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Characteristics of Individuals Screening Positive for Substance Use in a Welfare Setting: Implications for Welfare and Substance-Use Disorders Treatment Systems*

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Abstract

Objective—This study examined barriers to employability, motivation to abstain from substances and to work, and involvement in multiple service systems among male and female welfare applicants with alcohol- and drug-use problems.

Method—A representative sample (*N* = 1,431) of all persons applying for public assistance who screened positive for substance involvement over a 2-year period in a large urban county were recruited in welfare offices. Legal, education, general health, mental health, employment, housing, and child welfare barriers to employability were assessed, as were readiness to abstain from substance use and readiness to work.

Results—Only 1 in 20 participants reported no barrier other than substance use, whereas 70% reported at least two other barriers and 40% reported three or more. Moreover, 70% of participants experienced at least one additional barrier classified as “severe” and 30% experienced two or more. The number and type of barriers differed by gender. Latent class analysis revealed four main barriers-plus-readiness profiles among participants: (1) multiple barriers, (2) work experienced, (3) criminal justice, and (4) unstable housing.

Conclusions—Findings suggest that comprehensive coordination among social service systems is needed to address the complex problems of low-income Americans with substance-use disorders. Classifying applicants based on barriers and readiness is a promising approach to developing innovative welfare programs to serve the diverse needs of men and women with substance-related problems.

During the 1990s, welfare reform and other legislation dramatically altered the availability of social safety net benefits for individuals with substance-use disorders (SUDs; Schmidt et al., 1998). One important change that occurred as part of welfare reform was the

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development of formal collaborations between welfare agencies and the SUD treatment system. Cross-system collaboration is rare; but, in the intervening years since welfare reform, failure to adequately develop coordination across behavioral health, physical health, and social service systems has been identified as one of the major challenges affecting quality of care for those with SUD (Institute of Medicine, 2006). The primary aim of this study was to examine the personal characteristics and connections with various service systems of a large sample of welfare applicants screening positive for substance involvement at welfare offices.

Cross-system coordination

Welfare reform created an important change in the relationship between welfare agencies and SUD treatment by fundamentally changing the role of welfare agencies from one of distributing entitlements to one of fostering self-sufficiency of recipients, in part via the provision of employment and other support services. A time-limited duration of SUD treatment was included by federal welfare reform legislation as an “approved activity” that counted toward state requirements to actively engage welfare caseloads in work programs. As a result, more than half the states developed drug-use screen-and-refer services for applicants as part of their public assistance programs (Rubinstein, 2002; Substance Abuse and Mental Health Services Administration, 2002). Screen-and-refer programs contain a number of features identified as important aspects of systems-level coordination of care (Institute of Medicine, 2006), including the following: early detection of SUD via screening in welfare settings, active linkage mechanisms with treatment, cross-agency collaboration and information sharing, extended monitoring of relapse, and flexible use of funds (Morgenstern et al., 2001, 2006).

Unfortunately, very little is known about welfare agency and SUD system collaborations, including whether such systems-level coordination improves quality and outcomes. Our group examined Temporary Assistance for Needy Families (TANF) women with substance abuse or dependence in one large urban county in New Jersey (Morgenstern et al., 2003). We found that TANF women with SUD had more than double the number of personal barriers compared with recipients without SUD; also many of these barriers reflected complex and persistent problems. Thus, substance use can be considered a marker for disability rather than a single barrier to employment (Metsch and Pollack, 2005). We also found high levels of multiple system involvement beyond welfare and SUD treatment that included the shelter, mental health, criminal justice, and child welfare systems.

Research gaps

Prior studies examining barriers among welfare recipients with substance problems are limited in important ways. Our study was the only study that examined a screened sample, was limited to one site, and excluded several subgroups: men on TANF, clients on methadone, client already engaged in SUD treatment, and those not meeting criteria for dependence. Thus, no study has examined a representative sample of TANF clients screening positive for SUD. Moreover, no study has examined single adults on welfare or

examined readiness for behavior change. Gaining an understanding of whether recipients are motivated to abstain and become employed is an important consideration.

Current study

Data for the current study were drawn from a representative sample of persons applying for public assistance at city welfare centers in Bronx County (in New York City) during a 2-year period. These individuals screened positive for substance use and were referred for a comprehensive assessment at a specialized assessment center. Historically, New York City has had more welfare recipients on its rolls than any other city in the nation (Nightengale et al., 2002). New York City offers public assistance benefits to TANF-eligible individuals (primarily women), as well as single adults (primarily men). In addition, New York City's welfare agency has one of the most innovative and comprehensive systems to identify, refer, and coordinate welfare and SUD treatment services, making it a model of special interest from a public health perspective.

The current study had three specific aims. The first was to examine the types and prevalence of co-occurring problems and cross-system involvement. Second, the study examined the readiness of participants to abstain and become employed. Third, the study used latent class analysis (LCA) to examine heterogeneity among participants in an attempt to identify subgroups of participants who require different sets of services and system coordination arrangements.

