

Wolfe, Barbara; Hill, Steven

**Working Paper**

## The Health, Earnings Capacity, and Poverty of Single-Mother Families

Working Paper, No. 59

**Provided in Cooperation with:**

Levy Economics Institute of Bard College

*Suggested Citation:* Wolfe, Barbara; Hill, Steven (1991) : The Health, Earnings Capacity, and Poverty of Single-Mother Families, Working Paper, No. 59, Levy Economics Institute of Bard College, Annandale-on-Hudson, NY

This Version is available at:

<https://hdl.handle.net/10419/186748>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

**The Health, Earnings Capacity,  
and Poverty of Single-Mother Families**

by

**Barbara Wolfe\***  
**Steven Hill\*\***

**Working Paper No. 59**

**July 1991**

Resident Scholar, The Jerome Levy Economics Institute of Bard College

\*Department of Economics, Department of Preventive Medicine, La Follette Institute of Public Affairs,  
Institute for Research on Poverty, University of Wisconsin-Madison

\*\*Ph.D. candidate at the Department of Economics, Department of Preventive Medicine, La Follette  
Institute of Public Affairs, Institute for Research on Poverty, University of Wisconsin-Madison

Approximately 1.4 million single mothers have substantial health problems. Even if they were to work full time, they would be unlikely to earn enough to adequately provide for themselves and their children. Many of these women are not likely to find employment that offers health insurance coverage for themselves or their children. Employment is thus not an option that would provide sufficient resources--in terms of income or insurance--for them to live at or above the poverty line. Those single mothers who have a disabled child are at additional disadvantage. These children may require increased time from an adult and are likely to have considerable medical care needs and expenditures. For these families, employment of the mother may not provide adequate resources in terms of either time available to meet the disabled child's special needs, income, or adequate health insurance.

We explore these issues, first examining the health status of single mothers compared to other women. We next estimate their earnings capacity--the amount they would earn were they to join the work force on a full-time basis, taking into account their health status and that of their children. We then investigate the percentage of single mothers and their children who would be poor if they had to rely on the earnings capacity of the women (working 40 hours per week, adjusting for health). Finally, we explore the policy implications of our findings, which seem particularly timely in the face of the new work requirements of the 1988 Family Support Act. The act requires most single mothers currently receiving or applying for Aid to Families with Dependent Children (AFDC) to enroll in training or register to work.

## Introduction

More than 12 percent of GNP is now spent on health. The health services component of welfare benefits, Medicaid, has grown rapidly over the last two and a half decades, yet there has been little study of the link between health and labor force participation, earnings capacity, and poverty among single mothers.<sup>1</sup> This is surprising given (1) the important role of health (disability) in explaining the early retirement decisions of men and male labor supply decisions in general, and (2) basic statistics, discussed below, that suggest a generally low level of health among women and children in low-income families.

Health appears to play a role in poverty. If we look at the health profile of the U.S. population (as reported in National Center for Health Statistics, 1990), limitation of activity and self-reports of poor and fair health are higher among the low-income population than middle- and higher-income persons: as of 1989, 23.2 percent of those with family incomes under \$14,000 reported some limitation of activity, while 14.8 and 8.4 percent of those in families with incomes between \$14,000 and \$25,000 and above \$50,000, respectively, reported such limitations. Similarly, nearly 20 percent of the lowest income group reported fair or poor health compared to 10, and less than 4, percent of those in these middle- and higher-income groups.<sup>2</sup> Table 1 illustrates another link between health and income. In it, the adult population of this country is divided into income deciles using equivalent income, and data from the 1980 National Medical Care Utilization and Expenditure Survey are used to calculate the distributions of two measures of poor health: that associated with one or more limitations on physical activity; and self-reports of poor health. Both measures indicate that poor health is concentrated among those with low incomes. These raw data point to a correlation of health and income.

Health status, labor force status, and employment status are all quite clearly related. As of the mid-1980s, the percentage of currently employed persons who reported fair or poor health was

relatively low (3.8 percent among those aged 18-44), whereas the percentage among those not in the labor force was much higher (12.6 percent).<sup>3</sup> And a number of studies have demonstrated a link between health and labor force participation and earnings, particularly among men.<sup>4</sup>

The growth of single-mother families and the fact of their low family incomes are well known. There are now some 6.7 million families without fathers in this country. About 50 percent of the children living in these families are below the poverty line. Among black children in such families, nearly three-quarters live in families with incomes below the poverty line.

As of 1987, slightly more than 50 percent of all single mothers with children under 18 worked; among them, nearly three-quarters worked full time. Six percent of single mothers receiving welfare (AFDC) worked, and of these about one third worked full time. Only about 40 percent of single mothers earn enough to raise their families out of poverty. This economic condition has been explained by the relatively low level of education of many of these women, the lower earnings of women compared to men, and the need of single parents to arrange for child care. Another factor, however, may be poor health.

The evidence on single mothers from the Survey of Income and Program Participation (SIPP) is that approximately one quarter report that they are in poor or fair health, and 2 percent of them need help doing housework.<sup>5</sup> More of those in families with incomes below the poverty line (nearly 60 percent of these women) report poor or fair health than do those in families one to two times the poverty line, and the incidence is even less among those in higher-income families. Approximately 10 percent of the children of the single mothers in SIPP have some form of disability. The disability of a child is likely to influence the hours worked and hence the earnings capacity of a single parent.

### Health Status

Are single mothers at risk particularly of health problems? They face the stress of raising a child or children alone; they live on the earnings of one person combined with any transfers for which

they are eligible; many have relatively low levels of education compared to the general population (adjusting for age). All of these factors indicate that they are likely to have a greater probability of experiencing health problems than other persons of similar age.

Although health can be measured a number of ways, all of the available measures have limitations. The most commonly used means are self-reports of health on a four- or five-dimension scale ranking it poor through excellent. This has the disadvantage of being self-reported and hence depends in part on individuals' expectations of their health; e.g., a blind person may feel better than anticipated and reply excellent, while an able-bodied person with sight may feel somewhat depressed for a short period and respond fair or good. Studies comparing this measure to others find it is a good predictor of future health (see for example Maddox and Douglass, 1973). Other measures are self-reported disability or the presence of a health problem that prevents or limits the amount of work that a person can do. This is a commonly used measure in the disability area. Another measure that is sometimes used is the presence of specific health conditions. Unfortunately, small sample sizes limit the usefulness of such conditions. This is the case with the data set (SIPP) used in this analysis. Researchers now are turning to measures of functional ability--and using scales such as Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs) as better, more continuous measures of disability--and the need for additional services. We use self-reported disability or the presence of a health problem that prevents or limits work as the basis of our comparison of single mothers and other women. We also use self-reported poor or fair health and a variation of ADLs in our analysis that uses SIPP. These are more detailed and hence are likely to be better, more continuous measures of health status. They include difficulty in (1) lifting ten pounds, (2) seeing with the aid of corrective lenses, (3) hearing normal conversation, and (4) walking a quarter of a mile. They are not available on the more recent data set, the Current Population Survey (CPS) that we use for our broader comparisons.

We begin our analysis by using information on women aged 18-60 from the March 1989 CPS. Most of the subsequent analysis is conducted with a different sample, single mothers from the SIPP for 1984, which has much more extensive data on the health status of adults, and also contains information on the work effort of these women, their education, hours worked, and work experience. The CPS is used as a point of comparison because it is more recent.

