WELFARE REFORM, SUBSTANCE USE, AND MENTAL HEALTH[1]

Rukmalie Jayakody[2]
Pennsylvania State University

Sheldon Danziger[3]
University of Michigan

Harold Pollack[4]
University of Michigan

In Press. Journal of Health Politics, Policy and Law, August 2000.

---

1 *This research was supported by grants from the National Institute of Mental Health (R24-MH51363, R03-MH57898) and the Robert Wood Johnson Foundation Substance Abuse Policy Research Program. Any opinions expressed are those of the authors.*

2 *Assistant Professor of Human Development and Family Studies and Research Associate, Population Research Institute. 110 Henderson Building South, Pennsylvania State University, University Park, PA 16802. E-mail:* jayakody@pop.psu.edu.

3 *Henry J. Meyer Collegiate Professor of Social Work and Public Policy and Director, Center for Poverty, Risk and Mental Health, University of Michigan, 504 E. Liberty, Suite 202, Ann Arbor, MI 48104-2210. E-mail:* sheldond@umich.edu.

4 *Assistant Professor of Health Management and Policy. 109 S. Observatory, Room M3224, Ann Arbor, MI 48109-4338. E-mail:* haroldp@sph.umich.edu

Acknowledgments

An earlier version of this paper was presented at the Annual Meeting of the Association for Public Policy Analysis and Management. Sherry Glied, James Kunz, Robert Plotnick, Michael Spencer, Peter Reuter, David Boyum, and Ron Kessler provided helpful comments on a previous draft. We thank the editor and referees for useful comments that improved our paper.

ABSTRACT

Welfare reform transformed the traditional entitlement to cash welfare under Aid to Families with Dependent Children (AFDC) into a transitional program known as Temporary Assistance to Needy Families (TANF). Because of the work requirements and the time-limited nature of assistance, policy makers are increasingly confronted with what to do when welfare recipients do not effectively make the transition from welfare-to-work, and are increasingly using the language of public health to determine who is 'employable' and who is not. Thus, renewed attention is being focused on the individual characteristics of participants themselves, particularly specific diagnoses that might reduce employability. This paper focuses on substance abuse and mental health problems among single mothers and examines their relationship to welfare receipt. We analyze data from the 1994 and 1995 National Household Survey of Drug Abuse (NHSDA), and find that 19 percent of welfare recipients meet the criteria for a DSM-III-R psychiatric diagnosis. About the same percentage have used illicit drugs during the previous year. Logistic regression results indicate that mental and behavioral health problems are significant barriers to self-sufficiency that are increasingly important in this era of time-limited benefits.

KEYWORDS: welfare reform, substance abuse, mental health, poverty, single mothers

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996—welfare reform--redefined the goals and daily operation of public aid. The new law transformed the traditional entitlement to cash welfare under Aid to Families with Dependent Children (AFDC) into a transitional program known as Temporary Assistance to Needy Families (TANF). Although it is too early to evaluate its long-term consequences, welfare reform requires policymakers, the public, and recipients to confront basic questions about the nature and purpose of public aid. Are recipients willing and able to achieve economic self-sufficiency through work? Which educational, family, and health obstacles should excuse some recipients from obligations imposed on others? How should public authorities respond when recipients face labor market obstacles that partly result from their own adverse behaviors or poor job performance?

The welfare debate has increasingly framed these questions using the language and findings of public health. A growing literature documents the prevalence of physical, mental, and behavioral health problems among welfare recipients (See, Kalil *et al.* 1998, for a review). Liberals and conservatives, policymakers and program administrators, however, interpret these studies in starkly different ways. Thus, renewed attention is being focused on the characteristics of welfare recipients themselves, particularly specific diagnoses that might reduce employability.

This paper analyzes 1994-95 data from the National Household Surveys of Drug Abuse (NHSDA), and finds that 19 percent of welfare recipients meet the criteria for a DSM-III-R[1] diagnosis of depression or one of three other psychiatric disorders. About the same percentage have used illicit drugs during the year prior to the interview. Logistic regression results indicate that mental and behavioral health problems are significant barriers to self-sufficiency that are increasingly important in this era of time-limited benefits.

This paper is organized as follows: Section I describes the public discourse about welfare reform that influences policy choices regarding substance use and mental health problems. Section II describes the prevalence of substance use and mental health problems among welfare recipients. Section III describes the data from the National Household Survey of Drug Abuse. Section IV presents statistical results, and Section V concludes.

I. The Public Discourse of Welfare Reform

Substance use and mental health problems among welfare recipients have become important themes in the broader public discourse about welfare reform. The Personal Responsibility and Work Opportunity Reconciliation Act (PL 104-193) requires most recipients to work within two years of receiving public aid. Recipients also face a 5-year lifetime limit on the receipt of federally-funded aid. States have the option of imposing shorter time limits. Most have already recorded significant declines in caseloads.

To protect the most needy from hardship, PL 104-193 allows states to exempt up to 20 percent of the caseload from the 5-year lifetime limit. The administrative and epidemiological foundations of this figure remain obscure. Who should be exempted from time limits and for how long? Can authorities create efficient and fair, legally defensible procedures to compare the complex circumstances of individual recipients? These questions, central to public policy towards disability, were not central administrative or political concerns under the pre-1996 welfare rules.

For example, many states are considering using urine testing or other drug-testing technologies to identify and sanction substance use (Pearz 1997). Adults convicted of drug-related felonies after August 22, 1996 are not eligible (at least for some period) for cash welfare benefits or food stamps (United States House of Representatives, Ways and Means Committee 1998, Appendix L). Some critics charge that prevailing drug-testing technology often produce false positive readings (Zurer 1997). Others charge that welfare dependent adults convicted of drug related crimes require substance abuse treatment and other services rather than further

sanction. Because the true prevalence of substance abuse among welfare recipients is unknown, the impact of such regulations on welfare caseloads remains the subject of much debate.

Given their lack of experience with these issues, welfare administrators, scholars and policymakers have turned to clinical language and findings to try to distinguish among recipients who may need treatment in addition to labor market services. Researchers, welfare administrators, and advocates, concerned that some recipients who are unable to work are being wrongly dropped from the caseload, have highlighted the health and mental health dimensions of welfare dependence.

Thus, a policy spotlight is focused on clinical problems whose prevalence had previously been overlooked. Recent surveys document widespread prevalence of domestic violence, physical, mental, and behavioral health problems among welfare recipients (S.K. Danziger *et al.*, 1998). As always, however, the data do not speak for themselves. These problems must be interpreted through the moral and political lens of the diverse participants in the broader debate over the nature of public aid.

Proponents of expanded social provision, on the political defensive after the 1994 and 1996 election campaigns, have invoked clinical language to reframe public interpretations of chronic welfare dependence. Such arguments are reminiscent of Gilbert Steiner's (1966, 1971) contention three decades ago that the incapacity of welfare recipients would defeat efforts to convert welfare into a transitional system of economic support. Ironically, these arguments bear some resemblence to the claims of conservative "paternalists" such as Lawrence Mead (1992, 1997), who frames welfare dependence as the product of adverse behaviors by recipients who have "psychic inhibitions" (1992: 159) and therefore do not exploit available opportunities for economic mobility.

In contrast to these arguments, economic policy analysis of welfare reform often highlighted the adverse labor market incentives associated with existing programs. During the 1960s and 1970s, economists who advocated a negative income tax emphasized the high marginal tax rates created by receipt of AFDC, Food Stamps, and Medicaid. Charles Murray

(1984) posited that poor men and women responding rationally, perhaps even with foresight and cunning to the economic incentives associated with public aid, reduced their work effort and avoided marriage. Responding from a very different political perspective, while acknowledging the importance of micro-economic incentives, William Julius Wilson (1996) and others (e.g., Danziger and Gottschalk, 1995) suggested that welfare dependence primarily reflects labor market changes that have diminished employer demand for less-skilled workers, spatial mismatches, and other structural factors largely beyond the control of individual recipients.