Method

Participants

Study participants were 1,431 residents of Bronx County applying for public assistance over a 2-year period. During the study period, 8,986 applicants to Bronx welfare field offices screened positive for substance use and were assigned to complete a comprehensive substance-use needs assessment. Of all those individuals assigned, 7,301 either did not show up for the appointment (about 25%) or were not approached by research staff because of manpower limitations (75%). Research staff recruited on site every day in which clients were scheduled for needs assessments; clients were approached as they became available for interviews, and one client per 15- to 30-minute timeslot was interviewed. Thus, we believe that the approached sample was a randomly selected and representative subgroup of all those who showed up for the assessment. In all, 1,685 applicants (19% of all those assigned) were approached by research staff at the assessment site and asked to participate. Of those approached, 166 (10%) refused. The reasons given for study refusal were the following: not interested (60%), too personal (14%), no time to spare (11%), and various other reasons (15%). Among the 1,519 applicants who were interviewed, 88 (6%) were dropped from the study because of missing personal information (86%) or interviewer concerns about the validity of reported data (14%). A total of 1,431 applicants completed valid study interviews. Analyses of New York City administrative data found no significant differences between the total applicant sample (N = 8,986) and the final study sample (n = 1,431) on any of more than 20 demographic and welfare status variables.

Sample demographic and basic income characteristics are presented in Table 1. Participants were primarily men (68%) and either black (45%) or Hispanic (45%). On average (SD), the sample age was 40 (8.5) years. The vast majority (80%) had received public assistance before their application for benefits at the time of interview. Women, on average, had less income and spent more time previously on welfare. Finally, 54% of participants were already enrolled in an SUD treatment program (not depicted), including 26% who were receiving methadone.

New York City welfare procedures for applicants with substance involvement

All persons applying for public assistance in New York City welfare centers were administered a modified version of the CAGE screening questionnaire (Ewing, 1984). Applicants from the Bronx who indicated current or past problems with substance involvement were referred for a comprehensive substance-use assessment to one of two sites. The basic goals of assessment were to assign an appropriate level of treatment services and determine if work activity requirements should be waived for clients needing intensive treatment. For clients needing treatment, assessors selected a pre-approved treatment program and provided referral information.

Measures

A 57-item questionnaire was administered by research assistants that contained questions about demographics, family constellation, substance-use history, substance-use treatment status and motivation for treatment, physical and mental health, legal and housing status, employment history and motivation, and child welfare history. The questionnaire was drawn primarily from three instruments: (1) the Addiction Severity Index (ASI), Fifth Edition (McLellan et al., 1992); (2) the Short Form-12 Version 2 (SF-12; Ware et al., 2002); and (3) a modification of the Contemplation Ladder (described herein). The ASI is a structured clinical interview that records demographics and asks respondents to report lifetime and current problems in physical health, employment and financial support, illegal activity, family and social relationships, psychiatric symptoms, and alcohol and substance use. It has shown solid psychometric properties (McLellan et al., 1992) and has been widely used with a variety of special populations. The SF-12 is a measure of general health status. The reliability and validity of the SF-12 have been established across many studies (Ware et al., 2002).

Barriers to employability—Similar to other studies (Morgenstern et al., 2003), barriers to employability were defined as problems other than substance use that pose an obstacle to employment and likely require services in addition to SUD treatment. For descriptive and analysis purposes, barriers were classified as either severe or moderate. Severe barriers were considered to be major impediments to obtaining work or participating in work or training experiences. Moderate barriers were problems that posed less substantial obstacles.

Housing: Participants who were homeless or living in a shelter or treatment center were classified as severe. Those living with others temporarily and not able to stay longer than 6 months were classified as moderate. All other participants were defined as not having a housing barrier. For purposes of LCA, this latter group was divided into those living in their

own residence (stable own) versus those living stably in someone else's residence (stable other).

Mental health: Individuals prescribed medication in the past 12 months for emotional or psychological problems were classified as having a moderate mental health barrier. Those hospitalized for emotional or psychological problems in the past 12 months were classified as severe.

Legal: Participants arrested and charged, detained, or incarcerated in the last 12 months were classified as moderate. Those currently on probation or parole were classified as severe because they were expected to remain involved in the criminal justice system during the next several months.

General health: We used the global health question of the SF-12 ("In general, would you say your health is . . . ?") to define three categories. Those responding "poor" were classified as severe. Those responding "fair" were classified as moderate. Those responding "excellent, very good, or good" were classified as having no health barrier.

Employment history: Participants reporting no work in the past 3 years were classified as having a moderate barrier, with all others classified as having no barrier. For purposes of LCA, the latter group was subdivided into those working 1–12 months and those working more than 12 months in the last 3 years.