Table 2 shows the simple average of those in poor health by our preferred CPS measure, self-reported disability or presence of a health problem that prevents or limits work, and a second gauge, the "Haveman-Wolfe" measure,<sup>6</sup> which uses information on work limitation as well as participation in a disability-related transfer program.<sup>7</sup> The extent of poor health as measured by both of these indicators provides evidence that single women have poorer health than married women, that nonworking women have poorer health than working women, and that mothers have better health than women who are not mothers. The highest rate of reported poor health is among single mothers who are not working. AFDC recipients are less healthy than other women according to these measures. The evidence cited here is generally consistent with our expectations regarding the greater extent of health problems among single mothers than among most other women of similar age.

Next we examine the extent of disability among women who work and do not work, among women who are mothers and those who are not, among single versus married mothers, and among single mothers who receive or do not receive AFDC benefits, controlling for age and race by dividing the sample into four age groups (18-24, 25-34, 35-44, and 45-60) and two racial groups (white and nonwhite) (see Table 3). We also performed these calculations for education groups, but the results are not reported here. For these comparisons, only the preferred measure of disability (as used in column 1 of Table 2) is presented. The proportions of women with disabilities are calculated using the population weights assigned by the U.S. Bureau of the Census to each woman. A test for whether the proportions are statistically different across each (subgroup) was conducted using a one-tailed t-

test of the difference between the weighted proportions within each subgroup defined in terms of age, education, or race by the work, maternal, marital, or AFDC reciprocity status, adjusted for the number of tests run using the Bonferroni technique.<sup>8</sup> We find that about 80 percent of the t-tests conducted and reported in Table 3 are statistically significant at the 5 percent level; the Bonferroni inequality implies that the simultaneous results of all the tests of differences are significant at the 5 percent level. Another statistical test is conducted to test whether the incidence of disability is the same across these women defined in terms of marital status and maternal status. For this a nonparametric test--the Friedman  $F_r$  test--is used.<sup>9</sup>

The results suggest:

- Older (aged 45-60) single mothers receiving AFDC are the most likely women among those aged 18-60 to report poor health. Forty-one percent of these women report health problems.
- Among single mothers with more than a high school education (not shown on table), a significantly higher percentage of AFDC recipients report poor health than do those who are not AFDC recipients.
- Across racial groups, single mothers report more health limitations than do married mothers.
- A lower level of reported health limitations prevails among working women than among nonworking women, across race, education, and age groups.
- Somewhat surprisingly, reported health among mothers is better on average than among women who are not mothers.

The nonparametric results provide evidence that



- The distribution of health problems differs significantly among the four marital-maternal groups using all of the 43 age groups as blocks ( $F_r = 66.8$ , significant at the 1 percent level).
- The distribution of health problems also differs among the four maternal-marital status groups using the age and education groups ( $F_r = 11.1$ , significant at the 5 percent level).

In general, the results are consistent with our expectations regarding the greater incidence of health problems among certain subgroups of women. These include a statistically significant greater incidence of limitations among single mothers compared to other mothers, nonworking women relative to working women, and recipients of transfers oriented to single mothers versus single mothers who do not receive such aid. These patterns generally hold across the age, education, and race subgroups. The only unexpected results are poorer health of women who are not mothers than that of mothers, among those aged 35-60, but this may be consistent with fecundity problems of some of the women who are not mothers. Nevertheless, these cross-tabulations do not simultaneously control for a number of characteristics of these women at the same time. For this, we turn to a probit estimate on the determinants of self-reporting of disability or health problems that limit work.

Table 4 provides the estimates from three probit equations on the probability of health problems among women aged 18-60. The results suggest that older women, women with less schooling, single mothers, other unmarried women, and women in lower-income households are all more likely to report greater health problems. Women with more children aged 6-18 tend to be healthier than those with fewer children in this age bracket, and there is also some (surprising) evidence that women with more children under 6 report fewer health problems. These results are generally consistent with the analysis above. All of this evidence supports the view that single mothers relative to married mothers are more likely to have health problems. The evidence also

supports the view that working women tend to have better health than women who do not work. Finally, the evidence is consistent with the view that low income and poor health are related.

We turn our attention now to the group of primary interest, single mothers, drawing on SIPP data and its greater detail on health. We note first that in the SIPP data set, using the same definition of poor health as used in CPS, older women are more likely to self-report disability or health problems that limit work, and that there is more reported poor health among recipients of AFDC than among nonrecipients. These differences, as well as whether or not there are statistically different levels of disability in the SIPP sample of single women, are reported in Table 5. The same tests of statistical significance were run. Overall, and in the majority of age and race categories, there is a statistically significant difference between the higher reported rates of disability among AFDC recipients than among non-recipients. These patterns are similar to those found using the 1989 CPS and the percentage reporting a disability or limitation is nearly identical in both samples (8 and 7 percent).<sup>10</sup>

### Earnings Capacity

Persons with health problems are likely to have reduced earnings capacity relative to their able-bodied peers.<sup>11</sup> This may occur because of decreased productivity due to lower energy levels, the inability to perform certain tasks and hence reduced labor market options, fewer hours available to work owing to time needed for health-related activities, greater time requirements to perform everyday tasks, etc. Parents with a disabled child are also likely to face increased time demands and have fewer hours available to participate in the paid work force. We explore these issues for single mothers.

We estimate a tobit two-stage model of hours worked and wages.<sup>12</sup> The model is similar to a three-stage model in which the first equation concerns whether the woman works at all, and the second equation estimates hours of work and another wages. Like the three-stage model, the two-

stage model takes into account the fact that a number of these single mothers do not participate in the paid labor force. These women have both zero hours of work and zero wages. The final equation in both models is identical--an equation of wages among only those single mothers in the paid labor force. We estimate both versions but prefer the tobit two-stage model, which allows for a clearer direct representation of the influence of health on hours worked.

The first stage is an equation which has as its dependent variable log of hours worked. It is estimated as a maximum likelihood tobit equation in order to take into account the truncation at zero hours.

The tobit hours equation estimated is

$$\text{HRS} = \underline{X}_1' \underline{\beta}_1 + \underline{Y}_1' \underline{\alpha}_1 + \underline{H}_1' \underline{\gamma}_1 + \epsilon_1$$

The equation is also the selection criterion for the second stage, which is estimated only over those for whom  $\text{HRS} > 0$ . The wage equation is specified as a log wage equation, and the two-stage model includes a selection control for the decision to work positive hours, that is, to enter the paid labor force. The selection correction is identical to the more commonly used one based on a probit equation of labor force participation, except that the tobit parameter estimates are used in the normal distribution and density (see Maddala, 1983, p. 240).

The wage equation estimated is

$$\text{WAGE} = \underline{X}_2' \underline{\beta}_2 + \underline{Y}_2' \underline{\alpha}_2 + \underline{H}_2 \underline{\gamma}_2 + \lambda \xi + \epsilon_2$$

where the X vector contains personal characteristics of the woman, the Y vector contains family characteristics of the woman's family, and the H vector contains health information on the woman and her children. The  $\alpha$ ,  $\beta$ , and  $\gamma$  vectors and  $\xi$  are parameters to be estimated. The subscripts are used to indicate that the vectors need not be identical in the two equations.

