

DRC Working PAPER

WORKING PAPER NUMBER: 2014-08

Reasons for Job Separations Among People with Psychiatric Disabilities

July 2014

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Reference Number: 40112.MPR13-3

The research reported herein was pursuant to a grant from the U.S. Social Security Administration (SSA) funded as part of the Disability Research Consortium (DRC). The findings and conclusions expressed are solely those of the author(s) and do not represent the views of SSA or any agency of the Federal Government.

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CONTENTS

ABSTRACT v

EXECUTIVE SUMMARYvii

INTRODUCTION..... 1

METHODS 3

 Study Background..... 3

 Measures 5

 Statistical Analysis 7

RESULTS..... 7

DISCUSSION..... 9

REFERENCES..... 13

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ABSTRACT

We explored the relative effects of adverse working conditions, job satisfaction, wages, worker characteristics, and local labor markets in explaining voluntary job separations (i.e., quits) among employed workers with psychiatric disabilities. Data come from the Employment Intervention Demonstration Program, an eight-site study of employment interventions for 1,648 adults with serious mental illnesses. A total of 2,086 jobs were ended by 892 study participants during a 24-month observation period. Employment data were gathered from workers on a weekly basis and included occupational category, hourly salary, hours worked per week, employment benefits, job tenure, and demographic characteristics. Separation data were recorded weekly by employment and research staff and included job ending status, reasons for separation, job dissatisfaction, and adverse working conditions. Stepped multivariable logistic regression analysis was used to examine the impact of variables in each domain on the likelihood of quitting. Results revealed that over half (59%) of the 2,086 job separations were voluntary job endings or quits, while 41% were involuntary separations including firings (17%), temporary job endings (14%), and layoffs (10%). In multivariable analysis, individuals were more likely to quit positions at which they worked for twenty hours a week or less, those with which they were dissatisfied, low-wage jobs, non-temporary positions, and jobs in the structural (construction) occupations. Voluntary separation was less likely for workers who were older, members of racial/ethnic minority groups, and those residing in regions with lower unemployment rates. Patterns of job separations for workers with psychiatric disabilities mirrored some findings regarding job leaving in the general labor force but contradicted others. Overall, antecedents of separation reflect the concentration of jobs for workers with psychiatric disabilities in the secondary labor market with its low-salaried, temporary, and part-time employment.

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EXECUTIVE SUMMARY

Employment for people with disabling mental disorders is a complex phenomenon influenced by labor market conditions, individual work environments, worker characteristics, and public disability policies. Even among those receiving vocational rehabilitation services, employment tends to be low-wage, part-time, temporary, and high-turnover. We combined approaches from labor market research, human resource management, and psychiatric rehabilitation to assess antecedents of job separation in a large cohort of adults with psychiatric disabilities. Our model examined voluntary job separations (i.e., quits) in terms of several domains. One domain was adverse working conditions known as “job disamenities,” defined as employment that is part-time, temporary, with no fringe benefits, no direct relationship with employers, and demanding physically, mentally, and interpersonally. Other domains included job dissatisfaction, wages, worker demographic and clinical characteristics, and local labor market conditions.

We used job separation data from the Employment Intervention Demonstration Program (EIDP), a multi-site study conducted from 1996-2001 that was designed to generate knowledge about effective approaches for enhancing employment among adults with serious mental illnesses. Data came from programs in eight states including Arizona, Connecticut, Maine, Maryland, Massachusetts, Pennsylvania, South Carolina, and Texas. At each site, study participants were randomly assigned to: 1) an experimental condition in which they received evidence-based supported employment services, defined as integrated services delivered by employment specialists who were part of multidisciplinary teams that met frequently to coordinate employment and other services, with the goal of placement into competitive jobs that were tailored to patients’ career preferences, using a job search process beginning soon after program entry, and providing ongoing vocational supports throughout the entire study period, or 2) a comparison condition. Data come from 2,086 jobs held by 892 study participants who ended at least one position during the study’s 24-month follow-up period. Predictors of voluntary separations were examined in a series of multivariable logistic regression analyses in which different domains were entered in hierarchical steps.

Key Findings

Of the 2,086 job separations, half (59%) were voluntary job ending or quits. The remainder included involuntary separations due to firings (17%), temporary job endings (14%), and layoffs (10%). In the multivariable analysis, a strong association was found between job dissatisfaction and greater likelihood of quitting. Another significant association was between low-wage labor and greater likelihood of voluntary separation. Married or cohabiting workers were more likely to quit than single workers, and younger workers were more likely to quit than older workers. In comparison to Caucasian workers, minority workers were less likely to quit their jobs. Workers were more likely to quit part-time jobs than positions providing full-time compensation. Voluntary separation was more likely at study sites in the Northeast, Mid-Atlantic, and

Southwest, all of which had lower average monthly unemployment rates than the reference region of the Southeast. Workers were less likely to quit jobs that were temporary versus those with indefinite tenures. Finally, voluntary separation likelihood was greater for jobs in the structural (construction) industries compared to other industries.