Education: Participants with less than 12 years of education or without a General Educational Development (GED) credential were classified as having a moderate barrier. We did not define a severe category for this variable. For purposes of LCA, we further divided participants into those who were high school graduates and those who had more than 12 years of education.

Child welfare placement: Participants having a child in a placement by child welfare were defined as severe.

Readiness to abstain from substance use and to work—We adapted the Contemplation Ladder (Biener and Abrams, 1991; Rustin and Tate, 1993) to assess these constructs. The Contemplation Ladder is a measure of readiness to quit smoking based on the stages of change model that characterizes readiness to change as a progression through precontemplation, contemplation, action, and maintenance phases (Prochaska et al., 1992). The Contemplation Ladder has shown strong intercorrelations between different reporting formats (range of Pearson's *r:* .82-.98; Rustin and Tate, 1993) and also convergent, concurrent, and predictive validity with stated intentions to quit smoking and previous quit attempts (Biener and Abrams, 1991) and with established measures such as the Timeline Followback interview for days of substance use (Slavet et al., 2006; Sobell and Sobell, 1996) and the University of Rhode Island Change Assessment (URICA) stages of change measure (Amodei and Lamb, 2004). The current study created three separate versions of the Contemplation Ladder to measure readiness to (1) stop using alcohol, (2) stop using illegal drugs, and (3) seek employment during the past 30 days. Response choices on the alcohol

and illegal drugs ladders ranged from 1 to 7, with .5 increments and the following anchor points: 1 = I do not have a problem with drinking (drugs), and I do not intend to cut down; 2 = I might have a problem with drinking (drugs), but I do not intend to cut down or quit now; 3 = I am thinking about cutting down on my drinking (drug use), but I am not thinking about quitting drinking (drug use) altogether; 4 = I am thinking about quitting drinking (using drugs) altogether, but I still have not made any definite plans; 5 = I am close to making a decision to quit drinking alcohol (using drugs); 6 = I have decided to quit drinking alcohol (using drugs), at least for now; and 7 = I have decided to quit drinking alcohol (using drugs) and plan never to drink (use drugs) again. Response choices on the employment ladder ranged from 1 to 6: 1 = I am not interested in having a job, and I do not intend to look; 2 = I might like to have a job in the future, but I am not currently looking for one; 3 = I would like to have a job now, but I am not currently looking for one; 4 = I would like to have a job now, and I intend to start looking for one soon; 5 = I would like to have a job now, and I have done something in the last month to get one; and 6 = I would like to have a job now, and I have done something this past week to get one.

Responses on the three revised Contemplation Ladders were combined with responses from the employment and substance-use modules of the ASI portion of the screening measure to create two readiness constructs: (1) Readiness to Work and (2) Readiness to Abstain from Substance Use (see Table 3). *Readiness to work* was defined as a four-category variable: (1) currently working (full or part time), (2) not working but ready to work (endorsed 5–6 on the Employment Ladder), (3) not working but considering work (endorsed 3–4.5), and (4) not working and not interested (endorsed 1–2.5). *Readiness to abstain from substance use* was defined as a five-category variable intended to reflect the traditional stages of change model in addiction science (Prochaska et al., 1992): (1) maintenance = no use of alcohol or drugs in past 6 months, (2) action = some use in past 6 months but no use in past 30 days, (3) preparation = high motivation to change and minimal use (endorsed 5–7 on the ladder and reported 1–10 days of use in the past 30 days), (4) contemplation = contemplating change while using any amount (endorsed 4–4.5 on the ladder and reported 1–30 days of use) or committed to change while using moderately (endorsed 5–7 on the ladder and reported 6–10 days of use), and (5) precontemplation = low motivation to change while using any amount (endorsed 1–3.5 on the ladder and reported 1–30 days of use).

Study procedures

Research assistants approached welfare applicants in the waiting area before they were called for their assessment and offered them the opportunity to participate in a brief research interview. Applicants who agreed to participate in the study were then consented and interviewed in a private office. Monolingual Spanish-speaking participants (3% of the sample) were interviewed by a Spanish-speaking research assistant and completed a Spanish version of the screening instrument. Participants received an incentive for completing the screening measure.

Statistical analyses

Differences between men and women on various demographic, income, and family variables were tested using the chi-square statistic for categorical variables and one-way analysis of