The variables included in the hours equation are those designed to measure alternative demands on a mother's time (number of children under age 6 and aged 6-18; the presence of a

disabled child), labor market opportunities (unemployment rate), human capital (education and education squared, experience prior to this time period and its squared term), other personal characteristics (race measured as two variables, Hispanic and black; and non-public transfer, non-earnings of the mother which provide additional income and hence may increase an income effect), another potential source of income to also capture a potential income effect (maximum state AFDC benefits), attitudes toward work (captured by income of other family members), and own health (self-reported fair or poor health and a modified version of the Activities of Daily Living scale which measure functional status--the modification highlights the work-related nature of some ADLs). (Appendix 2 contains more exact variable definitions.) The variables measuring alternative demands on the mother's time, except for presence of a disabled child, are only included in the hours equation, as are measures of other income and maximum AFDC benefits. Once their influence is captured in the hours equation, there is little reason to believe that these factors should influence the wage rate. Otherwise the included variables are the same (with, of course, the exception of the selection term in the wage equation).

The results of this model are reported in Table 6. The first column of results reports the log hours tobit estimates; the second column reports the log wage results. The means and standard deviations of the independent variables are in columns three and four. The model is estimated only over the 1,605 single mothers in the sample who report 60 or fewer hours per week as their regular hours worked and over those with consistent responses on earnings and hours worked (both positive or both zero).

The mother's own health clearly plays a large and significant role in influencing hours worked. The coefficient on poor-fair health is -.9 in the log hours specification, while the coefficient on work ADLs is -.67. Both are significant at the 1 percent level.

The presence of a disabled child also is associated with fewer hours worked. In this case the coefficient is  $-.43$  and is significant at the 10 percent level. Other factors that measure time demands--the number of children by two age groups--are also negative, as expected. The coefficient on number of children under 6 is  $-.64$  and is significant at the 1 percent level. The coefficient on number of children aged 6-18 is  $-.13$  but is not quite significant. The smaller coefficient on older children is consistent with greater time demands of pre-school-age children. If a disabled child is present, he or she is included in the number of children in his or her age bracket--hence the impact of disability is over and above the presence of a child.

Among personal characteristics, being black and having an amount of other own income are statistically significant. Other potential sources of income (maximum AFDC benefits) are negative and statistically significant at the 1 percent level. Income of other family members is positive, perhaps suggesting unobserved attitudes rather than an income effect. Among human capital variables, education is not significant but increases in both the linear and quadratic terms. Prior work experience (measured up to the period of the factors under analysis) is positively associated with hours worked, but decreasingly so. Finally, the unemployment rate in the community, which measures employment opportunities facing the woman has the expected negative sign and is statistically significant at the 1 percent level. [The sigma reported is the standard deviation of the residual error term.]

The log wage equation is only estimated over those with positive hours in the labor force. Note, however, that the selection correction factor, although not statistically significant, has a large effect on wage rates. Thus, the single mothers who command the highest wage rates are already in the labor force.

For wages, own health is not significant. This suggests that the big impact of health among single mothers lies in reducing the potential to work and the hours that can be worked. Time

demands other than the presence of a disabled child are not included in the model, since a priori they should not play a role. The presence of a disabled child does not significantly influence wages, and its sign is positive. The two personal characteristics, both of which measure race, are also not statistically significant. Human capital values--education and experience--are significant in explaining wages, as expected. Education again shows a nonlinear relationship, and the positive effect dominates beginning at 8.7 years of education. For prior work experience the positive effect dominates until 21.3 years of experience--or throughout the relevant range for most of these women. Employment opportunities as captured by the unemployment rate are not significant, although they have the expected negative sign.

These log equations do not directly convey the impact of the right-hand-side variables on earnings capacity. Thus, we now use these equations to calculate the earnings capacity of single mothers. We use 40 hours per week as the basis of our calculation of how much these women could earn were they to work full time.<sup>13</sup> For women with poor health or one or more ADLs, we reduce their potential hours of work by using the coefficients on the relevant health variables from our hours equation. We do the same thing for the presence of a disabled child. The third row of Table 7 provides the weekly capacity hours worked for each of these categories of women. The highest reported number is 37.9 for those with no ADLs; the lowest is 4.49 for those with three ADLs. The average for all mothers is 32.3 hours per week. In the calculation of earnings capacity, because nonlinear transformations are not mean preserving, we correct our exponentiated log earnings capacity by a multiplicative factor, 1.3866. This factor is the ratio of the mean of the distribution of actual wages among workers divided by the mean of the distribution of wages of workers predicted by the two stage model. The earnings capacities thus calculated are reported in the first row of Table 7.

Over all of these women, the mean of annual earnings capacity in 1984 dollars is \$9,117. For women who report fair or poor health, the mean earnings capacity is \$2,440 per year, while for

women with good or better health it is \$10,724 per year. Thus, women with poor or fair health have an earnings capacity less than one quarter that of healthier women.

Women who report no ADLs (functional limitations) have an average earnings capacity of \$10,714 per year. Those with ADLs have significantly lower average annual earnings capacity--\$4,466 for those with one ADL, \$1,919 for those with two, and only \$973 for those with three ADLs.<sup>14</sup> The effect of having a disabled child on the earnings capacity of the single mothers with one or more disabled children is to reduce it to \$8,135 per year, on average.

None of the estimates just discussed take into account the cost of child care. We do this in the next row of Table 7. We link a child care payment to the hours the single mother would work at capacity (40 hours, adjusting for health). The dollar value of our calculation is based on a per hour, per child payment of \$1.25 for child care.<sup>15</sup> When we adjust for needed child care--needed during the hours these women are to work, exclusive of the time the children are in school, adjusting for school vacation and exclusive of care for children in school in families with children over age 14--we reduce earnings capacity on average to \$7,092 per year. Women who report fair or poor health have an average earnings capacity of \$1,859 per year, while those with three ADLs have an earnings capacity of \$855 per year, on average. (Clearly, the differences between the unadjusted earnings capacity and the child-care-adjusted ones are greater for healthier women who work more hours. Note as well that no adjustment is made for the potentially greater hourly cost of care for disabled children.)

### Earnings Capacity and Poverty

Another way to interpret these earnings capacity measures is to ask what proportion of these single mothers and their children would have family incomes below the poverty line if the mothers were to work at their earnings capacity. This assumes that the only source of income for the woman and her children is her earnings.

The results are reported in Table 8. There are four sets of reported proportions of single-mother families below the poverty line: the first is estimated from earnings capacity unadjusted for child care expenses, the second adjusts that set for child care expenses, the third reports actual percentages below the poverty line, and the fourth reports actual earnings, relative to the poverty line. The reported results are weighted; they differ little from the unweighted proportions.

If all of these women were to work at their earnings capacity--40 hours per week adjusted only for health--more than a third of their families would still be below the poverty line. Once we adjust for child care expenses, the proportion increases to 58 percent. Clearly, then, labor force participation will not provide sufficient income for most of these single-mother families. If we turn our attention to women with health problems, we see that a substantial share will live in poverty even if they work at their capacity: among women who report poor or fair health, all would reside in poverty under these circumstances; among women with one ADL about 94 percent (or about 96 percent adjusted for child care) would find themselves and their children living in poverty under these circumstances; among women with two or more ADLs, all would live in poverty. For single mothers with health problems, relying on their earnings capacity would mean that nearly all of them and their children would live in poverty. Finally, we present our predictions of the effect on family poverty status that a disabled child has through the earnings capacity of the mother. If we adjust hours that could be worked solely to account for the presence of a disabled child, we find that about 60 percent (72 percent adjusting for ordinary child care expenses) of these families are predicted to live in poverty. If we also take the mother's own health into account in our hours calculation, we instead predict that nearly 78 percent (about 85 percent when we adjust for child care) of families with a disabled child would be living in poverty. Clearly then, encouraging work among single mothers with health problems or with a disabled child is not an approach that will provide adequate income to the majority of these single-parent families.