Policy Implications

Consistent with prior research, very few of the 2,086 jobs ended with workers moving on to another job. A high proportion of people with psychiatric disabilities quit due to job dissatisfaction, which is likely a reflection of their typical underemployment or employment in poor quality jobs. In the EIDP, lower wage jobs were significantly associated with greater likelihood of workers voluntarily separating from jobs versus being involuntarily separated. In addition, only 5% of voluntary job separations were attributed to concern over loss of benefits, and SSI/DI beneficiary status was not associated with greater likelihood of quitting. This suggests that workers were not highly concerned about loss of cash benefits due to employment, most likely because low earnings and short job tenures generally did not reach levels at which benefits would be reduced or terminated due to Substantial Gainful Activity or completion of Trial Work Periods.

While it was not common, some workers with psychiatric disabilities did leave their jobs voluntarily in order to take other, more preferable employment that they had secured ahead of time. Yet given that this was a relatively infrequent occurrence, it may be that job retention support should be redefined as employment retention assistance, helping workers to transition smoothly between jobs either to pursue career development or satisfy other life choices. Our results also suggest the need for job follow-along services that focus on career enhancement for workers in the secondary labor market. Since market segmentation research suggests that these workers will acquire few transferrable skills, job-related training, or opportunities for advancement, ongoing support should include regular screening of jobs for advancement opportunities and assessment of workers' needs for further training and education that would enable them to obtain jobs in the primary labor market.

A challenge facing return to work and job retention efforts is the development of living-wage, career-oriented employment opportunities enabling people with psychiatric disabilities to escape from a cycle of poverty and dependence on Social Security disability benefits. Our results suggest that policies supporting career-building should include vocational rehabilitation services that help workers keep working or return more easily to work after experiencing the onset or recurrence of a psychiatric condition.

INTRODUCTION

Employment for people with psychiatric disabilities¹ is a complex phenomenon influenced by a multitude of factors including labor market conditions, individual work environments, worker characteristics, and public disability policies (Cook & Burke, 2002). Although effective models of vocational rehabilitation have been developed to help people with psychiatric disabilities obtain employment, most jobs that result are low-wage, part-time, and short-tenure (Leff et al., 2005; Resnick et al., 2003). Prior research indicates that job separations of workers with this condition are typically voluntary, yet high proportions of workers quit without having obtained another position (Cook et al., 1992; Becker et al., 1998). Given the known therapeutic and economic benefits of employment for people with psychiatric disabilities (Bond et al., 2001; Evans & Repper, 2000), as well as their contributions to national economies (Schofield et al., 2011; Stewart et al., 2003), more information about the causes and antecedents of voluntary job separations is needed to inform return to work and job retention interventions as well as public disability employment policies. We combine approaches from labor market research, human resource management, and psychiatric rehabilitation to assess multiple antecedents of voluntary job separation in a large cohort of adults with psychiatric disabilities.

Prior research on job separations among this group of workers has not always used commonly recognized definitions of job ending statuses, impeding the comparison of results across studies. One example is the practice of combining separation statuses into categories deemed “unsatisfactory,” such as collapsing firing and quitting without having another job (Becker et al., 1998; Mak et al., 2006), or combining firing with quitting due to poor performance or not liking the job (Gates et al., 2005). In some but not all cases, enough information is provided to reconstruct job separation categories that mirror those used in labor force research. Here, we see that quitting for any reason is the most common separation status reported for 63% (Cook, 1992), 59% (Wong et al., 2001), 57% (Mak et al., 2006), and 50% (Becker et al., 1998). Firing is less common, reported for 19% (Cook, 1992), 16% (Becker et al., 1998), and 8% (Mak et al., 2006). A noteworthy proportion of separations are due to the ending of temporary jobs, reported for 33% (Mak et al., 2006), 31% (Gates et al., 2005), 25% (Becker et al., 1998), and 10% (Wong et al., 2001). Finally, occurrence of separation due to lay-off is less common and varies widely at 16% (Wong et al., 2001), 13% (Cook, 1992), 10% (Becker et al., 1998), and 2% (Mak et al., 2006).

Research regarding the reasons given for different job ending statuses has found that most voluntary job separations are due to poor job performance, job dissatisfaction, lack of work

¹ The term disability is used here to refer to the level of functional impairment experienced by study participants, all of whom met criteria for the designation of “severe and persistent mental illness” based on diagnosis, duration, and level of disability as established by the Substance Abuse and Mental Health Services Administration (Manderscheid & Sonnenschein, 1992). Approximately 72% of participants were SSI/DI beneficiaries at some point during the 24-month study follow-up period.

motivation, poor labor force attachment, and worker stress or other mental health concerns. In a population of 143 adults with severe mental illness who obtained jobs through supported employment programs, Becker and colleagues (1998) found that only 13% of quits were followed by workers moving on to other employment. Factors associated with job separations that were followed by unemployment included less recent work experience, interpersonal problems, problems related to mental illness, poor job performance and job dissatisfaction. In a study of 252 adults with severe mental illness participating in vocational rehabilitation programs, Cook (1992) found that only 11% of workers quit to take an independent job. Factors associated with job separations included inability to perform job tasks, stress, and low motivation to hold the job. In a study of 108 employed adults with psychiatric disabilities receiving on-going vocational support services (Gates, Klein, Akabas et al., 2005), 45% were fired or quit within six months of placement due to job dissatisfaction or inability to perform the job. Predictors of job separation were lower hourly wage, temporary work, and more employment support hours. Most separations occurred in the first month of employment, with reasons for voluntary separations including quitting due to inability to perform job tasks, job dissatisfaction, and exacerbation of mental health condition.