Our point is not to evaluate the relative merits of these opposing views; nor do we seek here to analyze the political role that policy research played in the welfare debate.[2] Rather, we note how clinical language has been consistently invoked to either justify or to condemn welfare dependence. With equal frequency, others have denounced clinical explanations as disparaging of the capacity and moral agency of welfare recipients. However, few, if any, of these studies analyzed specific data on the substance use or mental health of recipients.

Moreover, those with diagnosed severe disabilities receive Supplemental Security Income (SSI) and Social Security Disability Income (SSDI)—programs that were not explicitly considered in the 1990's "welfare reform" debate. By virtue of continued participation in welfare rather than SSI or SSDI, recipients were deemed sufficiently fit, both physically and mentally, to obtain employment. Liberals and conservatives had different views as to how to move recipients to work, but neither side contested this basic premise of employability.

For a variety of reasons, supporters of expanded social provision highlighted the similarities between nonworking welfare recipients and labor force participants. In a society that displays tenuous commitment to redistributive concerns, in which many citizens identified poverty with racial minorities, liberals sought to reduce the stigma associated with cash aid. David Ellwood's *Poor Support* (1986), perhaps the most influential recent analysis of welfare policy, emphasized that with appropriate programs and policies in place, most recipients could be expected to work after a transitional period. As he concluded in a 1994 essay, "[I]f we had an

effective child support system, if we ensured that people got medical protection, if we made work pay, there would be far less need for welfare"(Ellwood 1994: 157).

Ellwood and other architects of work-oriented welfare reform realized that some recipients would fare poorly in the labor market (Ellwood 1996). However the presumption of time-limited benefits was that most recipients could become successfully employed given enough proper transitional support and other aid.

Bane and Ellwood's influential analysis of welfare spells supported these themes. They found that although welfare is a transitional program for most recipients, a significant minority of new entrants commence spells lasting a decade or more. Long-term recipients, therefore, comprise a surprisingly large percentage of the caseload at any specific time (Bane and Ellwood 1986). A pronounced subtext of this research was that prolonged welfare dependency is inappropriate, and that a transitional, time-limited system would provide superior incentives, would be more fair to the broad population in need of public aid, and would be more politically sustainable. Ellwood proposed to protect the most needy recipients by providing subsidized private and public employment of last resort to individuals who exhausted the time limits of available cash support (Ellwood 1986, 1996). During the 1992 election campaign, Candidate Clinton embraced Ellwood's notion of time-limited benefits. However, during the campaign and during his subsequent administration, Clinton downplayed controversial and expensive provisions designed to protect the most disadvantaged subgroups of recipients. The special problems of more disadvantaged or chronically dependent beneficiaries received far less attention than "Ending welfare as we know it." When the need for additional spending was discussed, the administration focused primarily on the details of an expanded earned income tax credit, transitional Medicaid coverage, child care subsidies, and other transitional services for short-term beneficiaries.

Recipient heterogeneity was also downplayed by conservative critics of the existing system. Conservatives often cited behavioral pathologies within the welfare population. However, such pathology was cited to question the very legitimacy of cash assistance, rather

than to advocate more individualized treatment for clients (Kaus1992). Welfare administrators and others responsible for the daily operation of public aid recognized the tremendous variation of capacities and circumstances across the welfare caseload (See, e.g., Lipsky 1980). Incremental reforms of the 1970s and 1980s sought to confront such heterogeneity through the development of case management and other services designed to create individualized pathways to self-sufficiency.[3] However, such reforms failed to capture public attention even as they failed to change the daily realities of welfare aid.

The 1988 Family Support Act (FSA) illustrated the obstacles to incremental reform. FSA was the last and the most substantive effort to alter welfare policy within the traditional entitlement structure established in 1935. FSA included expanded work requirements and expanded employment and training services through the Job Opportunities and Basic Skills Training Program (JOBS). The design and implementation of JOBS were strongly influenced by welfare-to-work demonstration projects analyzed by the Manpower Demonstration Research Corporation (MDRC). Although MDRC reported important successes in welfare-to-work programs, these demonstrations had modest effects on employment and earnings.(Gueron and Pauley 1991)

Moreover, FSA itself was not aggressively implemented in a way that would win public legitimacy for incremental reform. FSA took effect at the end of the 1980s economic boom when states faced increasing budgetary pressure from rising Medicaid costs and other factors. Only a small percentage of welfare recipients were recruited or required to obtain JOBS services.

Perhaps most important for welfare politics, FSA implementation coincided with steady increases in welfare caseloads between the mid-1980s and the early 1990s. Recession, population changes including immigration, and a rise in child-only cases were the most important factors in this increase. The linkage between Medicaid and AFDC may have also increased enrollment, as expanded Medicaid insurance coverage for children and pregnant women attracted many families into the Medicaid program. Some of these families may have subsequently discovered that they were AFDC-eligible. There is also evidence of a “Medicaid lock” discouraging welfare

exits as private health insurance coverage for low-earning workers became a visible concern (Yelowitz 1995).

Accounting for these factors, however, unexplained increases in takeup rates also played an important role. Moreover, caseloads remained high despite demographic and economic changes that should have reduced the welfare rolls (Blank 1997). In failing to deliver visible reductions in the duration or prevalence of welfare receipt, FSA failed to satisfy a key requirement imposed by policymakers and the public.

Moreover, unexplained increases in welfare takeup suggest that relatively employable individuals were more likely to receive public aid in the early 1990s than earlier comparable peers. This compositional shift highlighted the importance of transitional services for recipients who could be reasonably expected to work. These patterns may also have eroded the political legitimacy of traditional welfare, as both policymakers and the electorate observed a large population of nominally employable recipients of open-ended cash aid.

For these reasons and others, the 1996 welfare reform debate became a contest about the basic legitimacy of welfare itself, rather than a debate about specific program features that might produce incremental improvements in social outcomes. Within this debate, few stakeholders considered important administrative distinctions among recipients. As long as welfare recipients were entitled to cash aid, neither activists nor scholars nor elected officials had any reason to confront individual differences in behaviors or circumstances (Mashaw 1983). This political calculus abruptly changed with the 1996 welfare reform which explicitly presume that the great majority of recipients can quickly become employable and find jobs. Thus, much attention is now focused on the extent to which recipients have clinically diagnosable conditions. Such conditions provide an acceptable explanation for welfare dependence and also require enhanced treatment services and possible exemption from time limits. The advent of time-limited benefits also gives recipients a greater incentive to document existing physical, mental or behavioral health barriers to employment. State welfare agencies also have an incentive to provide services

in the near term, because once recipients reach their five-year limit, Federal funds to serve them and exemptions are limited.

II. The Prevalence of Substance Use and Mental Health Problems among Welfare Recipients

The welfare reform debate has generated evidence that substance use and mental and behavioral health problems are common among welfare recipients. Data from several employment and training programs indicate that such problems impeded recipients' social well-being and labor market performance.

Because substance use is a covert behavior, its true prevalence within the welfare population is unknown. Due to differing definitions and data sources, published prevalence estimates vary widely, from 6.6 to 37 percent of those receiving public aid (Olson and Pavetti 1996). The 1992 National Household Survey of Drug Abuse (NHSDA) indicated that 15.5 percent of AFDC recipients were impaired by drugs or alcohol, a rate twice that observed among non-AFDC recipients (U.S. Department of Health and Human Services 1994).