The third column shows the percentage of single-mother families with actual incomes below the poverty line. It provides an interesting comparison: a somewhat lower percentage of these families live in poverty now (that is, 1984) than if the mothers worked at their earnings capacity, taking child care into account. However, this average masks a pattern. Women with health problems would be worse off, in terms of income, if they were required to work at their earnings capacity and did not receive supplementary funds. Alternatively, "healthy" single-parent families would have about the same rate of poverty that they actually experience if the mother worked at her earnings capacity. The final column shows the percentage of these families who would live in poverty if their only income were the mother's actual earnings. In every case, except for women with one to three ADLs, this is greater than actual poverty levels and levels that depend on earnings capacity. Finally, we calculated (not shown on table) the proportion of women in each of these categories who currently receive AFDC. Thirty-one percent receive AFDC; of them, about 4 percent also receive SSI benefits.

### Policy Implications

If single mothers with substantial health problems--some 1.4 million families--are to avoid facing a situation of very low incomes for themselves and their children, there may be a need for a transfer program designed specifically for them. This is particularly the case if the public sector continues to pursue and even intensifies the move toward encouraging single mothers to work, exemplified in the work and training requirements of the 1988 Family Support Act.<sup>16</sup>

Similarly, if single mothers with disabled children are to secure a reasonable income for themselves and their children, a specific policy may be required for them. Having a disabled child puts increased demands on these single mothers--in terms of spending time with the disabled child and the need for generous health insurance coverage for the care required by the child.

Our study of the earnings potential of single mothers with health problems and of single mothers who have a disabled child estimates that the earnings capacity of a single mother in poor or fair health is about \$2,200 per year in 1990 dollars, after adjusting for child care needs. Based on these projections, all of these women and their children could expect to live in poverty if they worked at their capacity and received no transfers. (This projection does not take into account needed expenditures for medical care for the uninsured, out-of-pocket expenses for the insured, additional costs of child care to cover travel time, and the higher cost of care for disabled children.)

Using a functional index of health, we find that all of the women with two or more ADLs would live below the poverty line, even if they worked at their capacity. We estimate that a woman with two ADLs would have an earnings capacity of about \$2,300 annually, and a woman with three ADLs would on average have an earnings capacity of about \$1,200 annually.

A single mother with a disabled child also has limited earnings capacity. We estimate that the mean earnings capacity of such mothers is about \$8,000 per year. This estimate does not take into account any special surcharges for child care for a disabled child. Our estimates suggest that her average hours worked at capacity would be 17 per week (starting at a base of 40 hours per week and adjusting for the effects of child's health and her own health). We expect that about four out of five of these families would live below the poverty line if forced to rely on the mother's earnings as their only source of income.

Under the more generous provision of private health insurance benefits existing in 1984, only 39 percent of single mothers with poor or fair health would expect to be offered health insurance at their place of employment if they were to work. Thirty-two percent are expected to be offered family coverage while 7 percent are expected to be offered individual coverage only. More than 60 percent would not be offered coverage of either kind (see Moffitt and Wolfe, 1990, Table 14.)

There are two central problems for single-parent families in which the mother has significant health problems and/or there is a disabled child: the need for an adequate income independent of the parent's earnings, and for generous and comprehensive financing of medical care, including coverage for chronic conditions. The solution cannot take the form of a wage subsidy, since the earnings limitation facing these families is primarily one of limited time available to work. Hence there is need for provision of adequate income through a transfer program as well as a generous insurance package containing the benefits generally covered by Medicaid. As of 1984, the maximum AFDC benefit for women with poor or fair health was \$331 per month, slightly less than \$4000 per year. Because these benefits differ owing to geographic location and family size rather than health, they would not lift these families out of poverty.

What are the options to increase the family income of these families and to provide health insurance coverage as well? Several policy alternatives could be based on modification of existing public programs: (1) creating a special federal AFDC program for these women and their families that would provide uniform benefits across the country and to provide Medicaid coverage as well; (2) modifying the current state-based AFDC programs to provide extra payments to such families; (3) providing comprehensive health insurance to these persons regardless of their work status, a coverage that would continue if their income were to increase substantially but would require income-conditioned premiums and copayments at the time of utilization; and (4) providing coverage to many of these persons under the existing SSI program along with AFDC participation for other family members. Each option is discussed in more detail below.

Increasing the generosity of AFDC for these families would best be achieved in the form of a federal program with uniform payments across states. The program would be directed at a limited group--women with significant health problems, such as those with two or more ADLs. The payment schedule would depend on family size and would include coverage under Medicaid. The women

would not be expected to enroll in a training program or to register for work. The payment schedule would be sufficient to enable them to live reasonably comfortably, certainly out of poverty. They might be encouraged to work part time to augment their income up to some specified limit. After a certain dollar disregard, any additional earnings could be taxed at a 33 to 50 percent rate.

The second option is to modify the current AFDC program to include a special benefit for women with significant health problems. AFDC could have a multiplicative adjustment factor which increased the payments to families if the single parent met a specific health criterion or if she qualified for benefits owing to the health condition of a dependent child. This would be a simple adjustment formula that could easily be established to take into account the extra needs of these families. These women would be exempted from the work-training requirements of AFDC.

The difficulty with such a program is that it might create an incentive for other persons on AFDC to attempt to qualify. Some health conditions are rather difficult to establish. Avoiding giving extra payments to those who should not receive them could require substantial resources for determination of who is (or ought to be) eligible to receive the additional benefits. If the benefits are tied specifically to each health problem, the administrative chore becomes even greater. It would be clearly desirable to limit the options for adjustment. These might depend only on whether the mother has a health condition or the number of ADLs she has, with a separate consideration of the presence of a disabled child, perhaps differentiating the payment by the child's age.

A third (or perhaps complementary) policy would be to provide extensive health insurance benefits in order to relieve financial uncertainty and increase willingness to join the work force.<sup>17</sup> These insurance benefits should be modeled on the Medicaid benefits that provide coverage for chronic conditions. The families would be permanently covered by this insurance although, as their income increased, coverage would continue but income-conditioned premiums and copayments at the

time of utilization would be required. The only condition for maintaining the insurance would be the continuation of the mother's (or the child's) significant health condition(s).

Yet another alternative would be to modify the Supplemental Security Income (SSI) program to cover such families. SSI is a program which had expenditures of \$13.7 billion in 1988, or 4.1 percent of public income-maintenance program expenditures. It is a somewhat smaller program than AFDC, which had expenditures of \$18.4 billion. Measured by number of recipients, AFDC is far larger, with 10.9 million recipients (3.75 million families and 7.3 million children) in 1987 compared to 4.5 million for SSI, including 2.9 million disabled. SSI eligibility is based on low income plus disability, blindness, or elderly status. Disability requires that a person not be able to engage in a "substantial gainful activity," defined as earnings of more than \$500 per month over an extended period of time. (Many of the single mothers in our sample with health problems would qualify for benefits under this criterion--including about 90 percent of women with poor or fair health, 60 percent of women with one ADL, 97 percent of women with two ADLs, and all women with three or more ADLs. However, very few women in the sample actually receive SSI.<sup>18</sup>) The average monthly payment to individuals under SSI is greater than that under AFDC on average, but is well below the payment to AFDC families. As of 1988, average monthly payments were \$379 for AFDC families, and \$294 for SSI disabled persons--29 percent less than under AFDC (Statistical Abstract of the United States 1990, Table 607, p. 367.) The primary reason for this difference is that SSI does not provide benefits for dependents. A single-parent family with a severely disabled person can receive benefits under both programs--the severely disabled person under SSI, the others under AFDC. Yet only a small proportion (less than 5 percent) of single-parent families receiving AFDC also have a person receiving SSI.