There is ample evidence that the labor market position of people with psychiatric disabilities is systematically unfavorable relative to that of non-disabled individuals, with high levels of exclusion, unemployment, underemployment, wage and other forms of discrimination (Cook & Burke, 2002). Jobs held by people with psychiatric disabilities tend to be characterized by low wages and high turnover (Gates et al., 2005). However, low-wage, low-skill jobs are not unique to people with psychiatric disabilities. In the U.S. labor market, low wage jobs are part of what is considered the secondary labor market, characterized by high job instability and little opportunity to ascend career ladders, few fringe benefits, and more gender and racial discrimination than in the primary labor market (Berger & Piore, 1980). By some analyses, the secondary labor market accounts for almost half of all jobs (Bernstein & Hartmann, 2000), and labor force bipolarization has been growing over the past four decades (Autor & Dorn, 2013). This is mirrored in research on jobs held by workers with disabilities (Catalano et al., 1999). For example, a study of jobs held by workers following vocational rehabilitation (Shafer, Banks & Kregel, 1991) found that the large majority were in the secondary labor market clustered primarily in two types of occupations: food service (48.7%) and custodial jobs (35.4%).

Job turnover is frequent in the secondary labor market, especially in industries where disadvantaged workers tend to find employment such as retail trade and business services (Lane, 2000). Lane points to lower job attachment among younger workers, unmarried workers, and female workers as a reason for higher quit rates in these groups. Voluntary separations among low-wage workers are detrimental to both employers, who incur rehiring and training costs, and employees, who lose income and opportunities for job advancement (Kaye & Nightingale, 2000).

Labor economists have focused on wage as a predictor of voluntary job separations and, more recently, researchers have borrowed from the human resource management literature to also include job satisfaction and consideration of job “disamenities” or adverse working conditions (Böckerman & Ilmakunnas, 2006). Job disamenities are job specific and worker-perceived factors that lead to job dissatisfaction which, in turn, leads to voluntary job separations, regardless of the effects of wages, individual worker characteristics, industry features, and local unemployment rates (Böckerman & Ilmakunnas, 2009).

Given the complexity of the context in which jobs and job separations occur for people with psychiatric disabilities, we applied Böckerman & Ilmakunnas’ model (2009) to examine antecedents of voluntary job separations not only in terms of job holder characteristics, but also aspects of their working conditions and work attitudes. These domains include adverse working conditions or job disamenities (employment that is part-time, temporary, with no fringe benefits, no direct relationship with employers, and demanding physically, mentally, and interpersonally); job dissatisfaction; wages; worker demographic and clinical characteristics; and local labor market conditions. We used job separation data from the Employment Intervention Demonstration Program (EIDP), a multi-site study conducted from 1996-2001 that was designed to generate knowledge about effective approaches for enhancing employment among adults with serious mental illnesses (Cook et al., 2008). We found that most separations were voluntary, and that while some antecedents of voluntary job separations mirrored those found in the larger labor force such as job disamenities, job dissatisfaction, wages, and worker characteristics, other antecedents appear unique to this population such as a preference for temporary employment, and greater likelihood of quitting in regions with high versus low unemployment.

METHODS

Study Background

The EIDP was a 5-year study of supported employment programs for people with severe mental illnesses conducted in eight states (Arizona, Connecticut, Maine, Maryland, Massachusetts, Pennsylvania, South Carolina and Texas), and funded by the Center for Mental Health Services of the Substance Abuse and Mental Health Services Administration (Cook, Carey, Razzano, Burke, & Blyler, 2002; Cook et al., 2005). By means of a Cooperative Agreement funding mechanism, researchers, federal personnel, and policy makers developed and implemented a Common Protocol and Documentation (Employment Intervention Demonstration Program, 2001), uniform data collection methods, and a hypothesis-driven analysis plan. This effort was led by a Coordinating Center based at the University of Illinois at Chicago, Department of Psychiatry, in partnership with the Human Services Research Institute in Cambridge, Massachusetts.