Substance abuse impedes self-sufficiency. An Inspector General study of 25 state AFDC offices found substance abuse to be among the most frequently cited functional impairments preventing recipients from leaving welfare and completing job training programs (U.S. Department of Health and Human Services 1992). In dramatic fashion, Joseph Califano, former Secretary of Health, Education and Welfare, states that "all the financial lures and prods and all the job training in the world will do precious little to make employable the hundreds of thousands of welfare recipients who are addicts and abusers" (Califano 1995: 40.).

A liberal advocacy group states that "welfare reform is doomed to fail if it does not address the needs of individuals with alcohol and drug problems" (Legal Action Center 1995:1). Among state and local welfare program directors surveyed, 65 percent said that drug and alcohol treatment services were extremely important in getting recipients to leave welfare, and an additional 34 percent considered it somewhat important (Legal Action Center 1995).

Mental health disorders have received less attention, but existing studies indicate that such disorders are common among welfare recipients. A recent evaluation of the Jobs Opportunities and Basic Skills (JOBS) program reports that 42 percent of welfare mothers--twice the rate of the general population--reported high levels of depressive symptoms (U.S. Department of Health and Human Services 1995). Many studies establish that low-income persons, single mothers, parents of young children, young adults, the poorly educated and the unemployed face heightened risk of mental health problems (Bruce, Takeuchi and Leaf 1991; Catalano and Dooley 1983; Hall, Williams and Greenberg 1985; Kessler 1982; Kessler et al. 1994; Kessler and Neighbors 1986; Klebanov, Brooks-Gunn and Duncan 1994; McLanahan and Sorenson 1984; Ulbrich et al. 1989; Williams, Takeuchi and Adair 1992). Single mothers on public assistance thus form a high-risk group for depression and other disorders.

The New Chance Demonstration documented that 53 percent of applicants were at a high risk of depression, measured by the Center for Epidemiological Studies Depression (CES-D) Scale (Quint, Bos, and Polit 1997). As shown in Table 1, participants whose responses to the CES-D place them at high risk of depression displayed worse economic and social outcomes. It is unclear, however, whether depression was a cause or consequence of adverse life conditions. (As discussed below, both pathways may be important.)

Mental and behavioral health problems may also play some role in the disappointing outcomes of some "welfare to work" interventions. Whereas low education and job skills are obvious drawbacks in a competitive labor market, less tangible individual factors raise more subtle problems for employment and training interventions. Mental health problems may restrict women's ability to effectively participate in these programs, or to leave welfare for employment. Persons suffering from mental illness appear more vulnerable to interpersonal problems and irritability (Schless, *et al.* 1974; Tweed 1993). Many recipients obtain employment or slots in job training programs only to lose them due to confrontations with coworkers and supervisors, lateness, and similar violations of workplace norms. Mental health problems may be an undiagnosed factor in these work place difficulties.

Mental and behavioral health also affect non-economic aspects of recipients' social performance. Both substance abuse and mental health problems are known risk-factors for child neglect and abuse (e.g. Brooks-Gunn, *et al.* 1998). Such factors received heightened public attention in a 1994 *New York Times* profile of Mary Ann Moore, a poor Chicago mother of four and her arduous work schedule, and her determined efforts to escape public aid (DeParle 1994). Three years later, the reporter documented Moore's subsequent experiences of family dislocation, cocaine abuse, homelessness, and clinical depression aggravated by her poor adherence to prescribed therapies (DeParle 1997).

III. The National Household Survey of Drug Abuse

We analyze data from the 1994-95 National Household Survey of Drug Abuse (NHSDA), an annually repeated, national cross-sectional survey of the civilian, non-institutionalized population older than 11 years of age. Residents of non-institutionalized group quarters and persons with no permanent address (homeless people and residents of single room hotels) were also included. Appropriately weighed, the NHSDA is representative of the national population.

A new questionnaire, fielded in 1994 and 1995, retained the core questions from previous surveys, but added measures of four psychiatric disorders from the short form of the University of Michigan-Composite International Diagnostic Interview (UM-CIDI). The UM-CIDI is a non-clinically administered psychiatric diagnostic interview originally used in the National Comorbidity Survey (NCS). Field tests of the CIDI conducted by the World Health Organization documented high reliability and validity with diagnoses. The CIDI generates psychiatric diagnoses according to both the DSM-III-R and ICD-10 diagnostic systems (Wittchen 1994), providing a widely-recognized and credible definition of psychiatric problems.

The NHSDA is also the <u>only</u> national survey that includes information on substance use, psychiatric disorders and welfare receipt. Some data sources with information on welfare and employment contain limited measures of substance use and mental health, while others focus on

psychiatric disorders, but contain no information on welfare receipt. The National Longitudinal Survey of Youth (NLSY), for example, asks limited questions on marijuana and cocaine use in selected years, includes a measure of depression only after 1992, and includes little data on other types of substance use or mental health problems. The NCS includes detailed measures for many addictive and mood disorders, but no information on welfare receipt. Some studies of diagnosed individuals with mental illness do explore respondents' histories of welfare receipt. However, they do not analyze individuals with mental health problems who have not been diagnosed (Frank and Gertler 1991).

One obvious problem with the NHSDA (and other large-scale surveys used in policy research) is the likelihood of deceptive or inaccurate responses by survey participants (Harrison and Hughes 1997). Because welfare receipt and substance use each bring social stigma, they are likely to be under-reported. The magnitude of such under-reporting is unknown, but may be substantial. The worst possibilities are illustrated in a uniquely sensitive arena: substance use among pregnant women (Vega *et al.* 1993; National Pregnancy and Health Survey 1996). Urine testing and self-reports indicated that 6 percent of African American women (and less than 1 percent of non-Hispanic whites) used cocaine within 12-72 hours of delivery. Only about 1/5 of positive test results were accompanied by positive self-reports of usage.

A second limitation, inherent to the cross-sectional nature of the NHSDA, makes it difficult to untangle the simultaneous causal pathways by which mental and behavioral health problems both influence and reflect adverse family circumstances and poor economic outcomes. Substance use and prior mental health problems may trigger prolonged welfare receipt and adverse economic outcomes. However, welfare dependence, poverty, and family dislocation can stimulate depressive symptoms and substance use.

Despite these limitations, the NHSDA's rich data provide a valuable benchmark for examining the relationships between substance use, mental health problems, and welfare receipt. Although we cannot untangle issues of simultaneous causation, the associations we document are important for public policy. Prolonged welfare dependence and poverty aggravate existing

substance use and mental health problems, and thereby become a barrier to self-sufficiency even among individuals who display few prior risk factors for these diagnoses. At the same time, individuals who enter welfare with existing substance use and mental health problems are likely to have prolonged spells.

Sample. Our sample consists of 2,728 single mothers at least 18 years of age who live with at least one minor child. Because of small numbers, American Indian and Asian American respondents are excluded. We excluded disabled and retired mothers and full-time students so that our sample would approximate the women who are required to work under welfare reform.[4] To the extent that substance use and mental health problems cause women to leave the labor force and define themselves in the more socially acceptable category "disabled", this exclusion understates the negative effects of both substance use and mental health problems.

Because the 1994 and 1995 surveys used the same questions for the outcomes of interest, and because the annual surveys yielded demographically similar cross-sections of single mothers, we pooled the data. Table 2 shows that 31 percent of the 2,728 single mothers received cash welfare in the year prior to the survey (i.e., in 1993 and 1994).

Substance Use and Mental Health. The NHSDA also explores use at any time within the past year of many legal and illegal substances. In addition, we created a measure of alcohol dependence based on a list of symptoms that operationalize DSM-III-R criteria.[5] The NHSDA collected information on four mental health problems that meet DSM-III-R criteria: major depression, generalized anxiety disorder, panic attack, and agoraphobia. Dichotomous variables were created to indicate the presence of each disorder within the past year.