There are several other differences in the two programs. SSI is primarily a federal program

persons and providing small additional benefits, but these differences are not considered here.) SSI coverage is targeted on those with very low earnings capacity owing to disability; it is not conditioned on family structure. Eligibility for SSI confers Medicaid coverage, as does AFDC.<sup>19</sup>

The fourth policy option is to encourage women having a significant disability or a child with a significant disability to apply for SSI. As part of this special program, dependents' benefits might be added. Modifying the payment schedule for SSI to provide additional funds for the dependents of disabled persons--or the families of disabled children--would put these families under a uniform national standard and would separate them from state-based AFDC programs. Since eligibility for SSI requires establishment of a significant level of disability, and is an entirely separate program from AFDC, this option may have limited effects on women who do not have a significant long-term health problem.

In sum, if single mothers having significant disabilities (or children with significant disabilities) were to fall under a program designed for them--a special category of SSI, or a national AFDC program--they might obtain financial security with minimal incentives for others to join or even apply for the program. It may also be possible to use the existing administrative structure of SSI disability determination to facilitate this process. The 1987 amendments under section 1619(b) permit a number of deductions from earnings in determining eligibility for SSI. These include "impairment-related work expenses, work expenses of the blind, the cost of a plan to achieve self support and publicly funded attendant care services" (1990 Green Book, pp. 738-739). Making the standard more lenient for single parents and adding a dependents' allowance might permit these women to work and attain a decent living standard.

Under current law, severely disabled children in families receiving AFDC can receive SSI. The child found eligible receives a minimum payment of \$30 per month. Above this amount, payments are determined by family income. There is a disregard of the first \$2,000 of a single

parent's income in calculating eligibility and the payment level. If a single parent's income is more than \$12,500, the child is not eligible to receive other payments from SSI. The child covered by SSI is not regarded as a member of the family when AFDC benefits are calculated. In states with low AFDC payments, SSI can make a sizable contribution to the family income of single parents with a disabled child, even though benefits under both programs are generally reduced because of the receipt of benefits from the other program.<sup>20</sup> In our sample, only 2 percent of families received SSI, and among them 72 percent also received AFDC. Of families with a disabled child, 7 percent received SSI, compared to only 1.6 percent of single-parent families without a disabled child.

Could these programs be combined (or could there be joint eligibility) for single mothers with substantial health problems? As stated above, SSI provides payment only for a disabled person, not for his or her dependents. AFDC laws do not consider SSI payments in determining eligibility or payments--nor is the SSI recipient considered in calculating the AFDC benefit amount or eligibility. Thus, AFDC laws need not be modified to facilitate joint SSI and AFDC eligibility. However, substantial effort would be required to inform these single parents as well as AFDC administrators of the possibility of joint eligibility. By using SSI eligibility, no new administrative structure would be required for AFDC. Using SSI modified disability standards should minimize the extra AFDC payments that may be required under joint eligibility. If the standards were too strict, however, the problem of providing adequate income to these single parents and their children would remain. Combining AFDC with SSI removes the need to add dependents' benefits to SSI.<sup>21</sup> However, to provide an adequate income, in most states the combined benefits would have to be raised to the poverty line.

### Conclusions

We have documented the lower health status, on average, of single mothers as compared to married mothers and of nonworkers as compared to workers. Health status influences the earnings

capacity of single mothers: poor health substantially reduces potential earnings. We have estimated that the earnings capacity of a single mother in poor or fair health is about \$2,900 per year. Based on these projections, all of these women and their children could expect to live in poverty if they worked at their capacity and received no transfers. (This projection does not take into account needed expenditures for medical care for the uninsured and out-of-pocket expenses for the insured.)

We also used a functional type index of health in our study. It adds the number of activities of daily living (ADLs) that a person experiences difficulty in performing. The ADLs include seeing with the aid of corrective lenses, hearing normal conversation, lifting ten pounds, walking a quarter of a mile, and climbing stairs. Using this alternative measure of health, we find that all of the women with two or more ADLs would live below the poverty line even if they worked at their capacity. We estimate that a woman with two ADLs would have an earnings capacity of about \$2,300 per year, and a woman with three ADLs would on average have an earnings capacity of about \$1,200 per year.

A single mother with a disabled child also has limited earnings capacity. We estimate that the mean earnings capacity of such mothers is about \$8,000 per year. This estimate does not take into account any special surcharges for child care of her disabled child. Our estimates suggest that her average expected hours worked would be 17 per week, adjusting 40 hours per week only for the role of child's health and her own health. For these families, we expect that more than half would live below the poverty line if forced to rely on the mother's earnings as the only source of income.

This evidence suggests that labor force participation by itself may not raise a single-mother-headed family above the poverty line. The central problem is not so much low earnings--which would suggest the possibility of designing a special earnings supplement for single mothers with health limitations--as it is a limitation on hours available to work. Hence, policy should concentrate



on designing a welfare program that provides more generous benefits to single mothers with health limitations than to single mothers in good health.

<sup>1</sup> The exceptions to this are the few studies that analyze the role of Medicaid in influencing welfare participation. See for example Blank (1989), Winkler (1991), and Moffitt and Wolfe (1990).

<sup>2</sup> Rates of poor or fair health are also greater among blacks than whites -- 15.9 compared to 8.2 percent. This holds after controlling for broad income categories: the percentages for 1985-87 are 18 versus 11.1 percent among blacks and whites with family incomes less than \$10,000 (National Center for Health Statistics, 1990).

<sup>3</sup> See Ries (1990).

<sup>4</sup> See for example Luft (1975), Lee (1982), and Haveman, Stone, and Wolfe (1989).

<sup>5</sup> See Table 4 in Moffitt and Wolfe (1990).

<sup>6</sup> This measure has been used in a number of studies conducted by Haveman and Wolfe (e.g., 1990a, 1990b).

<sup>7</sup> These measures are compared with several others in Appendix 1.

<sup>8</sup> The standard error for each test is the square root of the product of the proportion of disabled women among the entire subgroup (e.g., ages 18-24), the proportion nondisabled and the sum of the reciprocals of the numbers of observations by either the work- nonwork classification, maternal or marital status, or reciprocity status. Take as an example women 18-24 who work or do not work; for this test, the appropriate calculation is the square root of the product of the proportion disabled among all women 18-24, the proportion nondisabled among all women 18-24, and the sum of the reciprocals of the numbers of observations in the work and nonwork subgroups among women 18-24. Since there is a high probability of type-I errors when a large number of t-tests are conducted, the Bonferroni technique is applied to reduce the possibility of spurious claims of significance. This simple correction requires dividing the desired significance level by the number of t-tests to be performed in order to derive a new critical level to determine statistical significance for the t-tests.

<sup>9</sup> The population of women is divided into four mutually exclusive categories (called treatments):

married mothers, married women without children, single childless women and single mothers. Blocks such as age serve as the basis of the test calculation. Employing a block for each age, 18-60 (or the four age and three education groups used in the Tables), the proportion disabled in each block is calculated ( $4 \times 43$ ), and these proportions of disabled are then ranked for each block (each age) across the four maternal, marital groupings. Within each marital, maternal category, the rankings are then summed across the age blocks; these values are squared and summed and the resulting value is multiplied by a constant (12), divided by the number of blocks multiplied by the number of treatments (4) times the number of treatments plus one (5). Next, we subtract a constant (3) times the number of blocks times the number of treatments plus one. The resulting value is then compared to the critical value in a chi-square table using the degrees of freedom equal to the number of treatments (4) minus 1 in this case.