Study participants were recruited from existing clinical populations via case manager referral, self-referral, word-of-mouth, and at one site, newspaper advertisements. Participants

met the following inclusion criteria: 18 years or older at the time of study enrollment; willing and able to provide informed consent; interest in working; an Axis I DSM-IV diagnosis of mental illness accompanied by severe or moderate functional impairment; and not being employed at study baseline. Subjects were recruited in waves, with data collection beginning 2/1996 and ending 5/2000, and all participants were monetarily compensated, with amounts varying from \$10 to \$20 per interview. All EIDP study sites administered the same semiannual interview assessments measuring demographic characteristics and weekly vocational assessments of employment status. Once enrolled in the study, lack of participation in EIDP services or research interviews were not criteria for exclusion from the study sample. Enrolled participants were randomly assigned to evidence-based supported employment services (i.e., integrated services delivered by employment specialists who were part of multidisciplinary teams that met frequently to coordinate employment and other services, with the goal of placement into competitive jobs that were tailored to patients' career preferences, using a job search process beginning soon after program entry, and providing ongoing vocational supports throughout the entire study period) or to comparison study conditions at each site. The results of the randomized controlled trial regarding the effectiveness of evidence based supported employment are described elsewhere (Cook et al., 2005a; Cook et al., 2005b).

Data come from 2,086 jobs for which there was information about job ending statuses and reasons. This represents 82% of all jobs held; some jobs were ongoing at the end of the observation period (17%, n=447), and information was missing for others (1%, n=31). Job data were collected using the EIDP Common Protocol's (2001) employment tracking procedures including job start and end forms completed by program and research staff. Initial assessments of new jobs included detailed information on features such as wages, hours, benefits, job duties, job industry, job setting, job integration, level of contact with disabled and non-disabled co-workers, type of job finding assistance, disclosure of disability status, and job accommodations. This information was updated weekly along with the recording of how many hours were worked that week. Job endings were documented in terms of: 1) who made the decision to end the position; 2) ending status classified as voluntary (quit with or without a new position) or involuntary (fired, laid off, temporary job end); and 3) reasons for job ending. Job ending status classifications were compared for consistency with: 1) data collected on who made the job ending decision (e.g., employee, employer); and 2) reasons for job ending (e.g., poor job performance, dissatisfaction with working conditions). Discrepancies were investigated using the paper records and resolved by two senior researchers prior to analysis.

Job data are from 892 study participants who held at least one job that ended during their 24-month observation period. Characteristics of the 892 individuals included in the job separation analysis were compared with the remainder of the EIDP cohort not included in the present analysis (n=756). Consistent with prior research on predictors of employment in the EIDP (Burke-Miller et al., 2006; Cook et al., 2005; Razzano et al., 2006), inclusion in the job separation analysis sample was statistically associated with receiving supported employment

services, with better prior work history, with younger age, and with not having a substance abuse diagnosis (univariate chi-square $p < .05$). Otherwise, the group we analyzed did not differ from the larger study population in terms of gender, race/ethnicity, number of co-resident children, presence of a schizophrenia spectrum or bipolar diagnosis, substance abuse or dependence, co-morbid medical conditions, self-reported functioning, or Social Security Administration (SSA) disability income beneficiary status (i.e., SSI/DI status).

Measures

Job separation. Separations were categorized as voluntary versus involuntary using definitions from the Bureau of Labor Statistics Job Openings and Labor Turnover Survey (JOLTS) (2013). Voluntary separations were defined as job endings in which an individual decided to leave a job, i.e., to quit. Involuntary separations were defined as job endings initiated by the employer, including: layoffs with no intent to rehire; discharges because positions were eliminated; discharges resulting from mergers, downsizing, or plant closings; firings or other discharges for cause; terminations of seasonal employees (whether or not they are expected to return next season) and other temporary workers; and layoffs (suspensions from pay status) lasting or expected to last more than seven days.

Disamenities and other job characteristics. Job characteristics included in the analysis were hours worked per week, hourly wage, temporary versus permanent job status, fringe benefits (medical or other health insurance, vacation, sick or personal leave), and whether the job was held directly or through an intermediary such as a temporary employment agency or transitional employment program. Occupational category was classified by each site's employment staff using codes from the 1991 *Dictionary of Occupational Titles* (DOT) published by the U.S. Department of Labor. Also used to characterize each position were DOT Worker Functions codes that rate the complexity of tasks performed by the worker for a particular job. Every job in the DOT is coded according to the way it requires a worker to function in relation to data, people, and things, with a separate digit expressing the worker's relationship to each of these three groups. Occupational categories and Worker Functions codes were verified by researchers against detailed job descriptions provided by vocational staff. Following Böckerman and Ilmakunnas (2009), job disamenities included part-time work (≤ 20 hours per week), temporary or seasonal jobs, jobs without benefits, and jobs held through intermediaries. In addition, DOT Worker Function codes were used to identify jobs that were mentally, interpersonally, and physically demanding. Mentally demanding jobs involved working with data by synthesizing, coordinating, analyzing, compiling or computing (versus copying or comparing). Interpersonally demanding jobs involved mentoring, negotiating, instructing, supervising, diverting, persuading, or giving assignments (versus serving, taking instructions, and helping). Physically demanding

jobs involved unloading and direct handling of materials (versus precision operating, driving, tending, and setting up).²

Job dissatisfaction. Workers' job dissatisfaction was assessed via information contained in employment end forms. For every separation, the primary reason for job termination, as well as additional reasons as reported by the client and/or program staff were recorded from a checklist of reasons related to the worker's psychiatric condition, job performance, job environment, relations with supervisor and co-workers, and ease of access to the job. Job dissatisfaction was assessed by a positive response to one or more of the following reasons: dissatisfaction with physical job environment; dissatisfaction with job duties; problems with supervisor(s); problems with co-workers; dissatisfaction with salary; dissatisfaction with hours, dissatisfaction with work schedule; dissatisfaction with employment benefits; and perceived discrimination.