variance for continuous variables. LCA (McCutcheon, 1987) was used to group similar individuals into latent classes based on their patterns of responses on a set of self-reported barriers to employability (see Table 4). The central assumption of LCA is that correlations among the observed indicators can be explained by a set of underlying latent classes plus error (Muthén, 2004). Thus, observed indicators are assumed to be conditionally independent, after accounting for the underlying latent structure. Model parameters estimated in LCA include conditional latent class probabilities, which refer to the average probabilities of endorsing each response category of each observed indicator, given membership in a particular latent class. LCA models were specified using Mplus version 4.2 (Muthén and Muthén, 1998–2004). For all models, multiple sets of random starting values were used to prevent local solutions and to maximize model stability (Muthén, 2004). Beginning with a two-class model, successive models were fit with an increasing number of classes until the best-fitting model was found. Model fit was evaluated based on the loglikelihood (LL) value, Akaike's information criterion (AIC) and Bayesian Information Criterion (BIC), with lower values indicating better fit (Nylund et al., 2007). Entropy, a summary index of classification quality, was also considered when evaluating model fit, with values closer to 1.0 indicating better fit. Following selection of the best-fitting model, conditional probability of assignment to each latent class was saved, and each individual was assigned to a specific class based on the highest probability of assignment. Post hoc comparisons among latent classes on key demographic and behavioral variables were then conducted using chi-square for categorical variables and Tukey's studentized range (Honestly Significant Difference) test for continuous variables to control the experimentwise error rate.

Results

Barriers to employability

Table 2 presents the percentage of participants who experienced moderate and severe barriers. The most prevalent barriers were legal and educational, with about half of the sample experiencing either moderate or severe levels of each. Those with a legal barrier (49% of the total sample experienced either moderate or severe legal barriers) averaged 3.6 (4.3) months of jail time in the previous year. Other barriers were also prevalent, with a third of the sample reporting current unstable housing or homelessness and a quarter of the sample reporting psychiatric medication or hospitalization in the past year. In addition, whereas only 12% of the total sample reported having a child in placement with child welfare, for those participants who were custodial parents of children below the age of 18 (n = 282, about 20% of the total sample), 60% (n = 170) had at least one child in placement. Men experienced proportionately more legal barriers than women, whereas women experienced more education, health, employment, mental health, and child welfare barriers. Combining across severe and moderate barriers, only 6% of the sample reported no barriers, whereas 23% reported one barrier, 28% two barriers, and 43% reported three or more barriers. Women had significantly more total barriers than men ($\chi^2 = 13.6$, 3 df, $p < .01$).

Table 3 contains data on readiness to work and readiness to abstain from alcohol and illegal drug use. Participants reported a wide range of readiness to abstain and work. Overall, men

reported significantly greater readiness to work than women, but no gender differences were found for readiness to abstain. Table 4 depicts bivariate correlations among the nine barriers to employability. Correlations are generally modest and in expected directions. Of note, readiness to work is positively related to mental health, general health, and employment history and negatively related (but weakly so) to readiness to abstain from substance use.

Latent classes of participants based on barriers

LCA was conducted on nine indicator variables: (1) housing, (2) mental health, (3) criminal justice, (4) general health, (5) employment history, (6) welfare tenure, (7) education, (8) readiness to work, and (9) readiness to abstain from substance use. Two-, three-, four-, and five-class models were run, and, based on a combination of statistical and substantive criteria, the four-class model was selected as providing the best fit to the data. The four-class model had a lower LL (−14,186.93) and AIC (28,563.85) than both the three-class model (LL = −14,232.95; AIC = 28,607.89) and the two-class model (LL = −14,370.57; AIC = 28,835.13). Although the BIC for the four-class model (29,064.13) was slightly higher than for the three-class model (28,981.79), the four-class model was selected based on substantive considerations. Classification quality for the four-class model was adequate, with an entropy value of .66 and average probabilities of .80, .68, .87, and .79 for each of the four classes, respectively. Estimated conditional probabilities for each of the four classes are displayed in Table 5.

Class 1, named Multiple Barriers, is the largest class (about 41% of the sample) and includes those individuals with barriers in several areas; 46% of this class have mental health problems, and 58% have fair or poor general health. Individuals in Class 1 are more likely than other classes to have no previous work experience (60%) and to have longer welfare tenure (50% more than 2 years). This class is also characterized by low education (61% achieved less than high school) and low readiness to work.

Class 2, Work Experienced (34% of the sample), includes individuals with fewer barriers but low motivation to change their substance-use behavior. About 76% are in stable housing, with low rates of mental and general health problems. Nearly half are currently working, and all report some work experience in the past 3 years. Class 2 has the highest education relative to the other classes, with almost 21% reporting at least some education after high school. Individuals in Class 2 also show relatively less readiness to abstain from substances, with 37% in the contemplation stage and 27% in the precontemplation stage.

Class 3, Criminal Justice (14% of sample), is characterized by a high likelihood of current probation or parole (91%) and low levels of mental health and health barriers. Individuals in this class are more likely to have stable housing (78%), shorter welfare tenure (50% less than 3 months), and greater readiness to work (53%). Interestingly, individuals in Class 3 are less likely to be currently using substances (64% in maintenance stage), probably because many were recently released from a controlled environment. It is also possible that persons involved in the legal system were motivated not to report current substance use. However, two factors mitigate the likelihood of underreporting: (1) all participants had already self-reported substance-use problems during the welfare application process before being

screened for this study, and (2) data were collected in welfare offices rather than a criminal justice setting.