<sup>10</sup>Using a chi-squared test, we tested the hypothesis that the distribution of our preferred health measure among single mothers is the same in CPS and SIPP samples. We stratified both samples into twelve groups by our four age groups and three education groups. For each of the twelve groups, we calculated the weighted proportion with a work limitation in the pooled CPS and SIPP sample. The difference between the CPS and pooled proportion was squared, multiplied by the CPS group sample size, and divided by the product of the pooled proportion and its complement. The same calculation was performed for the SIPP proportion, and then the CPS and SIPP numbers were added and summed across the twelve groups. Our test statistic is 20.77, and thus we reject the hypothesis at the 5 percent significance level. However, the overall difference in disability is small: 8 percent in SIPP versus 7 percent in CPS. There may be several reasons why SIPP has a slightly larger number of single mothers with disabilities. First, the question in SIPP is worded differently--it specifically mentions mental and physical disabilities, and so it may prompt greater responses. Second, SIPP asked the question initially and then verified the status at the beginning of the health section of the topical module, and this pattern of questions would encourage positive responses. Finally, varying attrition rates between the nondisabled

and disabled may not be accounted for in the Census Bureau's weighting scheme. The 1 percent difference between CPS and SIPP is not large, and, both show the same pattern of disability--rising with age and decreasing with education.

<sup>11</sup>See the Haveman and Buron paper in this volume for a fuller discussion of the concept of earnings capacity.

<sup>12</sup>We also estimated a maximum likelihood simulations system with the same specification. Results are nearly identical to the tobit two-stage model reported in the paper.

<sup>13</sup> Among our sample of healthy single mothers who work, the median number of actual hours worked is 40. The hours available to work at capacity are derived in the following way. First, we calculated the value of the latent log hours (the right-hand-side of the hours equation) that would yield a mean of the log of 40 hours--used as our standard base in calculating earnings capacity. From this value we subtract the product of the variables for a woman's own health and that of her children and their respective coefficients. From this, we have an estimate of mean log hours which is used to calculate health-adjusted earnings capacity hours.

<sup>14</sup> We also calculate these values for women with four, five or six ADLs. They are not reported, owing to their small sample size.

<sup>15</sup> This figure is from data on the costs of "acceptable" child care reported in the Institute for American Values (1989). A similar figure can be derived from tables published by the U.S. Bureau of the Census (1987).

<sup>16</sup> Under current law, all able-bodied women with children aged 6 or older must be registered for work or for job training. Furthermore, according to the Family Support Act, a state at its discretion can lower this requirement to cover women with children over one year of age. No special provision is included for mother's with a disabled child. Women with substantial health problems are clearly not "able-bodied," but it may be difficult for them to establish that fact. It is not at all clear whether the

majority of women who report themselves in poor or fair health would be considered able-bodied, nor is it clear how many ADLs a woman would be required to have in order to be classified as "not able-bodied".

<sup>17</sup> Moffitt and Wolfe (1990, Table 12) estimate that the value of health insurance to a single mother with fair or poor health is three or four times the value to a single mother with very good or excellent health, i.e., about \$4,000 in 1984 dollars.

<sup>18</sup> In our sample (using weights), only among women with six ADLs do all (100%) receive SSI. Among women with five ADLs, 38% are on SSI, while for women with fewer ADLs, less than 10% in any category receive SSI.

<sup>19</sup> In 13 states, there are further restrictions on Medicaid coverage under 209B provisions. In these states, those covered under SSI must be covered by a medical "spend-down" option.

<sup>20</sup> For AFDC calculations, the SSI benefits of a child are ignored. A study done in 1979 suggested that, of those children covered under SSI by their own disability and not living in a foster home, 42 percent lived in families receiving AFDC or local general assistance (1990 Green Book, p. 732).

<sup>21</sup> Increasing SSI eligibility for single mothers with substantial health problems will reduce AFDC payments somewhat, decreasing the AFDC expenditures of both states and the federal government. This would be offset by increased federal expenditures on SSI--and state expenditures to the extent that they provide SSI supplements. The alternative of adding dependents' benefits to SSI along with modified leniency standards for single parents would decrease AFDC--and hence state payments--to a greater extent while increasing federal payments to a greater extent.

## References

- Blank, R. 1989. "The Effect of Medical Need and Medicaid on AFDC Participation." Journal of Human Resources, 24 (Winter): 54-87.
- 1990 Green Book, Committee on Ways and Means, U.S. House of Representatives. Washington, D.C. U.S. Government Printing Office.
- Haveman, R., and B. Wolfe. 1990a. "The Economic Well-Being of the Disabled, 1962-1984." Journal of Human Resources, 25(1): 32-54.
- \_\_\_\_\_. 1990b. "Trends in the Prevalence of Disability, 1962-1984." The Milbank Quarterly, 68(1): 53-80.
- Haveman, R., M. Stone, and B. Wolfe. 1989. "Market Work, Wages and Men's Health." Working Paper No. 3020, National Bureau of Economic Research, Cambridge, Mass.
- Institute for American Values. 1989. "How the Child Care Market Works: An Economic Analysis." Family Policy Brief, New York.
- Lee, L. F. 1982. "Health and Wage: A Simultaneous Equation Model with Multiple Discrete Indicators." International Economic Review, 23: 199-221.
- Luft, H. 1975. "The Impact of Poor Health on Earnings." Review of Economics and Statistics, 57: 43-57.
- Maddox, G.L., and E. B. Douglass. 1973. "Self-Assessment of Health: A Longitudinal Study of Elderly Subjects." Journal of Health and Social Behavior, 14 (March): 87-93.
- Maddala, G.S. 1983. Limited Dependent and Qualitative Variables in Econometrics. Cambridge: Cambridge University Press.
- Moffitt, R. 1987. "Work and the U.S. Welfare System: A Critical Review." Final Report to the Department of Health and Human Services.

Moffitt, R., and B. Wolfe. 1990. "The Effects of Medicaid on Welfare Dependency and Work."

Special Report no. 49, Institute for Research on Poverty, University of Wisconsin-Madison.

National Center for Health Statistics. 1990. Health of Black and White Americans, 1985-87.

Hyattsville, Maryland: Public Health Service. Series 10, no. 171.

\_\_\_\_\_. 1991. Health, United States, 1990. Hyattsville, Maryland: Public Health Service.

Ries, P. 1990. Americans Assess Their Health: United States 1987. National Center for Health Statistics, Hyattsville, Maryland.

Winkler, A. 1991. "The Incentive Effects of Medicaid on Women's Labor Supply." Journal of Human Resources, 26(2): 308-337.

U.S. Bureau of the Census. 1987. Who's Minding the Kids? Child Care Arrangements: Winter 1984-85. Current Population Reports, Series P-70, No. 9, U.S. Government Printing Office, Washington, D.C.

Appendix 1

Disability among Women, Mothers, and Single Mothers by Five Definitions

		Women	Mothers	Single Mothers
Self-reported disability or health problem which prevents working or which limits the kind or amount of work performable	Frequency	2448	755	299
	Proportion	0.06	0.04	0.07
Self-reported "ever retired or left a job for health reasons"	Frequency	1115	340	131
	Proportion	0.03	0.02	0.03
Indicator by program participation	Frequency	2009	839	407
	Proportion	0.05	0.04	0.09
Indicator by work limitation	Frequency	2084	682	253
	Proportion	0.05	0.03	0.06
Indicator by work limitation or program participation	Frequency	3373	1371	589
	Proportion	0.08	0.07	0.13
Total Observations		42462	19867	3576

Data source: Current Population Survey, March, 1989.