Worker characteristics. Employee characteristics were collected in the baseline EIDP interview, and include age in years, gender (female=1/male=0), race/ethnic group (racial/ethnic minority=1/Caucasian=0), educational attainment (1=less than high school/0=otherwise, 1=some college or more/0=otherwise), prior work history (1=employed in 5 years prior to study entry/0=otherwise), marital status (1=married or cohabiting/0=otherwise), and SSA disability program status (1=enrolled in Social Security Disability Insurance or Supplemental Security Income/0=not enrolled). Psychiatric diagnoses came from clinical assessments and, in this analysis, we focused on schizophrenia spectrum disorders, bipolar disorder, and substance abuse or dependence.

Labor market variables. Region of the country was used as a proxy for the local unemployment rate. Study sites were clustered in the Northeast, Mid-Atlantic, Southeast, and Southwestern United States. Previous analysis (Cook, Mulkern, Grey et al., 2006) calculated the local unemployment rate for the geographic area surrounding each study site using Bureau of Labor Statistics, Current Population Survey reports from January 1996 (first month of study participation for initial group of participants) through November 2000 (last month of study participation for the final group). Unemployment rates remained fairly consistent over time and were similar by region, allowing us to calculate average regional unemployment rates as a measure of job availability in the local labor market. Average monthly unemployment rates by region were: Northeast (3.3%); Mid-Atlantic (4.7); Southwest (3.4%), with the Southeast region (5.4%) serving as the contrast.

² Unlike Böckerman & Ilmakunnas (2009), we were unable to include exclusively worker-perceived job disamenities, This was because workers were not interviewed at the occurrence of each job, but at 6-month intervals. Thus, while disamenities tested met the criteria for being specific to each individual job, most were assessed as disadvantageous by program staff and other objective appraisals such as Worker Functions codes in the Dictionary of Occupational Titles (U.S. Department of Labor, 1991).

Statistical Analysis

Univariate comparisons of factors associated with voluntary versus involuntary job separations were made using chi-square tests of association for categorical dependent variables and analysis of variance for interval or continuous dependent variables. Predictors of voluntary separations were examined in a series of multivariable logistic regressions in which different domains were entered in hierarchical steps: 1) job disamenities; 2) job dissatisfaction; 3) wage; 4) worker characteristics; 5) psychiatric diagnosis; 6) job industry; and 7) geographic region. Absence of multicollinearity was confirmed by the fact that none of the model variables had zero-order correlations $r \geq |.5|$. There was insufficient clustering of multiple jobs among individuals to support use of multilevel analysis. Instead, data were weighted to reflect the number of jobs contributed by each individual.

RESULTS

While the 892 study participants ended an average of 2.4 jobs each (standard deviation = 1.8) over the 24-month period, a sizable proportion (41.3%) ended only one job during this period. Just over half (53.0%) of all jobs lasted 2 months or less. Of the 2,086 job separations, half (53.0%) met criteria for voluntary ending or quits (59%). The remainder were involuntary separations: 17% were firings; 14% were temporary job endings, and 10% were layoffs. Job dissatisfaction was the most commonly reported reason for quitting, accounting for 33% of all voluntary job separations. Psychiatric disability-related problems were the next most common reason for quitting, including difficulty coping with psychiatric symptoms, hospitalization for mental illness, psychotropic medication problems, and emotional stress, cited in 28% of all voluntary job separations. Quitting a job to take another job was the third most common reason, but accounted for only 15% of voluntary separations. Other reasons for job quits were lack of access to the job or job site (12%) (e.g., transportation barriers, inability to obtain a reasonable accommodation, or relocation of a business or firm); poor job performance (6%); and quitting because of concerns about losing disability benefits or entitlements (5%).

Table 1 presents the characteristics of model variables by domain for the total group of job separations and, separately, by voluntary and involuntary separation status. The majority of positions were part-time at 20 hours or fewer per week (66.6%) and offered no medical or leave benefits (87.9%). These characteristics did not differ significantly ($p < .05$) by voluntary or involuntary separation status. Temporary jobs (32.0% of all jobs) and jobs held through intermediaries (22.0% of all jobs) were associated with less likelihood of voluntary than involuntary separation (25.2% vs. 41.7%, $p < .001$ and 18.4% vs. 27.2%, $p < .001$ respectively). Jobs were characterized as mentally demanding if they involved synthesizing, coordinating, analyzing, compiling or computing (34.8% of jobs), social demanding if they involved mentoring, negotiating, instructing, supervising, diverting, persuading, or giving assignments to assistants (26.8% of jobs), and physically demanding if they involved direct handling or placing

of materials with no judgment required (75.3% of jobs). These worker functions were not related to voluntary or involuntary separation status.

