Transition to Poverty among the Elderly: Evidence from the Health and Retirement Study

This study uses longitudinal data from the 1994 and 1998 Health and Retirement Survey to examine factors associated with transition to poverty among respondents aged 55 and older. This time frame is of interest because the Personal Responsibility and Work Opportunity Reconciliation Act (Welfare Reform) became law in 1996. While Welfare Reform targeted working age adults, several provisions directly and indirectly affected public benefit receipt of older individuals. Change in respondents' participation in Food Stamps, Supplemental Security Income, and Medicaid were examined using a Chi-square test. Results of logistic regression indicate that older individuals who are less educated, female, black and other race, foreign -born, less healthy, unemployed, widowed are more likely to enter poverty.

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Introduction

Poverty persists among the elderly despite the presence of social safety nets (Miller & Montalto, 1998). In the United States in 2001, one in 10 elderly age 65 and older have incomes at or below the poverty threshold. Among the elderly poor, close to 3 in 4 are female. The poverty rate for women age 65 and older is nearly two times that of men of the same age. Elderly minorities have a poverty rate over twice that of elderly whites (Miller, 1998).

Social Security provides retirement income for 91% of those aged 65 and older. For many, it is a vital part of their subsistence. Social Security retirement benefits make up half or more of income received for 65 percent of beneficiaries. For one-third of beneficiaries, it is 90 percent of their income. It is the sole income source for 1 in 5 beneficiaries (Social Security Administration, 2001).

As an entitlement program, Social Security pays benefits to those who have contributed to the system or who are economic dependents of someone who has contributed to the system regardless of income level. To provide a relatively larger economic cushion to low-income individuals, Social Security has a progressive benefit structure. Those in the lower portion of the income distribution who paid relatively lower levels of Social Security payroll taxes during their working years will receive proportionally higher amounts as retirement benefits. While this increment is helpful, it is not enough to boost the very poor out of poverty.

In addition to Social Security, poor individuals can also receive support from several means tested programs. To obtain benefits from these programs, certain eligibility requirements must be met, with income level at or near poverty a main eligibility criterion. These means tested programs include Supplemental Security Income (SSI), Food Stamps, and Medicaid.

Supplemental Security Income is a federal program initiated in 1972 that provides income assistance to the elderly, blind and disabled to enable them to purchase the basic necessities of food, clothing, and shelter. The program is administered by the Social Security Administration, but is financially separate. The federal government sets minimum benefit levels, but states can increase the amount. (Beedon, 2000). SSI recipients face a bare subsistence level of living. To be eligible for SSI, a person may not have more than $2,000 in savings or other funds ($3,000 for a couple) and asset transfers made in the previous 3 to 5 years are carefully scrutinized.

The federal Food Stamp Act of 1964 created a program to subsidize food purchase by low-income individuals and families (USDA, 2004). In 2002, 18.7 percent of all food stamp households had an elderly resident. In over three-quarters of these households (80.2 percent), the homeowner resided alone and received a $50 monthly benefit on average (USDA, 2002).

The Medicaid program was signed into law in 1965. It is the biggest source of funding for health and medical services for low-income individuals and families. While low cost medical care is certainly of interest to the elderly, the fact that Medicaid can be used to pay for long term care for individuals who meet strict income and asset eligibility criteria may be an even more important resource (Centers for Medicare and Medicaid Services, 2004). Like SSI, federal and state government jointly funds Medicaid.

Rising costs of maintaining means tested programs and size of their share of the federal budget came under scrutiny in the early 1990's as part of a larger national debate regarding the extent to which the nation's social welfare programs actually enabled individuals and families regain economic stability and move out of poverty. Debate culminated in passage of The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (commonly referred to as PRWORA or simply Welfare Reform). PRWORA instituted a major shift in public policy related to welfare. While the main focus of Welfare Reform was on moving able-bodied individuals from welfare to work, some provisions of Welfare Reform and public perception of those provisions affected the level of benefit receipt by the elderly.