Class 4, Unstable Housing (11% of sample), includes individuals most likely to be homeless or in unstable housing (52%) but with high motivation to change their substance-use behavior (45% in action stage). Individuals in this class are also likely to have worked in the past 3 years (81%), have no mental health (88%) and general health barriers (92%), and have shorter welfare tenure (less than 10% had >2 years).

Demographic comparisons of the four latent classes were conducted using chi-square tests (Table 6). Significant differences across classes were found for age, gender, race, treatment status, TANF receipt, and child welfare involvement. The Criminal Justice class had the highest proportion of men, whereas the Multiple Barriers class had the highest proportion of women. The Multiple Barriers class also had the largest share of individuals receiving TANF and those with child welfare involvement. The largest proportion of those currently participating in SUD treatment programs was in the Unstable Housing class and the lowest proportion was in Work Experienced.

Discussion

This is the first study to examine personal barriers, cross-system involvements, and readiness to abstain and work among a representative sample of individuals screening positive for substance use in a large welfare system. Although the sample is not representative of low-income individuals with SUD, it represents an important population from a service perspective: low-income individuals who can be identified via traditional SUD screening strategies in welfare settings. Overall, only about 1 in 20 participants reported no barrier other than substance use, whereas about 70% reported at least two other barriers, and about 40% reported three or more additional barriers. The number and type of barriers differed significantly by gender. Women—those predominantly eligible for TANF—had a greater number of barriers, primarily related to fewer job skills, more physical and mental health problems, and greater current involvement with child welfare. By contrast, almost 60% of men reported legal barriers, consisting of recent incarceration or being on probation or parole.

Examination of readiness indicators suggests substantial heterogeneity in a participant's motivation to abstain and work. About half of participants reported either working or actively searching for a job, whereas about one in five reported having no interest in working. Similarly, the majority of participants reported being in the preparation, action, or maintenance stages of readiness to abstain. However, one in five reported being in a precontemplation stage of readiness. Also, readiness to work was only weakly related to readiness to abstain. Although barriers have been widely studied in hard-to-employ welfare populations (Moffitt, 2002), limited attention has been paid to motivation as a factor that impedes success. The latter issue is important to consider in program design. Current findings suggest that, even if appropriate services are offered, they may not be effective unless motivation is also addressed.

Findings regarding women are consistent with our prior study (Morgenstern et al., 2003) and other studies indicating that women with SUD applying for TANF experience multiple, diverse barriers to employability. No prior study has reported on men or single adult populations. Results indicate that men also experience multiple, diverse barriers, although these barriers are fewer and somewhat different than those for women. Overall, findings support screening as a method of identifying a population with a unique set of needs but raise serious doubts if current welfare policy—referral to SUD treatment combined with a traditional work-first approach—is sufficient to help this multiple barrier population become employed within welfare reform time frames.

Subgroups based on readiness and personal resources

From a welfare system perspective, gaining a better understanding of the heterogeneity of participants identified via screening in welfare settings offers promise as a strategy to tailor future programs to client profiles. Results of the LCA indicated that about 40% of participants fit into a multiple barriers subgroup that, based on resources and readiness, seemed unlikely to become employed within a work-first timeframe and are characterized by numerous disabilities. These participants seem similar to those described by Taylor and Barusch (2004), that is, individuals likely require a longer term safety net support approach.

About one third of participants were classified as work experienced and work ready. However, about 60% of this subgroup were using substances and had low readiness to abstain, including those already engaged in treatment. Treatment programs that focus primarily on abstinence goals may be a poor fit for many of these clients, whereas supportive work programs that are focused on immediate employment (Cook et al., 2005) and adjunctive SUD treatment that is focused on helping people sustain work may yield better results. The other two subgroups were smaller, and each group suggested that one barrier—either criminal justice or housing—was the predominant problem. These findings suggest that specific interagency collaborations with homeless services and the criminal justice system may improve services.

Implications for SUD system redesign and services research

Findings add to limited research on the extent of cross-system involvement among low-income Americans with SUD who are engaged in social and health care systems. For example, this is among the very first studies to provide a systems-level perspective indicating that, not only do low-income individuals referred to or in SUD treatment have multiple social and health care problems, but also that they are engaged in multiple separate systems of care (e.g., criminal justice, housing, child welfare, mental health) to address these problems. Three recent comprehensive policy reports have highlighted the issue of cross-system coordination as a major challenge for improving the SUD treatment system (Institute of Medicine, 2006; Physician Leadership on National Drug Policy, 2001; Rosenbloom et al., 2006). All recommend new federal or state-level efforts focused on changing the organization, management, and financing of SUD treatment.

Study limitations

The primary study limitation is the generalizability of findings. The study was conducted in one large urban county in New York State. Findings regarding multiple barriers and cross-system involvement among low-income Americans with SUD engaged in care are consistent with other studies (Institute of Medicine, 2006; Metsch and Pollack, 2005), but studies of other locations are needed. In addition, sample representativeness may be limited because about 1 in 10 eligible participants declined to be interviewed. Finally, data are based on self-report; the measures of readiness, although possessing high face validity, have not received psychometric validation.