Job dissatisfaction was cited in 40.0% of all job separations, and significantly more often in voluntary than involuntary separations (55.3% versus 17.9%, $p < .001$). Average hourly wage was \$5.77 which was above the \$4.25-\$5.15 federal minimum wage at the time, but considerably lower than average U.S. hourly earnings of \$11.87-\$14.76 between January 1996 and December 2001 (U.S. Department of Labor, Bureau of Labor Statistics, www.data360.org). Average hourly wage was significantly lower among voluntary than involuntary separations (\$5.62 vs. \$6.00, $p < .001$).

Voluntary and involuntary job separations did not differ significantly by worker gender (women held 44.1% of all jobs), race/ethnic minority (50.5%), less than high school education (31.3%), any work experience in the 5 years prior to EIDP participation (79.0%), or enrollment in SSI/SSDI programs (66.6%). However, younger workers and those who were married or living with a partner were more likely to quit, while workers with any college education were less likely to quit. There were significant differences in voluntary versus involuntary separation associated with average age (35.9 years vs. 37.3, $p = .001$), being married or cohabiting with a partner (13.2% vs. 8.2%, $p < .001$), and any college education (35.1% vs. 39.8%, $p = .030$). DSM-IV diagnosis did not vary significantly by job separation status, with 45.6% of jobs held by people diagnosed with schizophrenia spectrum disorders, 17.6% with bipolar disorder, and 29.4% with a substance use or dependence disorder.

Almost half of jobs (44.0%) were in service industry occupations, 25.4% in clerical/sales, 4.4% professional, 4.4% structural (construction), and 4% benchwork. The remaining 18% of jobs were in categories of miscellaneous occupations (13%), agricultural/fisher/forestry (3%), processing occupations (1%), and machine trades (1%). Service occupation jobs were more often associated with voluntary rather than involuntary separations (46.4% vs. 40.6%, $p = .011$), but the reverse was true for clerical/sales jobs (23.7% vs. 27.8%, $p = .041$).

In terms of geographic region, 28.4% of jobs were in the Northeast (Maine, New Hampshire, New York), 38.5% were located in the mid-Atlantic U.S. region (Maryland, Pennsylvania), 18.1% in the Southwest (Arizona, Texas), and 15.0% in the Southeast (South Carolina). Job separation status did not differ by geographic region except in the Southeast, which was associated with a higher proportion of voluntary job endings (17.0% vs. 12.2%, $p = .002$).

Table 2 presents the results of a stepped logistic regression model predicting voluntary separations or quits versus involuntary job endings. Step 1 involved entering seven hypothesized job disamenities. Individuals were more likely to quit part-time positions worked for twenty hours or less per week than positions with a greater number of hours per week. They also were less likely to quit jobs that were temporary versus jobs with no predefined end point. There were

no relationships between quitting and whether the job conferred employee benefits or whether the job was held through an intermediary versus a direct relationship with the employer. Finally, there was no relationship between voluntary separation and the nature of the job as physically, mentally, or interpersonally demanding.

In the next step, job dissatisfaction was entered. As predicted, this variable was significant, with dissatisfied workers over 5 times as likely to quit their jobs as non-dissatisfied workers. Both working 20 hours a week or less and temporary job status remained significant in this step.

In the third step, hourly wage was entered into the model. As predicted, this variable was significant, with quitting less likely when jobs a paid higher hourly wage than when they paid a lower wage. All variables significant in previous steps remained significant even controlling for hourly wage.

In step 4, worker characteristics were entered in the model and two of these were significant. First, older workers were significantly less likely to quit their jobs than younger workers. Second, workers who were married or cohabiting were over one-and-one-half times as likely to quit their positions as workers who were single.

In step 5, the worker's clinical characteristics were entered. Neither mental health diagnosis nor whether the worker had a substance abuse or dependence diagnosis were significant additions to the model. Moreover, controlling for these factors did not alter the significance of variables entered in prior steps.

In step 6, the occupational designation of positions was entered. Here, structural positions, typically construction jobs, were almost three times as likely to end in quitting as other types of occupations. All variables significant in prior steps remained significant.

Finally, in step 7, region was entered as a proxy for unemployment rate, based on the regions of the U.S. in which study sites were located. Here, voluntary separation was more likely in regions with lower average unemployment rates in comparison to the Southeast which had the highest average unemployment rate. Significance of variables entered in prior steps did not change, with the exception of worker's racial/ethnic minority status which became significantly related to lesser likelihood of quitting.