The research presented here uses longitudinal data from the 1994 and 1998 Health and Retirement Survey to examine factors associated with transition to poverty among respondents aged 55 and older. Since this time frame encompasses the initial period of Welfare Reform, it affords an opportunity to examine how elderly participation in Supplemental Security Income, Food Stamps, and Medicare may have changed over years that occur pre- and post-Welfare Reform.

Review Of Literature

Economic Status of the Elderly

The economic well being of those aged 65 and older can be assessed from several different perspectives. Common measures include the poverty rate, median real income and median income as compared with earnings of the working age population. In general, across each of these measures, those aged 65 and older are better off today than a few decades ago. Hungerford, Rassette, Iams, and Konig (2002) report:

> The overall poverty rate of the elderly fell from 25 percent in 1976 to 7 percent in 2000….The poverty rate fell 44 percent (or 4 percentage points) for married couples, 32 percent (12 percentage points) for nonmarried women, 39 percent (9 percentage points) for whites, and 38 percent (20 percentage points) for blacks. Hispanics saw very little improvement in poverty rates after 1984, the first year in which data were available for them. (p. 12)

Median real income for the elderly taken as a whole increased 32 percent between 1976 and 2000. Gains for married couples were the highest at 31 percent. Real income gains for unmarried women were 23 percent higher. Racial differences exist. Between 1984 and 2000, whites experienced real income gains of 9 percent while, for blacks, real income gains rose 36 percent. Hispanics real income rose only 5 percent (Hungerford, Rassette, Iams, & Konig, 2002)

Comparing elderly income to working age income, gains, while present, were not quite as strong. The greatest relative gains for the elderly were realized between 1976 and 1984, from 1984 to 1996 there was little change. After 1996, elderly relative income declined. For minorities, the picture was bleaker. Blacks saw virtually no change in relative income from 1976 to 1982, then only a slight increase. Hispanics relative income declined across time (Hungerford, Rassette, Iams, & Konig, 2002).

Income sources for the elderly include Social Security, earnings, pension income, asset income and public assistance (for low income elderly). Social Security is a vital source of income for the elderly. Porter, Larin, and Primus (1999) note that without Social Security almost half of the U. S. population aged 65 and older would have been poor. Social Security brought down the poverty rate in 1997 by three-fourths to 11.9 percent. Indexed to inflation, Social Security retirement benefits maintain buying power over time. It also provides a lifetime annuity to a single beneficiary or to a married couple. The benefit structure replaces a relatively larger proportion of income for low wage workers as compared with high wage workers. Social Security is especially important to women. They receive 53 percent of Social Security survivor and retirement benefits, while contributing 38 percent of Social Security payroll taxes (Porter, Larin, & Primus, 1999). Ironically, Social Security also works against women since they typically work fewer years at lower pay than men, reducing Social Security benefits that are based on their own earnings record. Because they cannot take advantage of the spousal benefit feature of Social Security, Social Security replaces a smaller proportion of a never-married woman's retirement benefit as compared with a couple earning a comparable level of income (Burns, 2004).

For many elderly, retirement is a process rather than an event. Work time shifts from full time full year to part time part year before leaving the labor market altogether. The portion of elderly receiving labor income has varied between 20 to 25 percent from the mid 1970s until 2000. Interestingly, while the labor force participation of men declined until the mid 1980s and then plateau, the labor force participation of women has increased since 1980 (Quinn, 1999).

Today's elderly are more likely to receive income from a pension plan than subsequent generations given the shift away from defined benefit plans toward defined contribution plans. Between 1997 and 1992, an increasing proportion of elderly received pension income (31 to 45 percent). Of those that pension income, a larger share was white and male. Forty-three percent of whites had pension income in 2000 as compared with 33 percent of blacks and 22 percent of Hispanics. While the gender gap in pensions closed somewhat due to rising participation by women and falling participation by men, women still lag behind men in pension receipt (Hungerford, Rassette, Iams, & Konig, 2002).