Statistical Methods. We begin by comparing overall prevalence of substance use and psychiatric disorders across three categories of the sample: all single mothers, single mothers receiving cash welfare, and single mothers not receiving cash assistance. We then estimate a logistic regression model that controls for relevant socio-demographic characteristics and examines the relationships between substance use, mental health problems and welfare receipt. The NHSDA employs a complex survey design, including unequal selection probabilities,

stratification, and clustering. We use the software package STATA to weight and to account for design and sample effects.

These regressions provide a convenient way to explore patterns in the data, controlling for standard socio-demographic factors. Simultaneous causation and omitted variables may be operative, thus questioning their interpretation as a causal model. An analysis to untangle causal effects would require instrumental variables, such as state AFDC benefits or other variables that affect welfare receipt but not substance use. For confidentiality reasons, however, state identifiers are not available in these data. Thus, despite important strengths, the NHSDA does not include other potential instruments, such as prior childhood or adolescent mental health problems, that might affect substance use and current mental health problems independent of welfare receipt. Given the nature of the available data, we interpret our results cautiously, noting that simultaneity and omitted variables may influence the estimated coefficients.

We explore simultaneous causation in a more exploratory way by estimating reverse regressions in which psychiatric disorders and substance use are viewed as endogenous to the other variables in our model (Amemiya 1985). Reverse regression allows us to explore whether welfare receipt is an important "predictor" of drug use and psychiatric disorders. We also estimated the impact of tobacco on welfare receipt. Although tobacco likely plays no causal role, smoking provides an intriguing proxy for unobserved traits correlated with economic outcomes (Levine, Gustafson, and Valenchik 1995).

IV. Results

Table 3 documents the prevalence of substance use and psychiatric disorders. As indicated near the bottom of the first column, 16 percent of all single mothers experienced one of the four disorders during the past year, with depression being the most common (9 percent). Also, 16 percent of single mothers had used any illegal drug at least once within the past year, with 8 percent having used an illegal substance other than marijuana. Seven percent met diagnostic criteria for alcohol dependence.

Columns two and three dichotomize the sample by welfare receipt. Reported substance use is more common among welfare recipients than among other single mothers—21 percent of welfare recipients report use of any illegal substance during the past year, compared to 13 percent of non-recipients. Use of illegal substances other than marijuana are 10 and 7 percent, respectively, for the two groups, but this difference is not statistically significant. Cocaine and crack use is significantly higher among welfare recipients. However, only 5 percent of welfare recipients report such consumption.

Alcohol use was very common and was slightly less prevalent among recipients than among non-recipients (67 vs. 70 percent). Previous research examining the relationship between alcohol, earnings, and hours worked also reports this positive association (Berger and Leigh 1988; Bryant et al. 1993; Mullahy and Sindelar 1991, 1993). Alcohol dependence among welfare mothers (9 percent) was significantly higher than among non-recipient single mothers (5 percent). Recipients are also more likely to smoke—58 vs. 45 percent.

Welfare recipients were significantly more likely than non-recipients to have major depression and agoraphobia. About one-fifth of welfare recipients experienced one of the four disorders over the past year, compared to 13 percent of non-recipients. If the full range of psychiatric disorders had been measured in the NHSDA, the prevalence of any psychiatric disorder among recipients would be even higher.[6]

Regression Results. Table 4 shows estimated coefficients from a logistic regression model of substance use, mental health problems, and welfare receipt. Socio-demographic controls included race/ethnicity, marital status, education, age, number of children, health status, urbanicity and region. One dichotomous variable was included to measure psychiatric disorders, representing whether or not the woman had any one of the four DSM-III-R disorders. Because the bivariate results showed significant differences between recipients and non-recipients for cocaine and crack use, we included one variable indicating use of these drugs and another indicating the use of any other illegal substance. A measure of DSM-III-R alcohol dependence

was also included. We highlighted the role of unobserved differences in preferences and circumstances by including tobacco use as a regressor.

Psychiatric disorders and cocaine/crack use are associated with significantly higher welfare receipt. Controlling for the other variables, single mothers with a psychiatric disorder have an adjusted odds ratio of 1.38 associated with increased welfare receipt. Cocaine/crack use within the past year is associated with an adjusted odds ratio of 2.06. Alcohol dependence and other illicit drugs yielded smaller, but statistically insignificant associations with welfare receipt. Tobacco use is associated with an adjusted odds ratio of 1.68.[7]

Many familiar socio-demographic control variables are significantly associated with welfare receipt. African-Americans and Puerto Ricans, never-married women, and those who are less-educated, have more children and are in fair or poor health are all more likely likely to receive welfare. Southern residents are less likely to receive welfare, in part because benefit levels in Southern states are much lower. Many of these variables have large effects. For example, a high school graduate has an adjusted odds ratio that is only 0.45 that of a high school dropout.

Tobacco Use. We noted our concern about inferring causation in cross-sectional results. In addition, unobserved differences in preferences and circumstances can create misleading observed associations. Such problems are potentially important in any policy analysis, but are likely to be present in the analysis of stigmatized behaviors.

Alcohol and illicit substance use influence economic outcomes, including welfare receipt. Yet substance use is also correlated with other, unobserved values and experiences that may influence these outcomes. For example, substance users are both more risk-seeking and more myopic in balancing current and future well-being (Schelling 1984; Becker and Murphy 1988). Substance use is also a response to depressive symptoms, stressful employment and family roles (Kalil, *et al.* 1998).

Because substance use is correlated with these unobserved factors, the estimated coefficients in Table 4 may overstate the causal impact of any substance use itself. Tobacco

provides potential insight into these effects. A socially accepted, inexpensive non-intoxicant whose dominant health effects occur late in life, tobacco exerts few direct effects on family circumstances, welfare dependence, or employment among young mothers. Because, however, tobacco is addictive and brings well-documented health effects, smokers systematically differ from nonsmokers in important ways.

The linkage between smoking, depression, and stress is well-documented. Single mothers, staff nurses, and others in demanding caregiver roles often consume tobacco to cope with the stress and loneliness that often accompany these roles (Graham 1992). Depression has been identified as a major obstacle to smoking cessation among women (Borrelli, *et al.* 1996; Anda, *et al.* 1990).

The extensive literature regarding smoking during pregnancy reinforces these findings. Controlling for socio-demographic factors, pregnant women who smoke display higher prevalence of marital difficulties and are subsequently more likely to discipline their infants at 1 year of age (Butler and Golding 1986; Morales, Marks, and Kumar 1997). Using data from the National Maternal and Infant Health Study, Pollack and Frohna (1998) report that pregnant smokers report greater ambivalence about their current pregnancies, are more likely to consume alcohol prenatally, and are more likely to score at the 90^{th} percentile or higher on the CES-D Depression scale.

Refer again to Table 4 in which tobacco use is strongly associated with welfare receipt. Among licit and illicit substances, only crack/powder cocaine has a larger odds ratio. This, and the findings in Table 5 (discussed next) that tobacco use is positively associated with psychiatric disorders and cocaine/crack use, suggest caution in attributing causal effects.

Reverse Regressions. Table 5 provides "reverse regression" results. The regression in the first columns documents that illegal drug use, alcohol dependence, and cigarette use are all strongly associated with the presence of psychiatric disorders.. The adjusted odds ratio is 2.6 for drug use and substantial for the other two variables. African Americans and the Hispanic subgroups also have a lower prevalence of these disorders. Individuals in excellent or very good

health were less likely to meet criteria for psychiatric disorders. The regressions in the last columns show that cocaine/crack use is strongly correlated with other substance use, alcohol dependence and tobacco use. None of the socio-demographic variables are significantly associated with cocaine/crack use.

Controlling for other factors, welfare receipt is statistically significant in both regressions. In percentage terms, welfare recipients are more likely than comparable non-recipients to display psychiatric disorders, with an adjusted odds ratio of 1.35. Differences between recipients and non-recipients appear more striking for crack/cocaine use. Welfare recipients are approximately twice as likely to report cocaine/crack use as comparable non-recipients. Because, however, the population prevalence of this is quite low, cocaine/crack use remains small within the welfare caseload.

