptoms at each interview (Kay et al., 1992). The alpha coefficients of reliability for the PANSS scale scores were 0.78 for the positive symptom scale and 0.81 for the negative symptom scale. Interviewers used the Community Care Schedule (Caton, 1997) to collect information on demographics, living arrangements, education, employment, and criminal justice contacts; the Quality of Life Inventory (Lehman, 1988) to assess quality of life on the overall life satisfaction scale (seven points from "terrible" to "delighted" at the beginning and end of interview (range = 2–14)); and the World Health Organization Psychiatric Disability Assessment Schedule (WHO/DAS), which contains ratings on a 5-point scale from 1 = no disability to 5 = gross disability, to assess social and family problems. WHO collaborators have reported high levels of inter-rater agreement on ratings of major social roles covered in the WHO/DAS: kappas were equal to or greater than 0.7 in 86% of comparisons, and equal to or greater than 0.8 in 60% (World Health Organization, 1988). Finally, interviewers assessed hospitalizations, incarcerations, homelessness, and treatments, including medications and outpatient services, at each interview using a time-line follow-back calendar as part of the PRISM interview.

2.3. Procedures

Following assessment, treatment, and stabilization in emergency departments, interviewers recruited patients for the study. For about three-quarters, recruitment occurred after transfer to an inpatient service; for the others, recruitment occurred prior to discharge following treatment in the emergency department for up to 72 h. Interviewers assessed diagnoses, including alcohol and drug dependence, at baseline, at 12-month follow-up, and at 24-month follow-up using DSM-IV criteria and the PRISM interview. Assessments focused on substance dependence because the reliability of abuse diagnoses has been generally lower and much more variable than the excellent reliability of dependence (Hasin et al., 2006a). Interviewers administered the other interviews at baseline and at 6-, 12-, 18-, and 24-month follow-ups. The institutional review boards of the New York State Psychiatric Institute/Columbia University Medical Center and the other participating institutions approved and monitored the research protocol. All participants gave written informed consent.

2.4. Analyses

Because amount of employment was a count variable with large variance (greater than the mean), we assessed predictors using Poisson regression and included a scale parameter to adjust for over-dispersion. We analyzed longitudinal correlates of employment status using generalized estimating equations (GEE) (Liang and Zeger, 1986; Zeger and Liang, 1986), which accommodate attrition, missing data, and auto-regression. We used SAS 9.2 (SAS, 2008) for all analyses.

3. Results

Table 1 shows demographic and clinical differences between workers and non-workers at baseline. The workers at baseline had more education, were more likely to be diagnosed with substance-induced psychosis (and not changing to primary psychosis), were less likely to have non-alcohol drug dependence, and had fewer negative symptoms.

Fig. 1 shows longitudinal employment rates by diagnosis. The substance-induced psychosis group had the highest rate of improvement, increasing significantly from 26% at baseline to 44% at 24 months (Z-score = 4.05, $p < .0001$). The primary psychosis group started at a similar level but did not increase significantly over 24 months (24% to 31%). The switch group (substance-induced psychosis to primary psychosis) began at a very low level and improved marginally (3% to 24%; Z-score = 1.75, $p = .08$) without catching up with the two other groups. The substance-induced psychosis group worked in a higher proportion of follow-up periods than the primary psychosis group over time (Z-score = 2.41, $p = .02$).