Well over half (56 to 68 percent between 1976 and 1984) of all elderly have some asset income. Returns may be small, however. Kennickell, Starr-McCluer, and Surete (2000) note that in 1998, 92 percent of elderly had a checking account, 33 percent had certificates of deposit, 36 percent had cash value life insurance while only 20 percent held stock.

The share of aggregate income that comes from public assistance is quite low, around 1 to 2 percent. The proportion of elderly receiving income from public assistance declined from 11 percent in 1976 to 5 percent in 2000. This proportion fell somewhat for all racial groups over time. Among the elderly in 2000 4 percent of whites, 11 percent of blacks and 16 percent of Hispanics had public assistance income (Hungerford, Rassette, Iams, & Konig, 2002). Still, pockets of need remain. Alecxih and Kennell (1994) note that, of the elderly who are in poverty, 28 percent have incomes that are below 150 percent of the poverty guideline. Of that group, 60 percent had less than $10,000 per year income in 1990. These figures indicate that a substantial number of elderly are quite poor, despite the existence of government income support programs.

It should be noted that there are problems in measuring economic status. Daniel B. Radner (1996) notes that perception of economic status could be affected by how income is defined. He pointed out that the general income definition, which is confined to cash income before tax, does not reflect a realistic picture. Using a comprehensive definition of income with an equivalence scale instead of cash income, he found that the percentage of the elderly who have low income is higher than the percentage of the elderly that is below the official poverty threshold. He concluded that the elderly have a greater chance than other age groups to fall into poverty.

The official poverty rate is based on poverty thresholds and a definition of income that many deem less than fully satisfactory. Beston and Warlick (1998) pointed out that the official poverty rate miscalculates family resources and does not reflect changing consumption levels or patterns. They showed that elderly poverty between 1983 and 1994 remained significantly higher than the poverty rate in the general population when they used a more comprehensive measure of family resources that included not only the sum of money income from all sources but also the value of near–money income such as food stamps, while subtracting medical spending from resources.

Transitions Into and Out of Poverty

McKernan and Ratcliffe (2002) used data from the 1975-1997 Panel Study of Income Dynamics (PSID) and the 1988, 1990, and 1996 panels of the Survey of Income and Program Participation (SIPP) to investigate “Transition Events in the Dynamics of Poverty.” Using the official definition of poverty, they found that when economic and demographic factors were controlled, change in employment and disability status and changes in household composition were the dominant factors behind entry to or exit from poverty. For the elderly, these changes could take the form of reducing labor market time, retirement, and death of spouse.

Iceland (2003) utilized the data from the 1996 and 1999 SIPP to describe patterns of poverty using several measures with different time horizons in addition to the official poverty measure. Those aged 65 and older had an average monthly poverty rate of 10.7 as compared with a 12.8 overall rate. Chronic poverty was more likely to be a problem for the elderly; 3.8 percent of the elderly were poor all 48 months of the survey versus 2.0 percent for the population as a whole. Median number of months in poverty was 4 for those 65 and older, exactly the same as for the entire sample. A little over 3 percent of those aged 65 moved into poverty between 1996 and 1999. The entry rate was 3.5 overall. The elderly were less likely to exit poverty than other age groups. The exit rate for 65 and older was 32.4 versus 53.9 for those aged 18 to 64 and 47.9 for those under age 18. Iceland did no multivariate analysis to evaluate factors motivating entry into or exist from poverty.