DISCUSSION

Many of our findings regarding voluntary separation of workers with psychiatric disabilities mirrored those derived from research on the general population. We too found a strong association between job dissatisfaction and the likelihood of quitting that was first established in the human resource literature. Another example is our finding of an association between low-wage labor and greater likelihood of voluntary separation that was previously established in labor economics research. Still another similarity is our finding that married or cohabiting

workers were more likely to quit than single workers, which may have reflected the former's ability to rely on a spouse or partner's human capital during periods of unemployment after voluntary separations. Another similar pattern was our finding that, compared to older workers, younger workers who presumably had lower labor force attachment were more likely to voluntarily separate from their jobs. We also found that in comparison to Caucasian workers, minority workers were less likely to quit, which may reflect the latter's more precarious labor market opportunities and position. Finally, we found that workers were more likely to quit part-time jobs than ones providing more hours of compensation, as would be predicted given the risk and instability inherent in part-time labor.

Other findings did not mirror those found in research on general labor force separation patterns. For example, we expected to see greater likelihood of quitting in regions with lower unemployment rates. Instead, we found that voluntary separation was more likely at study sites in the Northeast, Mid-Atlantic, and Southwest, all of which had lower average monthly unemployment rates than our reference region of the Southeast. It may be that our proxy for unemployment was too gross a measure, and that some other features of these regions influenced quit likelihood. Also unexpectedly, we found that workers were less likely to quit jobs that were temporary versus those with indefinite tenures. This was contrary to the hypothesis that temporary employment would be perceived unfavorably by workers who would be seeking more permanent, stable employment. This may not be the case for workers with disabilities, who may need or prefer the flexibility of fixed-term positions (Booth et al., 2002). A similar rationale may apply to our finding of higher voluntary separation likelihood for jobs in the structural (construction) industries, occupations known for their required "presenteeism" and "infinite availability" (Watts, 2009, p.37), which may be a poor match for the needs and stamina of some workers with psychiatric disabilities (Baron & Salzer, 2002).

Overall, we found limited support for Böckerman & Ilmakunnas' job disamenities hypothesis (2009), since only two of the seven unfavorable conditions we tested were significant in our model, and one of these relationships (temporary employment) was in an unexpected direction. This may mean that the concept of work disamenities has limited relevance for this group of disabled workers. Or it may be due to the fact that, unlike those authors, we measured adverse work conditions with primarily objective rather than subjective job-specific variables. It is also worth noting that Böckerman & Ilmakunnas' own research did not find a strong relationship between disamenities and *actual* quitting. Instead, they found that disamenities were more strongly related to job quit *intentions* than to actual behavior. Their findings suggested that disamenities influence job satisfaction which, in turn, increases quit intentions that, in turn, increase the likelihood of actual quit behavior. Because we were unable to assess quit intentions, our inability to test that specific chain of associations leaves open the question of the relative import of disamenities to voluntary separation for our population of interest.

The fact that certain client characteristics such as education and prior work experience were not related to the likelihood of voluntary separation may be the result of labor segmentation

that these workers experienced. As others have shown (Dickens & Lang, 1985; Sakamoto & Chen 1991), compared to primary sector workers, workers with disabilities in the secondary labor market receive a lower return on education and their labor force participation does not offer the same opportunities for advancement. Thus, the value of human capital may be less for these workers, as has been argued by others (Aakvik, 2003; Hollenbeck & Kimmel, 2008).

Consistent with the limited prior research, very few of the 2,086 jobs ended with workers moving on to another job. A high proportion of people with psychiatric disabilities quit due to job dissatisfaction, which is likely a reflection of their typical underemployment or employment in poor quality jobs (Cook, 2006). In the EIDP, lower wage jobs were significantly associated with greater likelihood of workers voluntarily separating from jobs versus being involuntarily separated. In addition, only 5% of voluntary job separations were attributed to concern over loss of benefits, and SSI/DI beneficiary status was not associated with greater likelihood of quitting. This suggests that workers were not highly concerned about loss of cash benefits due to employment, most likely because low earnings and short job tenures generally did not reach levels at which benefits would be reduced or terminated due to Substantial Gainful Activity or completion of Trial Work Periods.

While it was not common, some workers with psychiatric disabilities did leave their jobs voluntarily in order to take other, more preferable employment that they had secured ahead of time. Yet given that this was a relatively infrequent occurrence, it may be that job retention support should be redefined as employment retention assistance, helping workers to transition smoothly between jobs either to pursue career development or satisfy other life choices. Our results also suggest the need for job follow-along services that focus on career enhancement for workers in the secondary labor market (Hagner, 2000). Since market segmentation research suggests that these workers will acquire few transferrable skills, job-related training, or opportunities for advancement, ongoing support should include regular screening of jobs for advancement opportunities and assessment of workers' needs for further training and education that would enable them to obtain jobs in the primary labor market (Hagner, 2000). Rumrill and Roessler (1999) suggest that at 6- and 12-month intervals following job placement, rehabilitation counselors could conduct structured interviews with employed rehabilitation clients to obtain valuable information to consider in this effort.

A challenge facing return to work and job retention efforts is the development of living-wage, career-oriented employment opportunities that help people with psychiatric disabilities to escape from a cycle of poverty and dependence on Social Security disability benefits (Stapleton et al., 2006). Our results suggest that policies supporting career-building should include vocational rehabilitation services that help workers keep working or return more easily to work after experiencing the onset or recurrence of a psychiatric condition.