Magnitude of Substance Use and Mental Health Effects. To illustrate the relative impacts of substance use and mental health problems on the probability of receiving welfare, predicted probabilities were calculated from the regression coefficients in Table 4 for a single mother with baseline characteristics. These estimates were then modified to indicate psychiatric disorders and cocaine/crack use. The baseline case corresponds to an African American, never married single mother with two children, between 18 and 25 years of age, who is not alcohol dependent, does not use tobacco, does not use any illegal drugs, is in excellent or very good health, and lives in an urban area in the Northeast. In Figure 1, separate probabilities are shown for women who have and do not have a high school degree.

Single mothers with these baseline characteristics, who do not have a psychiatric disorder and did not use cocaine/crack in the past year had a .75 probability of receiving welfare if they had not graduated from high school and a .57 probability if they had graduated. Having one or more of the four psychiatric disorders increases the probability by 6 and 8 percentage points;

having used cocaine/crack increases the probability of welfare receipt by 11 and 16 percentage points, respectively. The presence of both a disorder and cocaine/crack use increases the probability of welfare receipt by 14 and 22 percentage points relative to the baseline case. These latter effects are similar in magnitude to the 18 percentage point high school dropout effect for the baseline case. Note from tables 2 and 3 however, that being a high school dropout (21 percent of women) is more common than is the presence of a psychiatric disorder (16 percent) and much more common than cocaine or crack use (4 percent). Only 1.3 percent of the sample has both a psychiatric disorder and cocaine/crack use. However, these individuals were substantially more likely to receive welfare aid.

V. Conclusion

Welfare reform has focused increased attention on the problems of substance use and mental health among welfare recipients. The NHSDA documents that in the past year, 21 percent of welfare recipients have used at least one illegal drug, and that 19 percent had at least one of four psychiatric disorders--depression, general anxiety disorders, agoraphobia or panic attack. Mental health problems, in particular, appear to be prevalent threats to well-being and social performance among welfare recipients.

We did not find documented support for claims of widespread substance abuse among welfare recipients (e.g. Califano 1995). Although 16 percent of recipients report some marijuana use during a year, only about one-tenth report use of any other illegal drugs. Controlling for socio-demographic factors, welfare participation is higher among cocaine/crack users and among those with psychiatric disorders. However, welfare participation has no statistically significant association with the use of other illegal drugs.

Several states are contemplating the use of chemical testing to detect illicit drug use among welfare recipients (Pear 1997). In our view, such policies are likely to have unintended, and undesired results. Our prevalence estimates suggest that most detected cases will involve

marijuana—a substance that has no clear association with welfare receipt in the NHSDA sample. Ironically, urine testing technologies have greatest difficulty identifying cocaine, the substance which has the strongest association with increased welfare dependence and with diminished social performance (Kleiman 1992; Vega *et al.* 1993).

Widespread drug testing of welfare recipients will detect use among many women who have no accompanying problem with impaired social performance or employment. Fairness and efficiency suggest that such approaches might be more carefully targeted to specific cases in which authorities have reasonable suspicion of child mistreatment or other adverse behaviors associated with substance use. Similar targeting has been used to address substance abuse during pregnancy, where broad drug testing raises serious practical and concerns (Pollack forthcoming).

Moreover, introduction of chemical detection does not address the principal administrative challenge of developing effective integrated services to monitor and to assist welfare recipients with drug-related concerns. Oregon and other states appear to be pursuing a sensible middle course, in which substance abuse investigation is targeted to clients who fail to fulfill work requirements or who show other tangible signs of diminished social performance (Kirby *et al*. 1999).[8]

We are not suggesting that users of illicit substances should be exempt from the work requirements imposed on other recipients. Although recipients with severe substance abuse problems are unlikely to obtain gainful employment, they comprise a very small proportion of the welfare population. To the extent that welfare programs focus on substance abuse, our results suggest that they should focus on the very small group of serious drug abusers rather than casting the net widely to include any occasional user.

The strong association between tobacco use and welfare receipt provides a useful reminder that caution is warranted in drawing sweeping policy conclusions from observed correlations of adverse outcomes with substance use. Substance abuse is a consequence, as well as a cause of poverty, family distress, psychiatric disorders, and other prevalent problems among recipients of public aid. If illicit drug use is a symptom of other difficulties, punitive deterrence

may not improve the social performance of recipients, and may be less effective than more therapeutic modalities in preventing substance abuse itself. Thus, drug treatment should be one part of a set of services provided by welfare-to-work programs that focus on job skills, mental health, and other barriers to employment.

Psychiatric disorders appear more widespread than serious substance abuse. Depression and three other problems afflict about a fifth of the welfare caseload during a year, so the full extent of psychiatric disorders would be much higher if the NHSDA had measured additional disorders. Results from New Chance and other interventions suggest that negative social and economic outcomes are more widespread among those at highest risk for depression. Some cases of depression or other psychiatric disorders may be severe enough to warrant exemptions from the 5-year lifetime limit on welfare receipt. However, many recipients would benefit if more extensive screening and treatment services were incorporated into welfare-to-work programs.

These problems are especially important because existing employment and training programs tend not to address mental and behavioral health concerns. Most welfare-to-work interventions focus on the development of specific job skills and traditional human capital credentials, such as GED degrees. Even intensive interventions, such as New Chance, did not provide explicit treatment for mental health concerns, even though many participants were at high risk of depression.

Some advocates might cite our prevalence results to question the overall fairness of work requirements. They should note, however, that comparable non-recipients experience similar prevalence of many of these same conditions. Many poor women struggle with disorders like depression or problems related to substance use, yet avoid receipt of public cash aid. Adverse economic and family circumstances bring considerable distress to many single mothers, regardless of their welfare status.

More generally, we believe that advocates should exercise caution in drawing sharp policy conclusions from epidemiological data. Epidemiological findings should sharpen

administrative judgments. These data inform, but they cannot resolve the broader political debate concerning the proper purposes of public aid.

Finally, our findings should be evaluated in the context of the new welfare regime. TANF is quite different from the AFDC system it replaced. Caseloads declined by 38 percent between August 1996 and December 1998, partly due to favorable economic conditions, partly due to deliberate changes in program eligibility rules (Danziger 1999). The very success of welfare reform in cutting the most employable recipients' welfare spells has increased the percentage of the remaining recipients who are especially ill-equipped for moving into the workforce.

Data to document this shift in caseload composition is emerging from several longitudinal studies of post-reform welfare spells. For example, the Women's Employment Study (WES), a longitudinal survey in Michigan based upon a cohort of 1997 TANF recipients (Danziger, *et al.* 1998), found that recipients who remained on the TANF caseload in Fall 1998 displayed more than twice the rate of DSM III-R drug dependence as respondents who had exited the TANF rolls. Rates of DSM III-defined psychiatric disorders were also significantly higher for those continuing to receive TANF aid.

These findings highlight the need to provide effective treatment for welfare recipients who experience psychiatric disorders or who have substance abuse problems. Substance abuse and dependence and mental health problems are important barriers to economic self-sufficiency and the successful fulfilment of family roles. Appropriate treatment is likely to improve economic outcomes among affected welfare clients. Independent of such effects, effective services are needed to address great and preventable anguish in an important subgroup of the welfare population.

REFERENCES

Amemiya, T. 1985. *Advanced Econometrics*. Cambridge, MA: Harvard University Press.

American Psychiatric Association. 1987. *Diagnostic and Statistical Manual of Mental Disorders, Revised Third Edition.* Washington, DC: American Psychiatric Association.