Aspects of Welfare Reform Affecting the Elderly

The main thrust of Welfare Reform was to create incentives to move able-bodied individuals from dependence on social welfare to self-sustaining employment. To that end, PRWORA had four major provisions (Bechill, 1997, Schoeni and Blank, 2000). First, the Aid For Dependent Children (AFDC) program was discontinued and replaced with Temporary Assistance for Needy Families (TANF). AFDC participants could receive assistance as long as eligibility criteria were met. "Temporary" in TANF underscored a shift from long-term support to clearly time-limited support available, in most cases, for a lifetime limit of 60 months. Program funding also changed. Under AFDC, federal dollars matched state expenditures - poorer states' expenditures were matched at a higher rate than that of wealthier states. The funding structure was somewhat flexible. When caseloads increased in times of recession, dollars to the states went up. When the economy grew and caseload size decreased so did the money to the state. Under TANF, states received fixed funding in the form of a block grant. Initial size of the block grant was based on the amount the state had received for AFDC in 1994. No adjustments were made for business cycles, caseload size, or inflation. Although this provision targeted the working age, if an elderly person resided with a working age family member who lost eligibility for AFDC after Welfare Reform, their economic status could have been affected indirectly by the program changes. Implementation of TANF also affected access to public support for low-income grandparents who became caregivers for a co-resident grandchild.

Second, PRWORA ended SSI eligibility for legal immigrants. It also set more narrow standards for disability for children and required more frequent reviews of disability status for children and adults. In response to public outcry against the narrowed eligibility rules for legal immigrants, some initial restrictions were later relaxed. Many states restored program eligibility for legal immigrants who came to the United States before Welfare Reform. This provision obviously had a significant impact on immigrant or disabled elderly who lost income that they had previously been eligible to receive.

Third, the amount of Food Stamps received by program participants was significantly reduced. Minimum benefit was frozen at $10 and the maximum benefit was scaled back. PRWORA discontinued some services and eliminated the eligibility of most legal immigrants and imposed a time limit for benefits to able-bodied adults without dependents. PRWORA also mandated conversion of paper coupons to the Electronic Benefits Transfer system by 2002, a shift undoubtedly problematic for the older segment of the elderly population accustomed to the old system and not readily amenable to change.

Fourth, PRWORA "decoupled" welfare and eligibility for Medicaid, creating a separate application process. Eligibility for the disabled narrowed. Eligibility for some legal immigrants was terminated and most future legal immigrants were barred from participation in Medicaid. As with SSI, the elderly most at risk of economic loss were the legal immigrants.

Method

Data and Sample

Data from the 1994 and 1998 waves of the Health and Retirement Study (HRS) were used to examine the economic well-being of the elderly pre- and post- passage of the Welfare-Reform Act in 1996. HRS is a longitudinal national panel study administered by the University of Michigan. The HRS has surveyed more than 22,000 Americans aged 50 and over every two years since 1992. The HRS collects data on health, employment, wealth, income, and asset transfers. Participants are asked to report multiple sources of income, assets, and medical expenses. These factors make the HRS well suited for this study.

From an initial sample of over 11,000 observations in the 1994 HRS and over 21,000 observations in the 1998 HRS, this study selected only those respondents who participated in both years of data collection and who were financial respondents age 55 or over. Age 55 was selected to give an adequate sample size for longitudinal analysis.

It was assumed that HRS data were missing at random (MAR), which means that the probability that the variable X_i is missing is unrelated to the value of X_i. This assumption allowed missing data to be ignored. That is, no model was used for the treatment of missing data.

The unit of observation for all analysis in this study was the individual. For this study, the final unweighted sample size was 4,588 observations.

Weighting

In cross sectional analysis, weights are used to adjust the sample drawn to represent the population of interest. Application of weights with cross sectional data is unambiguous. Use of weights in longitudinal data analysis becomes less clear, however. Does one use the base year weight or the transition year weight or weight adjusted in some manner to account for change in sample characteristics over time? Finding no clear guidance on this issue in the literature or from statistical consultants, the following decisions were made for the analysis in this research. Year specific weights were used in the descriptive analysis, as 1994 could be considered separate and apart from 1998. The multivariate analysis, however, contained data from both years since the intent was to assess factors influencing change over time. For the longitudinal analysis, the weight for the base year, 1994, was used, based on the argument that the weights would reflect the initial sample. Admittedly, this is a somewhat arbitrary choice as equal argument could be made in favor of using the 1998 weight if one preferred instead to have the sample reflect the last year of data collection. Given the limited guidance on use of weights in longitudinal analysis, the decision was made to present both weighted and unweighted results to see the impact that weighting had on the outcome. As will be seen, use of the weight eliminated the statistical significance of several variables. To the extent that one accepts the premise that the weights enable the sample to represent the population, the weighted analysis would be the "better" of the two and perhaps, given the changes in significance levels, the more conservative.