Program participation:

1. Receives social security or railroad retirement benefits and
  - a. is not in school, is age 19 to 59, and is not widowed, divorced, or separated with dependent children,
  - b. is in school and is age 23 to 59, or
  - c. is age 19 to 59, and is widowed, divorced, or separated with dependent children.
2. Receives SSI.
3. Receives workers compensation.
4. Receives veterans disability benefits, is a veteran, and is not in school.

Work Limitation:

1. Major activity last week is "unable to work."
2. Works fewer than 35 hours, and the reason for part-time work is "own illness" or the reason for working part year is "own illness."
3. Works fewer than 35 hours and was absent from work last week, and the reason for absence is "own illness."

Correlation coefficient between "Self-reported disability or health problem limits work" and "Disability indicator: work or program participation" = 0.453.



## Appendix 2

### Definitions of Selected Variables

Our ADL measure was constructed from the Activities of Daily Living questions most clearly related to ability to work. Dummy variables for difficulty performing the following activities were summed: reading with glasses or contact lenses, hearing normal conversation, having one's speech understood, walking a quarter mile, lifting ten pounds, climbing a flight of stairs, moving without a walking aid, and getting around outside one's home. Thus the measure ranges from 0 to 8. In this sample about 9 percent report difficulty lifting ten pounds or walking a quarter mile; about 8 percent have difficulty climbing stairs and 5 percent seeing with corrective lenses. About 1 percent report each of the other ADLs.

Experience was derived from the work history section of topical module on Wave 3 of SIPP. It is the minimum of age-education-5 and the maximum of the number of years the woman worked six months or more, the sum of the complement periods to spells without employment and time at current and last employer, and length of time holding this type of job. The experience gained during the 5 months of Wave 3 used in this study was eliminated from all relevant variables in this calculation.

Hours is the usual number of hours worked each week.

Maximum AFDC benefits are maximum monthly benefits available to the mother in 1984 based on the number of her children and her state of residence.

Mother's other income is the four month average of the difference between total personal income and earned income, less public transfers. Negative incomes were not included in the average.

Other family income is the fourth month average of the difference between total family income and total mother's income. Negative incomes were not included in the average.

Unemployment rate is the average unemployment rate over the four months surveyed in Wave 3 for the woman. SMA rates were used for SMA residents, otherwise state rates were used.

Wage is the average of monthly earnings over months with positive earnings in the past four months, divided by the usual number of hours the woman worked each week. Geographic variations were removed by dividing by the ratio of average weekly earnings of workers in each state's unemployment compensation system and the national average of workers in the unemployment compensation system. Reported earnings capacities by health status and poverty rates, are also normalized. The coefficients of the wage and hours equations are similar to those using non-normalized wages and geographic dummy variables.

## Appendix 3

## Joint Eligibility for SSI and AFDC

A person who is unable to do any kind of work for he or she is suited owing to a medically determined physical or mental impairment,<sup>1</sup> who has been out of work for six months or more, and whose disability is expected to last for at least a year or result in death is eligible for SSI. This includes children who have an impairment comparable to that of adults. In the case of children, the work component is changed to the inability to attend school.

A single-parent family which meets the income and assets tests is generally eligible for AFDC in the state in which it resides.

If a woman is sufficiently disabled to receive SSI, her child(ren) can receive AFDC under the stipulation that they are a deprived child--deprived of the care of one parent. (They might also receive AFDC in a two-parent household if one parent is sufficiently disabled to be on SSI. However, in the latter case, the family will be subject to the income and assets tests.) In the case of a single mother, the woman faces an income test of \$407 per month (1991) and an assets test of \$2,000 in determining her SSI benefits.<sup>2</sup> The maximum she can receive in most states is a total monthly income of \$407, or \$4,884 per year. Her child can receive AFDC benefits. These benefits are determined as though the mother were not part of the household--so that a single child would receive the single or first-person payment. In the United States as a whole in 1991, on average, this would be \$133 (1990 Green Book projection, p. 576); in Wisconsin this would be \$248 per month for one child. The total for this mother and child would then be \$655, or \$7,860 per year in Wisconsin including both SSI and AFDC benefits.

If a child is so severely disabled as to be eligible for SSI, his or her payments would depend on the income of the parents. The child would be eligible to receive payments if a single parent's income were less than \$1,454 per month (1991). The maximum payment for a person on SSI would again apply--\$407. The actual amount would depend on the source of the mother's income (earned income is treated more generously than unearned income), as well as her total income. The single mother would be potentially eligible for AFDC as the caretaker of a deprived child. Her actual AFDC payment would depend on her other income, not the SSI payment to her child.

As of 1988, only 1.9 percent of AFDC families also received federal SSI. (1990 Green Book, p. 582).

<sup>1</sup> Over half of those receiving SSI on the basis of disability are eligible on the basis of a mental disability. Among children this is largely mental retardation. More than one-fifth of those eligible via disability are over age 65.

<sup>2</sup> A number of states provide a state supplement. In these cases, the income test is also increased and is usually equal to the higher benefit level. Less than 10% of beneficiaries qualify because of state supplementation.

Table 1

Distribution of Poor Health among U.S. Adults,  
by Income Level, 1980-81

---

Income Decile	% with Limitation	% in Poor Health
Lowest	21.44	30.69
2	16.2	19.02
3	12.45	11.93
4	10.33	10.4
5	8.63	9.29
6	6.85	4.9
7	6.44	4.38
8	5.32	2.25
9	5.73	4.3
10	6.60	2.85
Gini coefficient	-.244	-.411

---

Source: Calculations using National Medical Care and Utilization Data as reported in Peter Gottschalk and Barbara Wolfe, "How Equal Is the Utilization of Medical Care in the United States?" 1991, mimeo. Institute for Research on Poverty, University of Wisconsin-Madison.

Table 2

Disability among Women, by Marital, Family,  
Work, and Welfare Status

Status	Self-Reported Disability or Health Problem Limits Work	Disability Indicator: Work or Program Participation
Single	8%	11%
Married	4	6
Not working	12	14
Working	2	4
Mothers	4	7
Not mothers	7	9
<u>Mothers</u>		
Single	7	13
Married	3	5
Not working	7	10
Working	2	5
<u>Single mothers</u>		
Not working	12	18
Working	2	9
AFDC recipient	11	10
Not AFDC recipient	5	14

Source: Calculations by the authors with data from the Current Population Survey, March 1989.

Table 3

Comparative Health of Women by  
Marital, Maternal, and Work Status and by Race  
(Sample size in parentheses)

	Self-Reported Disability or Health Problem that Limits Work			
	Ages 18-24 (7,356)	Ages 25-34 (12,718)	Ages 35-44 (10,968)	Ages 45-60 (11,420)
<u>Work Status</u>				
Not working	4%*	6%*	14%*	22%*
White	4*	7*	12*	20*
Nonwhite	3	6*	18*	27*
Working	1*	2*	2*	4*
White	1*	2*	3*	3*
Nonwhite	1	1*	2*	6*
<u>Maternal Status</u>				
Mothers	3	3*	4*	7*
White	2	3	4*	6*
Nonwhite	3	2	6*	10*
Non Mothers	2	4*	9*	12*
White	2	4	9*	11*
Nonwhite	1	4	11*	17*
<u>Marital Status for Mothers</u>				
Single mothers	4	5*	8*	15*
White	4	6*	7*	14*
Nonwhite	4	4*	10*	16*
Married mothers	2	2*	3*	6*
White	2	3*	3*	5*
Nonwhite	2	1*	4*	7*
<u>AFDC Status for Single Mothers</u>				
AFDC recipient	4	8*	20*	41*
Not AFDC recipient	4	3*	5*	9*

Source: Calculations by the authors with data from the Current Population Survey, March 1989.