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Table 1: Domains and factors associated with voluntary versus involuntary job separations of 2,086 jobs

	All Separations N=2,086	Voluntary Separation N=1,231	Involuntary Separation N=855	Univariate Chi-square or ANOVA p-value
Step 1 – Job Disamenities	%	%	%	
Part-time (<=20 hours per week)	66.6	67.7	65.1	.326
Temporary job	32.0	25.2	41.7	<.001
No fringe benefits	87.9	86.9	89.3	.093
Job held through intermediary	22.0	18.4	27.2	<.001
Mentally demanding	34.8	35.0	34.5	.804
Interpersonally demanding	26.8	26.8	26.8	.993
Physically demanding	75.3	75.3	75.2	.936
Step 2 – Job Dissatisfaction				
Job dissatisfaction	40.0	55.3	17.9	<.001
Step 3 – Wage				
Mean hourly wage, \$	\$5.77 (\$2.02)	\$5.62 (\$1.76)	\$6.00 (\$2.32)	<.001
Step 4 – Worker Characteristics				
Age, years	36.5	35.9	37.3	.001
Female	44.1	45.5	42.1	.126
Race/ethnic minority	50.5	50.6	50.4	.928
Less than high school education	31.3	31.5	31.0	.787
Some college or more	37.0	35.1	39.8	.030
Prior 5 years work experience	79.0	79.5	78.2	.491
Married or living with partner	11.2	13.2	8.2	<.001
SSI/SSDI beneficiary	66.6	66.0	67.4	.487
Step 5 – Clinical Features				
Schizophrenia spectrum disorder	45.6	46.1	44.9	.579
Bipolar disorder	17.6	18.4	16.5	.271
Substance abuse /dependence disorder	29.4	29.1	29.9	.672
Step 6 – Occupational Category				
Service	44.0%	46.4%	40.6%	.011
Clerical/Sales	25.4%	23.7%	27.8%	.041
Professional	4.4	4.1	5.0	.342
Structural/Construction	4.4	4.5	4.2	.766
Benchwork	4.0	4.2	3.8	.734
Step 7 – Region				
Northeast	28.4	27.5	29.7	.280
Mid-Atlantic	38.5	37.8	39.5	.417
Southeast	18.1	17.7	18.6	.604
Southwest	15.0	17.0	12.2	.002

***p<.001, **p<.01, *p<.05, +p<.10

Data are weighted to reflect number of jobs contributed by each individual.
Employment Intervention Demonstration Program: 1996-2001

Table 2. Antecedents of 2,086 job separations with domains entered in hierarchical multivariable logistic regression models predicting voluntary versus involuntary separation

		Multivariable logistic regression odds ratio, p-value						
		Step1	Step2	Step3	Step4	Step5	Step6	Step7
Step 1	Job Disamenities							
	Part-time (<=20 hours per week)	1.41***	1.49**	1.46**	1.47**	1.46**	1.48**	1.47**
	Temporary job	.54***	.58**	.60**	.61**	.62**	.61**	.54**
	No fringe benefits	.80	.83	.80	.80	.80	.78	.85
	Job held through intermediary	.83	.98	.90	.91	.90	.94	.91
	Job mentally demanding	1.01	1.04	1.10	1.07	1.08	1.17	1.18
	Job interpersonally demanding	.95	.95	.98	1.03	1.03	1.23	1.19
Job physically demanding	1.06	1.05	1.04	1.04	1.03	1.15	1.14	
Step 2	Job Dissatisfaction							
	Job dissatisfaction		5.46***	5.40***	5.50***	5.47***	5.55***	5.82***
Step 3	Wage							
	Hourly wage (10 cent increments)			.39*	.40*	.40*	.36**	.40*
Step 4	Worker Characteristics							
	Age (5 year increments)				.91*	.91*	.91*	.91*
	Female				1.24	1.26	1.33+	1.24
	Race/ethnic minority				.81	.81	.79+	.69*
	Less than high school education				1.08	1.10	1.07	1.04
	Some college or more				.85	.84	.87	.87
	Prior 5 years work experience				.95	.97	.96	.96
Married or living with partner				1.75*	1.72*	1.72*	1.61*	
SSI/SSDI beneficiary				1.06	1.05	1.06	1.04	
Step 5	Clinical Characteristics							
	Schizophrenia spectrum disorder					1.13	1.14	1.22
	Substance abuse/dependence					.91	.90	.91
	Bipolar disorder					1.13	1.13	1.15
Step 6	Occupational Category							
	Service industry						1.13	1.17
	Clerical/sales						.84	.97
	Professional						.84	.94
	Structural/construction						2.83*	2.79*
Benchmark						1.43	1.38	
Step 7	Region							
	Northeast							.47**
	Mid-Atlantic							.57*
	Southeast							.42*
	Southwest							Ref

***p<.001, **p<.01, *p<.05, +p<.10; Data are weighted to reflect number of jobs contributed by each individual.

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