Conceptual Framework

Human capital theory suggests that a decline in income (and, hence, a possibility of descending into poverty) may be related to age, gender, level of education, level of health, and labor market history (Bryant, 1995). Resource levels can also play a role. Increasing household size without increasing resource levels could push a household into poverty. Losing a spouse or a job could decrease resource levels, making it difficult to remain out of poverty. Conversely, decreasing household size or gaining employment might keep a household out of poverty; so, too, could having or gaining transportation. Given the provisions in Welfare Reform regarding immigrants, being foreign born could push a survey respondent into poverty if welfare benefits formerly received were then withdrawn.

The conceptual model used to guide selection of the independent variables for this analysis was:

move into poverty = f(ΔR, ΔP ; C, R)

where ΔR is a change in resources that included health, income, assets, employment status, and number of household residents

ΔP is a change in policy due to Welfare Reform

given

C - respondent demographic characteristics

R - respondent's initial level of resources

Variables

Variables used in this study, their coding and descriptive statistics are detailed in Table 1. Respondent demographic characteristics include gender, age, race, foreign born, and marital status. Education level, health status, number of household residents, marital status, employment status and car ownership measured level and change in respondent resources.

Table 1

Coding and Descriptive Statistics of Variables Used in Study

Dependent variable	Coding	Proportions
Into-poverty	1 If move from not poverty in 1994 to poverty in 1998; 0 otherwise	
Categorical Independent variables		
Male	1 If male; 0 otherwise	Male: 53%, Female: 47%
Education level		
< high school	1 If less than high school education; 0 otherwise	Less than high school education: 28.9%
High school	1 If have high school diploma; 0 otherwise (reference category)	High school education: 33.4%
> high school	1 If more than high school education; 0 otherwise	More than high school education: 37.8%
Foreign-born	1 If born not in the U.S.A.; 0 otherwise	Born not in the U.S.A.: 8.9%,
Race		
White	1 if white; 0 otherwise (reference category)	White 79%
Black	1 If black, white; 0 otherwise	Black: 17.6%
Other race	1 if other race; 0 otherwise	Other: 3.4%
Married in 1994	1 If married in 1994; 0 otherwise	Married in 1994: 65%, Married in 1998: 59.7%
Lost spouse	1 If lost spouse in 1998; 0 otherwise	Lost spouse in 1998: 6.8%
Gained spouse	1 If have spouse in 1998 but not in 1994; 0 otherwise	Have spouse in 1998 but not in 1994: 1.5%
Employed in 1994	1 If employed in 1994; 0 otherwise	Employed in 1994: 56%
Employed in 1998	1 If employed in 1998; 0 otherwise	Employed in 1998: 41.5%
Lost job	1 If lost job in 1998; 0 otherwise	Lost job in 1998: 19.7%
Gained job	1 If gain job in 1998; 0 otherwise	Gain job in 1998: 5.2%