Anda, R. F., D. F. Williamson, L. G. Escobedo, E. E. Mast, G. A. Giovino, and P. L. Remington. 1990. Depression and the Dynamics of Smoking. *Journal of the American Medical Association* 264(12), 1541-1545.

Bane, M.J. and D. Ellwood. 1986. "Slipping into and Out of Poverty: The Dynamics of Welfare Spells," *Journal of Human Resources*, 21(1): 1-23.

Becker, G. and K. M. Murphy. 1988. A Theory of Rational Addiction. *Journal of Political Economy* 96(4) 675-700.

Berger, M. C., and J. P. Leigh. 1988. The Effect of Alcohol Use on Wages. *Applied Economics* 20:1343-1351.

Blank, R. "What Causes Public Assistance Caseloads to Grow?" National Bureau of Economic Research Working Paper 6343, 1997.

Borrelli B., B. Bock, T. King, B. Pinto, and B. H. Marcus. 1996. The Impact of Depression on Smoking Cessation in Women. *American Journal of Preventive Medicine* 12(5):378-87.

Brooks-Gunn, J, J. Smith, L. Berlin, and K. Lee. 1998. *Implementations of Welfare Changes for Parents of Young Children.* Joint Center for Poverty Research, University of Chicago/ Northwestern University.

Bruce, M. L., D. T. Takeuchi, and P. J. Leaf. 1991. Poverty And Psychiatric Status: Longitudinal Evidence from the New Haven Epidemiologic Catchment Area Study. *Archives of General Psychiatry* 150:465-469.

Bryant, R. R., A. Jayawardhana, V. A. Samaranayake, and A. Wilhite. 1996. The Impact of Alcohol and Drug Use on Employment: A Labor Market Study Using the National Longitudinal Survey of Youth. *Institute for Research on Poverty Discussion Paper no. 1092-96.*

Butler, N. and J. Golding. 1986. *From Birth to Five.* Oxford: Pergamon Press.

Califano, J. A. 1995. It's Drugs Stupid. *New York Times Sunday Magazine,* January 29:40-41.

Catalano, R., and D. Dooley. 1983. Health Effects of Economic Instability: A Test of the Economic Stress Hypothesis. *Journal of Health and Social Behavior* 24:44-60.

Danziger, S.K. et al. 1998. "Barriers to the Employment of Welfare Recipients." University of Michigan: www.sww.umich.edu/poverty/pubs.html.

Danziger, S. and Gottschalk, P. 1995. *American Unequal.* Cambridge, MA: Howard University Press.

Danziger, S., ed. 1999. *Economic Conditions and Welfare Reform: What are the early Lessons?* Kalamazoo MI: Upjohn Institute for Employment Research.

Danziger, S. 1999. "In Pursuit of Robert J. Lampman's 'Modest Goal': Antipoverty Policy After Welfare Reform." *Focus* 20(2): pp. 8-12.

DeParle, J. 1994. Better Work than Welfare. But What if There's Neither? *New York Times*, December 18.

DeParle, J. 1997. Welfare to Work: A Sequel. *New York Times.*

Ellwood, D. 1986. *Poor Support: Poverty in the American Family*. New York: Basic Books.

Ellwood, D. 1994. "Increasing Self-Sufficiency by Reforming Welfare." Chapter 14 in M.J. Bane and D. Ellwood, editors, *Welfare Realities: From Rhetoric to Reform*, Cambridge, MA: Harvard University Press.

Ellwood, D. 1996. "Welfare Reform As I Knew it." *American Prospect* No. 26: 22-29.
Frank, R., and P. Gertler. 1991. An Assessment of Measurement Error Bias for Estimating the Effect of Mental Distress on Income. *Human Resources* 26:154-164.
Graham, H. 1992. Women's Smoking and Family Health. *Social Science and Medicine* 25(l):47-56.
Gueron, J., and E. L. Pauly. 1991. *From Welfare to Work.* New York: Russell Sage Foundation.
Hall, L. A., C. A. Williams, and R. S. Greenberg. 1985. Supports, Stressors and Depressive Symptoms in Low-Income Mothers of Young Children. *American Journal of Public Health* 75:18-522.
Harrison, L., and A Hughes. 1997. "The Validity of Self-Reported Drug Use; Improving the Accuracy of Survey Estimates," *NIDA Research Monograph 167,* Washington, DC.
Kalil, A, M. Corcoran, S. K. Danziger, R. Tolman, K. S. Seefeldt, D. Rosen, and Y. Nam. 1998. *Getting Jobs, Keeping Jobs, and Earning a Living Wage: Can Welfare Reform Work?* University of Wisconsin: Institute for Research on Poverty, Discussion Paper.
Kaus, M. 1992. *The End of Equality*. New York: Basic Books.
Kessler, R. C. 1982. A Dissaggregation of The Relationship Between Socioeconomic Status and Psychological Distress. *American Sociological Review* 47:752-764.
Kessler, R. C. 1994. The National Comorbidity Survey. *International Review of Psychiatry* 6:365-376.
Kessler, R. C., K. A. McGonagle, S. Zhao, C. B. Nelson, M. Hughes, S. Eshlerman, Wittchen, K. U., and K. S. Kendler, K. S. 1994. Lifetime and 12-Month Prevalence of DSM-ITI-R Psychiatric Disorders in the U.S.: Results from the National Comorbidity Survey. *Archives of General Psychiatry* 51:8-19.
Kessler, R. C., and H. W. Neighbors. 1986. A New Perspective on the Relationship Among Race, Social Class, and Psychological Distress. *Journal of Health and Social Behavior* 27:107-115.
Kirby, G., et al., Integrating Alcohol and Drug Treatment into a Work-Oriented Welfare Program: Lessons from Oregon, . 1999, Mathematica Policy Research: Washington, DC.
Kleiman, M. 1992. *Against Excess: Drug Policy for Results.* New York: Basic Books.
Klebanov, P. K., J. Brooks-Gunn, and G. J. Duncan. 1994. Does Neighborhood and Family Poverty Affect Mother's Parenting, Mental Health, and Social Support? *Journal Of Marriage And The Family* 56:441-455.
Legal Action Center. 1995. *State, Local Welfare Officials See Important Role for Drugs and Alcohol Treatment in Welfare Reform*. Washington, DC: Legal Action Center.
Levine, P., Gustafson, T., and Velenchik, A. 1995. More Bad News for Smokers? The Effects of Cigarette Smoking for Labor Market Outcomes. *National Bureau of Economic Research Working Paper*, Paper 5270.
Lipsky, Michael. 1980. *Street-level Bureaucracy : Dilemmas of the Individual in Public Services.* New York: Russell Sage Foundation.
Mashaw, J. 1983. *Bureaucratic Justice.* New Haven, CT*:* Yale University Press.
Mead, L. 1992. *The New Politics of Poverty: The Nonworking Poor in America*. New York: Free Press.
Mead, L. 1997. *The New Paternalism: Supervisory Approaches to Poverty.* Washington DC: Brookings Institute.

Mclanahan, S., and A. B. Sorensen. 1984. Life Events and Psychological Well-Being: A Reexamination of Theoretical and Methodological Issues. *Social Science Research* 13:111-128.

Morales, A., Marks, MN, and Kumar, R. 1997. Smoking In Pregnancy: A Study of Psychosocial and Reproductive Risk Factors. *Journal of Psychosomatic Obstetrics and Gynecology* 18(4):247-254.

Mullahy, J., and J. L. Sindelar. 1991. Gender Differences in Labor Market Effects of Alcoholism. *ARA Papers And Proceedings* 8(2):161-165.

Mullahy, J., and J. L. Sindelar. 1993. Alcoholism, Work, and Income. *Journal of Labor Economics* 11(3):494-520.

Murray, C. 1984. *Losing Ground: American Social Policy 1950-1980*. New York: Basic Books.