\*Significantly different at 5% level, compared to matched age and race subgroup in same panel (for example, not working 25-34 white women compared to working 25-34 white women).

Table 4

Probit Models of Disability (Dependent variable: self-reported disability or health problem limits work)

Variable	Coefficient (std error)	Coefficient (std error)	Coefficient (std error)
Intercept	-1.63** (0.072)	-1.59** (0.073)	-1.43** (0.075)
Age	0.026** (0.00096)	0.025** (0.0099)	0.026** (0.0010)
Race (non- white)	-0.14** (0.026)	-0.13** (0.026)	0.19** (0.027)
Education	-0.093** (0.0037)	-0.094** (0.0037)	-0.068** (0.0040)
South	0.068** (0.022)	0.059** (0.022)	0.031 (0.023)
Single mother	0.35** (0.039)	0.43** (0.049)	0.19** (0.050)
Married mother	-0.042 (0.031)	0.049 (0.045)	-0.0027 (0.046)
Single, not mother	0.46** (0.029)	0.46** (0.029)	0.30** (0.030)
Number of unmarried children under 18		-0.044* (0.019)	-0.079** (0.020)
Number of children under 6		-0.035 (0.025)	-0.062* (0.025)
Income/poverty line			-0.11** (0.0058)
Log likelihood	-8310.6	-8305.3	-8084.8

Source: Calculations by the authors with data from the Current Population Survey, March, 1989; 42,462 observations.

\* Significant at 5% level.

\*\* Significant at 1% level.



Table 5

Comparative Health of Single Mothers Receiving AFDC and  
Other Single Mothers, by Age, Education, and Race  
(Numbers of observations in parenthesis)

	Self-Reported Disability or Health Problem Limits Work				Difference of proportion t-statistic
	AFDC Recipient		Not AFDC Recipient		
	Frequency	Proportion	Frequency	Proportion	
<u>Age</u>					
18-24 (340)	7	0.05	2	0.01	2.013
25-34 (684)	20	0.10	18	0.04	* 2.923
35-44 (487)	24	0.25	25	0.06	** 5.594
45-60 (191)	16	0.50	29	0.19	** 3.812
<u>Education</u>					
Did not complete high school (496)	32	0.14	33	0.13	0.392
Completed high school (727)	27	0.13	25	0.05	** 3.946
More than high school (479)	8	0.11	16	0.04	2.396
<u>Race</u>					
White (1094)	33	0.12	54	0.07	* 2.753
Nonwhite (608)	34	0.14	20	0.06	** 3.771
<u>Region</u>					
Midwest (440)	10	0.06	4	0.01	2.492
Northeast (334)	12	0.15	25	0.09	1.350
South (613)	24	0.16	34	0.07	** 3.191
West (315)	21	0.19	11	0.06	** 3.779
All Single Mothers (1702)	67	0.13	74	0.06	** 4.715

Source: Calculated by the authors with data from the Survey of Income and Program Participation, 1984 panel.

Note: Positive t-statistics indicate poorer health among AFDC recipients.

\* Significant at 5% level.

\*\* Significant at 1% level.

Table 6

Estimated Model of Earnings Capacity of Single Mothers:  
Two-Stage Tobit Estimates  
(N = 1605)

	Ln Hours	Ln Wage	Mean	Standard Deviation
Constant	.20(.68)	those with HRS > 0 1.54(.33)**		
<u>Health</u>				
Poor-Fair	-.90(.20)**	-.15(.10)	.18	.38
Work ADLs	-.67(.09)**	-.06(.06)	.36	.91
<u>Time Demands</u>				
Children under 6	-.64(.12)**		.58	.73
Children 6 - 18	-.13(.08)		1.19	1.10
Disabled child	-.43(.24)*	.09(.11)	.09	.29
<u>Personal Characteristics</u>				
Hispanic	-.29(.24)	-.01(.11)	.09	.29
Black	-.47(.14)**	.04(.06)	.34	.48
Mother's other income (000's)	-.74(.18)**		.18	.39
<u>Human Capital</u>				
Education	.11(.10)	-.13(.05)**	11.8	2.58
Education <sup>2</sup>	.003(.004)	.01(.002)**	146.9	56.9
Prior Exp.	.36(.02)**	.05(.02)**	8.86	7.93
Prior Exp. <sup>2</sup>	-.01(.001)**	-.001(.56 <sup>-4</sup> )**	141.3	220.9
Unempl. rate	-.08(.03)**	-.01(.01)	7.79	2.26
<u>Other Sources of Income</u>				
Other family income (000's)	.12(.06)*			
Max AFDC benefits (000's)	-1.93(.47)**			
Sigma	2.25(.06)			
$\lambda$		.16(.14)		
Covariance	.29			
Log likelihood	-5060			

\*\* Significant at 5% level; \* significant at 10% level.

Note: Standard errors in parentheses.

Table 7  
 Earnings Capacity of Single Mothers:  
 Mean (and Standard Deviation) of Annual Earnings and  
 Weekly Hours  
 (N = 1702, 1984 data and dollars)

Weighted	All	Women with Poor/Fair Health	Women with Good health	Those with disabled child	Disabled Child & Adj. for own health	Those with No ADLs	Those with 1 ADLs	Those with 2 ADLs	Those with 3 ADLs	Current Workers
Earnings capacity	\$9,117(4,521)	2,440(1,523)	10,724(3,502)	8,135(1,844)	6,634(2,622)	10,714(3,514)	4,466(2,075)	1,919(1,092)	973(460)	10,713(4,126)
Earnings capacity corrected for child care	7,092(4,365)	1,859(1,367)	8,299(3,974)	5,023(3,522)	4,054(3,341)	8,262(4,041)	3,445(2,108)	1,569(1,082)	855(486)	8,886(4,054)
Weekly hours worked at capacity (adjusted for health)	32.33(12.5)	11.1(6.0)	37.75(7.1)	26.7(0)	17.0(9.9)	37.9(6.5)	16.8(5.7)	8.26(3.0)	4.49(1.4)	35.06(10.0)
N	1,702	294	1,408	160	160	1,398	142	82	43	967

Table 8  
 Prediction of Poverty among Single Mothers as Based on  
 Earnings Capacity and Family Size  
 (N = 1702; weighted proportions<sup>a</sup>)

	Percentage Poor, Based on Earnings Capacity	Percentage Poor, Based on Earnings Capacity and Child Care Costs	Actual Percentage Poor, Based on All Family Income	Actual Percentage Poor, Based on Earnings Alone
All	37.0%	58.4%	52.5%	87.7%
If <u>only</u> child disabled	60.5	72.2	--	--
Child disabled actual mom health	77.7	84.6	55.3	92.1
Women in poor or fair health	100	100	73.1	97.3
Women in good health	22.3	48.5	48.1	85.6
Women with 0 ADLs	22.5	48.6	49.6	85.8
Women with 1 ADL	94.3	95.6	57.5	94.0
Women with 2 ADLs	100	100	73.7	97.5
Women with 3 ADLs	100	100	67.2	97.4
Women with 4 ADLs	100	100	88.5	100
Current workers	21.8	40.2	25.4	78.2

<sup>a</sup>The proportion below the official poverty line if the family received the maximum AFDC benefit for their family in their state is 100% for all categories of single mothers.