Conclusions

Crafting social and health care policy for low-income Americans with SUD is a formidable challenge. Effectively helping individuals with multiple social and health care problems is exceedingly difficult because of the inherent impairment of individuals, the fragmented nature of our service systems, and limited public resources. Although the collaboration of welfare agencies and SUD treatment programs is important, more comprehensive coordination arrangements may be needed to address the complex lives of low-income Americans with SUDs. Findings suggest that classifying participants based on readiness and resources is a promising approach to the development of innovative programs that move beyond screen-and-refer models.

References

Amodei N, Lamb RJ. Convergent and concurrent validity of the Contemplation Ladder and URICA scales. Drug Alcohol Depend. 2004; 73:301–306. [PubMed: 15036552]

Biener L, Abrams DB. The Contemplation Ladder: Validation of a measure of readiness to consider smoking cessation. Hlth Psychol. 1991; 10:360–365.

Cook JA, Leff HS, Blyler CR, Gold PB, Goldberg RW, Mueser KT, Toprac MG, McFarlane WR, Shafer MS, Blankertz LE, Dudek K, Razzano LA, Grey DD, Burke-Miller J. Results of a multisite randomized trial of supported employment interventions for individuals with severe mental illness. Arch Gen Psychiat. 2005; 62:505–512. [PubMed: 15867103]

Ewing JA. Detecting alcoholism: The CAGE questionnaire. JAMA. 1984; 25:1905–1907. [PubMed: 6471323]

Institute of Medicine. Improving the Quality of Health Care for Mental and Substance-Use Conditions. Washington, DC: National Academies Press; 2006.

McCutcheon, AL. Latent Class Analysis. Thousand Oaks, CA: Sage; 1987.

McLellan AT, Kushner H, Metzger D, Peters R, Smith I, Grissom G, Pettinati H, Argeriou M. The fifth edition of the Addiction Severity Index. J Subst Abuse Treat. 1992; 9:199–213. [PubMed: 1334156]

Metsch LR, Pollack HA. Welfare reform and substance abuse. Milbank Q. 2005; 83:65–99. [PubMed: 15787954]

Moffitt, RA. From Welfare to Work: What the Evidence Shows, Welfare Reform and Beyond, Policy Brief No.13, January 2002. Washington, DC: Brookings Institute; 2002. (available at: www.brookings.edu/~/media/files/rc/papers/2002/01welfare_moffitt/pb13.pdf)

Morgenstern J, Blanchard KA, McCrady BS, McVeigh KH, Morgan TJ, Pandina RJ. The effectiveness of intensive case management for substance-dependent women receiving Temporary Assistance for Needy Families. Amer J Publ Hlth. 2006; 96:2016–2023.

Morgenstern J, McCrady BS, Blanchard KA, McVeigh KH, Riordan A, Irwin TW. Barriers to employability among substance dependent and nonsubstance-affected women on federal welfare: Implications for program design. J Stud Alcohol. 2003; 64:239–246. [PubMed: 12713198]

Morgenstern, J.; Riordan, A.; Dephilippis, D.; Irwin, TW.; Blanchard, KA.; McCrady, BS.; McVeigh, KH. Research Note: Specialized Screening Approaches can Substantially Increase the Identification of Substance Abuse Problems Among Welfare Recipients. Washington, DC: Administration for Children and Families; 2001.

Muthén, B. Latent variable analysis: Growth mixture modeling and related techniques for longitudinal data. In: Kaplan, D., editor. The SAGE Handbook of Quantitative Methodology for the Social Sciences. Thousand Oaks, CA: Sage; 2004. p. 345-368.

Muthén, BO.; Muthén, LK. Mplus User's Guide, Version 3. Los Angeles, CA: Muthén and Muthén; 1998–2004.

Nightengale, DS.; Pindus, N.; Kramer, FD.; Trutko, J.; Mikelson, K.; Egner, M. Work and Welfare Reform in New York City During the Giuliani Administration: A Study of Program Implementation. Washington, DC: The Urban Institute; 2002.

Nylund KL, Asparouhov T, Muthén BO. Deciding on the number of classes in latent class analysis and growth mixture modeling: A monte carlo simulation study. Struct Equat Model. 2007; 14:535–569.

Physician Leadership on National Drug Policy. Best Practice Initiative: State-Level Issues for Medicaid/Welfare and Substance Abuse Treatment. Providence, RI: Physician Leadership on National Drug Policy, Center of Alcohol and Addiction Studies, Brown University; 2001.