Table 1 continued

Dependent variable	Coding	Proportions
Owned car 1994	1 If possess a car in 1994; 0 otherwise	Owned car in 1994: 88.7%
Owned car 1998	1 If possess a car in 1998; 0 otherwise	Owned car in 1998: 86.4%
Lost car	1 If possess a car in 1994, but not in 1998 ; 0 otherwise	Possess a car in 1994 but not in 1998: 4.7%,
Decline in health	1 If health status is worse than in 1994; 0 otherwise	Health status in worse than in 1994: 33.9%
Continuous Independent Variables		**Means**
Age	Measured in years	Mean:59.7 Min:55 Max:82 Median:59
Age^2	Age squared	Mean: 585 Min: 025 Max:6724 Median:3481
Total HH residents in 1994	Count of household residents	Mean:1.84 Min:1 Max:8 Median:2
Total HH residents in 1998	Count of household residents	Mean:2.21Min:1 Max:15 Median:2
Change in number of residents	Count of household residents 1994 minus count of household residents 1998	Mean:0.37 Min:-5 Max:10 Median: 0
Health in 1994	5 point Likert scale (1:excellent, 5:worst)	Mean:2.67 Min:1 Max: 5 Median: 3
Health in 1998	5 point Likert scale (1:excellent, 5:worst)	Mean:2.89 Min:1 Max:5 Median: 3
Income in 1994	Dollars of total household income, inflated with 1998 CPI, divided by 1000	Mean: 52.29 Min:0 Max: 2767.73 Median: 34.14
Income in 1998	Dollars of total household income	Mean: 49.92 Min: 0 Max: 5057.19 Median: 31.52
Change in income	Dollars of 1998 income minus dollars of 1994 adjusted income	Mean:$ -2.30 Min:$ -2737 Max: 4443.9 Median: $-0.03
Assets in 1994	Dollar value of assets in 1994	Mean:$185.39 Min: $-103.5 Max: $7722 Median: 48.47
Assets in 1998	Dollar value of assets in 1994	Mean:$234.9 Min:$-420 Max:$85710 Median: $45
Change in assets	Dollars of 1998 assets minus dollars of 1994 adjusted assets	Mean:$49.66 Min:$-8007 Max:$84041 Median: $0

Empirical model

From 1994 to 1998, a respondent could move from not poor to poor, from poor to not poor, or remain in the same category (poor or not poor) both years. In this study, movement into poverty was selected for analysis because it was thought to have interesting policy implications. If the goal of government welfare policy is to enable an individual to become economically self-supporting, knowledge of the factors associated with a decent into poverty could highlight areas for possible government intervention.

The empirical model used to analyze factors associated with a decent into poverty was:

$$\begin{aligned} \textit{Into-pov} = {} & \alpha_0 + \alpha_1 Age + \alpha_2 Age^2 + \alpha_3 Male + \alpha_4 LThigh + \alpha_5 GThigh \\ & + \alpha_6 Black + \alpha_7 Otherrace + \alpha_8 \textit{Foreign-born} + \alpha_9 Healt94 \\ & + \alpha_{10} Declineht + \alpha_{11} \textit{Total-res}1994 + \alpha_{12} Chnresident \\ & + \alpha_{13} Employed94 + \alpha_{14} Lostjob + \alpha_{15} Gainjob + \alpha_{16} Married94 \\ & + \alpha_{17} Lostsp + \alpha_{18} Gainsp + \alpha_{19} Owncar + \alpha_{20} Lostcar + \varepsilon \end{aligned}$$

Since income level is used to measure poverty, it was omitted as an independent variable. Similar issues coupled with some measurement problems lead to a decision to omit assets as well. Car ownership was used as (an admittedly weak) measure of asset ownership given important transportation services that a car provides.

Hypotheses

It is expected that, as the elderly age, they encounter greater opportunity to become poor due to level of or decline in income sources and increased medical expenditures. In addition, as people grow older, they are less likely to invest in their human capital, decreasing their productivity. Consequently, even if they wanted to hold down a job, their relatively low level of human capital would likely hinder them from gaining employment. Therefore, it is expected that age will have a positive impact on moving into poverty.

Males are less likely to be in poverty as compared with women. Males tend to have higher earnings and consequently higher pension benefits due to larger investment in human capital and to relatively continuous job histories. It is expected that being male will be negatively associated with moving into poverty.

Being married is expected to have a negative effect on moving into poverty. Loss of a spouse would be expected to have opposite signs. The elderly do not often use marital status change as a way out of poverty. Instead, after losing a spouse, the elderly are more likely to fall into poverty and less likely to leave welfare programs. Women who depend on their husband's income and lack job experience are especially at risk of falling into poverty. For these women, loss of a spouse might greatly impact economic status since most pensions do not fully replace the income of the deceased spouse. Further, if the deceased spouse has opted for a single life annuity payout, all payments would cease at the spouse's death.