Olson, K., and L. Pavetti. 1996. Personal and Family Challenges to the Successful Transition from Welfare to Work. *Final Report. Prepared for the Office of the Assistant Secretary for Planning and Evaluation and for the Administration for Children and Families.* May 17.

Pear, R. 1997. Rewards and Penalties Vary in State's Welfare Programs. *New York Times*, February, 23.

Pollack, H. A., and J. J. Frohna. 1998. "Prenatal Smoking as an Indicator of Psychosocial Distress," unpublished manuscript, University of Michigan.

Pollack, H.A. "When Pregnant Women Use Crack," forthcoming. *Drug Policy Analysis Bulletin.*

Pollack, H.A., K. Khoshnood, and F. Altice. 1999. "Health Care Delivery Strategies for Supervised Offenders," *Journal of Health Care Finance*, 1999 26(1), pp. 1-17.

Quint, J. C., H. Bos, and D. F. Polit. 1997. *New Chance: Final Refort on a Comprehensive Program for Disadvantaged Young Mothers and their Children.* New York: Manpower Demonstration Research Corporation.

Schelling, T. C. 1984. *Choice and Consequence.* Cambridge, MA: Harvard University Press.

Schless, A., L. Schartz, C. Goetz, and J. Mendels. 1974. How Depressives View the Significance of Life Events. *British Journals of Psychiatry* 125:406-410.

Steiner, G. Y. 1966. *Social Insecurity: The Politics of Welfare.* New York: Rand McNally.

Steiner, G. Y. 1971. *The State of Welfare.* Washington, D.C.: Brooking Institution.

Thompson, A., K. Blankenship, P. Selwyn, *et al.* 1998. "Evaluation of an innovative program to address the health and social service needs of drug-using women with or at risk for HIV infection." *Journal of Community Health*, **23**(6): p. 419-40.

Tweed, D. L. 1993. Depression-Related Impairment: Estimating Concurrent and Lingering Effects. *Psychological Medicine* 23:373-386.

Ulbrich, P. M., G. J. Warheit, and R. S. Zimmerman. 1989. Race, Socioeconomic Status, and Psychological Distress: An Examination of Differential Vulnerability. *Journal of Health and Social Behavior* 30:131-146.

United States Department of Health and Human Services, Office of the Inspector General. 1992. *Functional Impairments of AFDC Clients.* Washington, DC.

United States Department of Health and Human Services. 1994. *Patterns of Substance Use and Substance-Related Impairment Among Participants in the Aid to Families with Dependent Children Program (AFDC).* Office of the Assistant Secretary for Planning and Evaluation and the Substance Abuse and Mental Health Services Administration. Washington, DC.

United States Department of Health and Human Services. 1995. *The JOBS Evaluation: How Well Are They Faring?: AFDC Families with Preschool-Aged Children at the Outset of the JOBS Evaluation.* Office of the Assistant Secretary for Planning and Evaluation and The Administration For Children and Families. Washington, DC.

United States House of Representatives. *1998 Green Book: Background Material and Data on Programs within the Jurisdiction of the Committee on Ways and Means*. Committee on Ways and Means. Washington, DC.

Vega, W. A., B. Kolody, and J. Hwang. 1993. Prevalence and Magnitude of Perinatal Substance Exposures in California. *New England Journal of Medicine* 329:850-854.

Weaver, Robert. Forthcoming. *Ending Welfare as We Know It: Policy Making for Low-Income Families in the United States*. Washington, D.C.: Brookings Institution.

Wilson, W.J. 1996. *When Work Disappears: The World of the New Urban Poor*. New York: Knopf.

Williams, D. T., D. T. Takeuchi, and R. K. Adair, R. K. (1992). Socioeconomic Status and Sychiatric Disorders Among Blacks and Whites. *Social Forces* 71(l):179-194.

Wittchen, H. U. 1994. Reliability and Validity Studies of the WHO-Composite International Diagnostic Interview (CIDI): A Critical Review. *Journal of Psychiatric Research* 28:57-84.

Yelowitz, A. 1995. "The Medicaid Notch, Labor Supply, and Welfare Participation: Evidence from Eligibility Expansions," *Quarterly Journal of Economics* 110(4), pp. 909-39.

Zurer, P. 1997. Drug Abuse Testing Policy not as Defensible as Testing Technology. *Chemical and Engineering News* 75:28.

TABLE 1. Depression Risk and Outcomes in New Chance Demonstration Program

	Not at Risk of Depression at 42 Months (CES-D< 16)	At Risk of Depression at 42 Months (CES-D< Between 16 and 23)	At High Risk of Depression at 42 Months (CES-D< Over 23)
Percent receiving High School Diploma/GED	57.1	42.6	40.5
Percent not living With any of her children	2.5	2.3	7.8
Percent living without At least one child	7.9	10.9	18.4
Percent living with Partner/husband	33.1	31.1	23.9
Percent employed	32.3	24.5	21.5
Percent hospitalized In 18-month interval	15.5	17.7	25.9
Mean earnings over intervention	$7,204	$5,753	$4,801

SOURCE: Quint, Bos, and Polit, 1997; Table 6.13.

TABLE 2. Sample Description for 1994 and 1995 Combined[1]

Unweighted sample size=2,728 single mothers[2]	Proportion	Mean
RACE/ETHNICITY		
White, non-Hispanic	51.90	
Black, non-Hispanic	33.07	
Puerto Rican	2.98	
Mexican American	7.82	
Other Hispanic	4.22	
MARITAL STATUS		
Divorced/separated	56.44	
Never married	42.87	
EDUCATION		
Less than high school	21.25	
High school graduate[3]	43.06	
More than high school	35.69	
AGE		
18 to 25	24.40	
26 to 34	39.66	
35 and over	35.93	
HEALTH STATUS		
Excellent or very good	37.72	
Other response	62.28	
MEAN NUMBER OF KIDS < 12		1.68
URBANICITY		
Urban	84.65	
Rural	15.35	
REGION		
Northeast	20.98	
South central	22.61	
South	36.56	
West	19.84	
RECEIVED WELFARE		
Yes, received welfare	31.15	
No, did not receive welfare	68.85	

[1] Widows, the disabled, full-time students, those receiving social security or supplemental security insurance are excluded from the sample. [2] All data are weighted. [3]High school graduates include those with a GED.

TABLE 3. Descriptive Statistics: Substance Use, Mental Health and Welfare Receipt

	Total	Received Welfare	Received No Welfare
Unweighted sample size[1]	2,728	1124	1604
Substance Use			
Cigarettes	.50	.58***	.45***
Smokeless tobacco	.01	.01	.007
Alcohol	.69	.67	.70
Marijuana	.12	.16***	.10***
Cocaine	.03	.05**	.03**
Crack	.02	.03***	.008***
Cocaine or crack	.04	.05**	.03**
Heroin	.002	.004	.001
Hallucinogen	.007	.008	.007
LSD	.003	.004	.003
PCP	.001	.002	.001
Inhalents	.002	.002	.002
Analgesics	.03	.04	.02
Tranquilizers	.02	.02	.01
Stimulants	.008	.009	.007
Sedatives	.004	.005	.004
Steroids	.00	.00	.00
DSM-III-R Psychiatric Disorders			
Major depression	.09	.12**	.08**
Generalized anxiety disorder	.02	.03	.02
Agoraphobia	.04	.05***	.02***
Panic attack	.04	.05	.04
Any of the four disorders	.16	.19**	.13**
Summary			
Any illegal drug use	.16	.21***	.13***
Any illegal, except marijuana	.08	.10	.07
Drug use other than cocaine/crack	.15	.19**	.13**
DSM-III-R alcohol dependence	.07	.09**	.05**

[1] All data are weighted.