Prochaska JO, DiClemente CC, Norcross JC. In search of how people change: Applications to addictive behaviors. Amer Psychol. 1992; 47:1102–1114. [PubMed: 1329589]

Rosenbloom, DL.; Garsen Leis, RG.; Shah, P.; Ambrogi, R. Blue-print for the states: Policies to improve the ways states organize and deliver alcohol and drug prevention and treatment. Boston, MA: Join Together, School of Public Health, Boston University; 2006.

Rubinstein, G. The State of State Policy on TANF and Addiction: Findings from the "Survey of State Policies and Practices to Address Alcohol and Drug Problems Among TANF Recipients". Washington, DC: Legal Action Center; 2002.

Rustin TA, Tate JC. Measuring the stages of change in cigarette smokers. J Subst Abuse Treat. 1993; 10:209–220. [PubMed: 8389898]

Schmidt L, Weisner C, Wiley J. Substance abuse and the course of welfare dependency. Amer J Publ Hlth. 1998; 88:1616–1622.

Slavet JD, Stein LA, Colby SM, Barnett NP, Monti PM, Golembeske C Jr, Lebeau-Craven R. The Marijuana Ladder: Measuring motivation to change marijuana use in incarcerated adolescents. Drug Alcohol Depend. 2006; 83:42–48. [PubMed: 16289930]

Sobell, LC.; Sobell, MB. A Calendar Method for Assessing Alcohol and Drug Use. Toronto, Canada: Addiction Research Foundation; 1996. Timeline FollowBack: User's Guide.

Substance Abuse and Mental Health Services Administration and Center for Substance Abuse Treatment. A Look at State Welfare Reform Efforts to Address Substance Abuse. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2002.

Taylor MJ, Barusch AS. Personal, family, and multiple barriers of long-term welfare recipients. Social Work. 2004; 49:175–183. [PubMed: 15124958]

Ware, JE.; Turner-Bowker, DM.; Kosinski, M.; Gandek, B. SF-12v2: How to Score Version 2 of the SF-12 Health Survey. Lincoln, RI: QualityMetric Inc; 2002.

Table 1

Demographic and income characteristics of men and women

Variable	Total sample	Men	Women
N	1,431	980 (68%)	451 (32%)
Age in years, mean (SD)	40.0 (8.5)	39.9 (8.5)	40.1 (8.5)
Race, %†			
Black	45	42	52
Hispanic	45	48	39
Other	10	10	9
Marital status, %			
Married/common law	10	9	10
Never married	62	62	62
Formerly married	28	29	28
Past 30 days income, %‡			
No earned income	87	84	92
Some earned income	13	16	8
Previous welfare experience			
Had previous case, %‡	80	75	93
No. times on welfare, mean (SD)‡	2.7 (3.6)	2.2 (3.0)	3.8 (4.6)
No. months on welfare, mean (SD)‡	25.1 (41.2)	16.0 (29.4)	48.7 (55.4)

Notes: Group differences were tested using the chi-square statistic for categorical variables and one-way analysis of variance for continuous variables. Column percentages are presented for categorical variables; means and standard deviations are presented for continuous variables.

† $p < .01$;

‡ $p < .001$.

Table 2

Moderate and severe barriers to employability in total sample (N = 1,431)

	Moderate			Severe		
Barrier	**Total sample %**	**Men %**	**Women %**	**Total sample %**	**Men %**	**Women %**
Housing	15	15	13	18	19	14
Mental health	17†	14	25	9	9	10
Legal	23†	27	16	26†	30	16
General health	25†	23	31	12	12	11
Employment history	34†	29	45	NA		
Education	49†	46	55	NA		
Child welfare placement	NA			12†	6	26

Notes: Total sample percentages were tested for differences in proportions of men versus women using the chi-square statistic. Housing: moderate = living with others and cannot stay longer than 6 months; severe = currently homeless, living in a shelter, or living at a treatment center. Mental health: moderate = use of psychiatric medications in past 12 months; severe = psychiatric hospitalization in past 12 months. Legal: moderate = any arrests or incarcerations in past 12 months; severe = current probation/parole. General health: moderate = Short Form (SF)-12 rating of fair; severe = SF-12 rating of poor. Employment history: moderate = no work at all in past 3 years. Education: moderate = having less than a high school diploma or General Educational Development (GED) credential. Child welfare placement: severe = having a child placed out of home by child welfare. NA = not applicable.

†$p < .01$.

Table 3

Readiness to work and readiness to abstain from substance use in total sample (N = 1,431)

Variable	Total sample %	Men %	Women %
Readiness to Work[†]			
Currently working	16	19	10
Not working but ready to work	29	33	21
Not working but considering work	32	29	40
Not working and not interested	23	20	29
Readiness to Abstain from Substance Use			
Maintenance	28	27	30
Action	14	14	14
Preparation	13	13	14
Contemplation	26	27	24
Precontemplation	19	19	18

Notes: Differences in proportions of men versus women across four categories of Readiness to Work (significant; [†]$p < .01$) and five categories of Readiness to Abstain from Substance Use (nonsignificant) were tested using the chi-square statistic.

Table 4

Bivariate correlations among key barriers to employability

	1	2	3	4	5	6	7	8
1. Housing	–	–	–	–	–	–	–	–
2. Mental health	.10†	–	–	–	–	–	–	–
3. Legal	.02	−.04	–	–	–	–	–	–
4. General health	.01	.26†	−.10†	–	–	–	–	–
5. Employment history	.07*	.11†	.06*	.12†	–	–	–	–
6. Welfare tenure	−.11†	.14†	−.18†	.08†	.14†	–	–	–
7. Education	.03	.03	.01	.07†	.16†	.08†	–	–
8. Readiness to work	.06*	.21†	−.12†	.24†	.32†	.11†	.09†	–
9. Readiness to abstain from substance use	−.05	.01	−.14†	.07†	−.06*	.03	−.01	−.09†

Notes: Housing: stable own = 0; stable other = 1; unstable other = 2; homeless/shelter = 3. Mental health: none = 0; medication only = 1; hospitalization and medication = 2. Legal: none = 0; arrests only (past) = 1; probation/parole (current) = 2. General health: good or better = 0; fair = 1; poor = 2. Employment history: 13 months or more = 0; up to 12 months = 1; none = 2. Welfare tenure: less than 3 months = 0; 3 months to 2 years = 1; 2 to 5 years = 2; 5 years or more = 3. Education: more than 12 years = 0; high school or General Educational Development (GED) credential = 1; less than high school = 2. Readiness to work: currently working = 0; not working but ready to work = 1; not working but considering work = 2; not working and not interested = 3. Readiness to abstain from substance use: maintenance = 0; action = 1; preparation = 2; contemplation = 3; precontemplation = 4.

*$p < .05$;

†$p < .01$.

Table 5

Estimated conditional probabilities, by class for key barriers to employability

Variable	Class 1 Multiple Barriers (*n* = 589)	Class 2Work Experienced (*n* = 480)	Class 3 Criminal Justice (*n* =202)	Class 4Unstable Housing (*n* = 160)
(Percentage of sample in each class)	(41.1%)	(33.5%)	(14.1%)	(11.1%)
Housing				
Stable own	.403	.544	.230	.253
Stable other	.247	.211	.549	.224
Unstable other	.142	.114	.184	.189
Homeless or shelter	.208	.131	.037	.334
Mental health				
None	.536	.862	.915	.879
Medication only	.301	.086	.078	.071
Hospitalization and medication	.163	.052	.006	.051
Legal				
None	.621	.569	.088	.454
Arrests only (past)	.241	.269	.000	.398
Probation/parole (current)	.138	.163	.912	.148
General health				
Good or better	.421	.689	.854	.921
Fair	.354	.270	.093	.060
Poor	.225	.041	.054	.020
Employment history				
≥ 13 months	.164	.542	.218	.474
≤12 months	.240	.458	.306	.332
None	.595	.000	.476	.194
Welfare tenure				
<3 months	.173	.231	.494	.388
3 months–2 years	.331	.472	.394	.515
2–5 years	.187	.153	.067	.097
≥5 years	.308	.145	.046	.000
Education				
More than 12 years	.121	.206	.127	.165
High school or GED	.272	.387	.446	.475
Less than high school	.606	.407	.427	.359
Readiness to Work				
Currently working	.012	.436	.132	.019
Not working, but ready to work	.118	.338	.527	.454
Not working but considering work	.411	.198	.242	.423
Not working and not interested	.460	.029	.098	.104
Readiness to Abstain from Substance Use				
Maintenance	.265	.189	.640	.167
Action	.141	.048	.061	.445

Variable	Class 1 Multiple Barriers (*n* = 589)	Class 2Work Experienced (*n* = 480)	Class 3 Criminal Justice (*n* =202)	Class 4Unstable Housing (*n* = 160)
Preparation	.145	.125	.116	.120
Contemplation	.282	.369	.087	.122
Precontemplation	.168	.270	.096	.146

Note: GED = General Educational Development credential.

Table 6

Demographic comparisons of the four latent classes

Variable	Total sample	Class 1 Multiple Barriers	Class 2 Work Experienced	Class 3 Criminal Justice	Class 4 Unstable Housing
N	1,431	589	480	202	160
Gender, %‡					
Male	68	53	74	88	83
Female	32	47	26	12	18
Race, %†					
Black	45	41	49	52	43
Hispanic	45	50	43	41	41
Other	10	8	8	8	16
Treatment status, %‡					
Not in treatment	46	44	56	41	34
In treatment	54	56	44	59	66
TANF recipient, %†					
No	82	78	81	90	87
Yes	18	22	19	10	13
Child welfare placement, %†					
No	88	85	88	93	90
Yes	12	15	12	7	10

Notes: Group differences were tested using the chi-square statistic. TANF = Temporary Assistance for Needy Families.

† $p < .01$;

‡ $p < .001$.