*, **, *** indicates significant differences between welfare recipients and non-recipients;
*p<.05, **p<.01, ***p<.001;

TABLE 4. Regression Results: Substance Use, Mental Health and Welfare Receipt

	b	s.e.	odds ratio
Constant	-1.15		
Substance Use and Mental Health Problems			
Psychiatric disorder[1] (no disorder=0)	.321*	.128	1.38
Cocaine/crack use (no use=0)	.713*	.322	2.06
Any other drug use (no use=0)	.119	.211	1.12
Alcohol dependence (no dependence=0)	.291	.183	1.33
Cigarette use (no use=0)	.519***	.096	1.68
Race/ethnicity (White=0)			
African American	.545***	.124	1.72
Puerto Rican	1.01***	.226	2.77
Mexican American	-.126	.166	0.88
Other Hispanic	.198	.208	1.22
Marital Status			
Never married (divorced/separated=0)	.793***	.097	2.21
Education (less than high school=0)			
High school degree[2]	-.807***	.106	0.45
More than high school	-1.26***	.127	0.28
Age (35 and over=0)			
18 to 25	.182	.135	1.19
26 to 34	-.106	.108	0.89
Number of kids under 12	.499***	.044	1.65
Excellent or very good health (other=0)	-.268**	.092	0.76
Rural (urban=0)	-.085	.143	0.92
Region (Northeast=0)			
North central	-.263	.149	0.77
South	-.776**	.133	0.46
West	-.069	.153	0.93

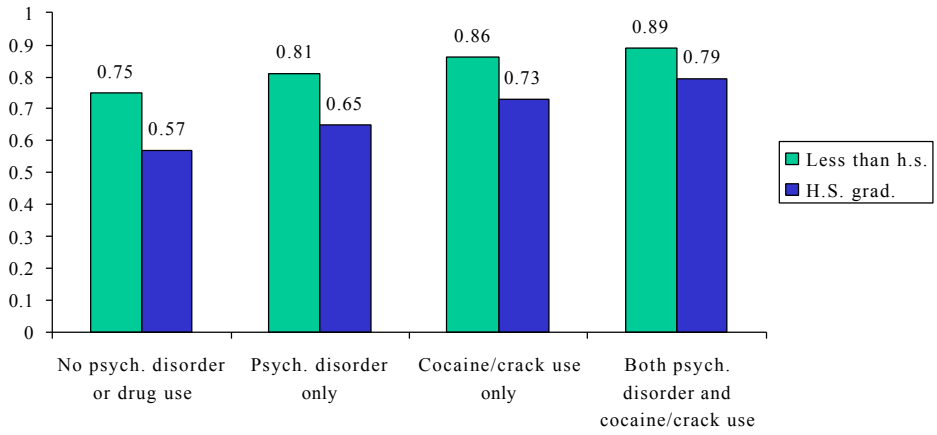
[1] Includes major depression, generalized anxiety disorder, agoraphobia, and panic attack.
[2] Includes those who received a GED.
* $p < .05$; ** $p < .01$; ***$p < .001$
Model $\chi^2(19)=670.52$; Regressions are weighted.

TABLE 5. Reverse Regressions: Welfare Receipt, Substance Use and Mental Health

	PSYCHIATRIC DISORDERS[1]			COCAINE/CRACK USE[2]		
	b	s.e.	odds ratio	b	s.e.	odds ratio
Constant	-1.40	.250		-4.61	.54	
Received welfare (No=0)	.302*	.127	1.35	.699*	.305	2.03
Substance Use						
Any other drug use (No=0)	.973***	.198	2.64	2.31***	.264	10.1
Alcohol dependence (No=0)	.649**	.195	1.91	1.56***	.257	4.76
Cigarette use (No=0)	.353**	.120	1.42	1.55***	.320	4.74
Race/ethnicity (White=0)						
African American	-.579***	.151	0.56	.225	.274	1.25
Puerto Rican	-.205	.264	0.81	.545	.463	1.72
Mexican American	-.398	.199	0.67	.062	.408	1.06
Other Hispanic	.031	.228	1.03	-.321	.657	0.72
Marital Status (Div./separated=0)						
Never married	-.184	.119	0.83	-.156	.231	.855
Education (less than H.S.=0)						
High school graduate[3]	.045	.139	1.04	-.176	.257	0.84
More than high school	.233	.159	1.26	-.146	.303	0.86
Age (35 and over=0)						
18 to 25	.037	.172	1.03	-.302	.338	0.74
26 to 34	.035	.131	1.03	.304	.241	1.35
Number of kids under 12	-.002	.051	0.99	-.023	.101	0.97
Excellent or very good health	-.705***	.114	0.49	-.164	.213	0.85
Rural (Urban=0)	.088	.175	1.09	-.259	.361	0.77
Region (Northeast=0)						
North central	-.114	.189	0.89	-.153	.355	0.86
South	-.068	.169	0.93	-.288	.310	0.74
West	-.103	.194	0.90	-.373	.389	0.74

[1] Includes major depression, generalized anxiety disorder, agoraphobia, and panic attack; Model X^2 (18) = 147.52.
[2] Model X^2 (18) = 270.60; both regressions are weighted.
[3] Includes those who received a GED.
*p <. 05; **p < .01; ***p < .001

Figure 1. Probability of Receiving Welfare



NOTE: Baseline probability is for an African American, never married single mother, 18 to 25 years of age with two children, in excellent or very good health, and lives in an urban area in the Northeast.

ENDNOTES

[1] DSM III-R diagnoses are defined in American Psychiatric Association, 1987.

[2] On policy research in public discourse, see Weaver, forthcoming. See also Danziger (1999).

[3] We thank an anonymous referee for comments related to this point.

[4] In the NHSDA, the disabled are those who reported that this was the reason why they are not working or looking for work. Only 101 women are excluded for disability. We excluded 23 other women who reported receiving social security income and 66 who reported receiving SSI, because they also would not be eligible for TANF. Our empirical results do not differ substantially if these 190 women are included in the sample.

[5] Respondents classified as alcohol dependent required affirmative responses to two or more of the following criteria: alcohol often consumed in larger amounts or over a longer periods than the person intended; persistent desire or effort to cut down on use; a great deal of time spent in either acquiring the alcohol or recovering from its effects; frequent intoxication or withdrawal symptoms when expected to fulfill major obligations at work, home or school; important social, occupational or recreational activities given up or reduced because of alcohol; continued use despite having knowledge of having a persistent or recurrent social, psychological, or physical problems that is caused by alcohol use; need for markedly increased amount of alcohol in order to achieve intoxication or desired effect.

[6] The NCS does not indicate receipt of public aid. It is therefore not possible to directly compare NHSDA and NCS samples of welfare recipients. However, if we examine a comparable demographic group--single mothers with personal incomes under $20,000--we find that the NCS has slightly higher rates of examined disorders. This may result from the NCS using the long form of the CIDI whereas the NHSDA uses the short form. Major depression was the most common psychiatric disorder in both surveys. The NCS includes information on 14 psychiatric disorders, and we find that 44.5 percent of single mothers with personal incomes below $20,000 have had at least one of these 14 in the previous year. In comparison, 20.3 percent of low-income single mothers in the NHSDA have experienced one of four disorders (major depression, generalized anxiety disorders, panic attacks and agoraphobia) in the previous year. Our results are therefore likely to under-estimate the impact of psychiatric disorders on welfare receipt, since only 4 of the 14 NCS-measured disorders are included in the NHSDA.

[7] We have also estimated the model in table 4 without including the variable for tobacco use (results available from

authors). All of the other variables that are significant in Table 4 remain significant and their magnitudes do not appreciably change. The next section discusses why we prefer to have this variable in the regression.

[8] Pollack, Khoshnood, and Altice (1999), and Thompson, Blankenship, Selwyn, *et al.* (1998) consider related social service issues for criminal offenders and for more severe substance users.