Generally, people who have lower education levels are more likely to be poor because the lower investment in education contributes to reduced employment and lower wages. Similarly, because of relatively poor education, high unemployment rates, irregular labor market histories and discrimination in the labor market, minorities are expected to move into poverty more than whites. The relatively low pay from work related activities not only creates immediate financial hardship, it also reduces pension benefits after retirement.

Being employed is expected to have a negative impact on moving into poverty. A job usually represents a steady and stable income source. Loss of labor income at retirement might have a negative impact on the elderly especially if they do not have an appropriate pension plan.

Having dependent family members may increase the chances that an elderly person will move into poverty. In most elderly households, children are grown and financially independent from their parent, decreasing the financial burden on the elderly. But, for those who have marginally adequate benefits, having a dependent child and grandchild in the home might increase demands on an already tight budget, moving them into poverty.

Because persons in poor health are more likely to need hospitalization and to face increased medical costs, persons in poor health are more likely to become poor. Human capital theory suggests that poor health is equivalent to a depleted or nonproductive asset. Poor health leads to low employment, decreased financial resources, and restricted daily activity.

Finding and Discussion

Disentangling the effects of Welfare Reform on the poverty dynamics of the elderly from the effects of other factors is complex (Blank, 2002). An objective measure of Welfare Reform does not exist in these data. In looking at the results, the impact of change in program eligibility requirements due to Welfare Reform can be considered as a possible explanation of change in program participation.

It is interesting to note how constant the participation rate of public benefits has been over time relative to poverty status. Table 1 presents the mean test of difference in public program participation 1994 to 1998 by change of poverty status. Four different groups were considered: those who moved into poverty, those who moved out of poverty, those who are not in poverty and those who are in poverty in both Waves. For respondents who moved into poverty in 1998, their participation in Food Stamps and the SSI program is not statistically different across time. But they participated less in Medicaid benefits in 1998 as compared with 1994. The Food Stamp participation rate decreased, even among the respondents who were in poverty in both years.

Respondents who were out of poverty in 1998 had relatively lower participation rates for Food Stamps and Medicaid while their SSI participation rate was not statistically different over time. The restricted eligibility for the Medicaid program under Welfare Reform could have hindered joining the program. In addition, the participation rate in Food Stamps and Medicaid decreased for respondents who were not in poverty in both Waves. But the SSI participation rate was not statistically different across both years.

Table 2
Mean test of difference in public program participation 1994 to 1998 by change of poverty status

	Food Stamp Participants		SSI Participants		Medicaid Participants	
	1994	1998	1994	1998	1994	1998
Poor 1994 Not poor 1998 (n=278)	0.190*** (0.43)	0.051 (0.24)	0.103 (0.33)	0.092 (0.31)	0.237*** (0.46)	0.090 (0.31)
Poor 1994 Poor 1998 (n = 397)	0.464** (0.49)	0.388 (0.48)	0.318*** (0.46)	0.440 (0.49)	0.516 (0.49)	0.528 (0.49)
Not Poor 1994 Not Poor 1998 (n = 3427)	0.017*** (0.14)	0.007 (0.09)	0.016 (0.14)	0.018 (0.15)	0.120*** (0.36)	0.016 (0.14)
Not Poor 1994 Poor 1998 (n = 359)	0.191 (0.42)	0.187 (0.41)	0.122 (0.35)	0.131 (0.36)	0.257** (0.46)	0.211 (0.43)

*** $p < 0.001$, ** $p < 0.05$, * $p < 0.1$; standard deviation in parenthesis

Table 3 presents the results for the logistic analysis of factors affecting movement into poverty. There are 373 respondents who were not poor in 1994 but were poor in 1998 and 3,859 respondents who were not poor in both waves. For the dependent variable, not poor in 1994 and poor in 1998 was coded 1; zero otherwise. Measures of income and assets were excluded from the model because, given the way that poverty classification is done, there is a linear relationship between poverty and those two variables. As previously mentioned, given the lack of guidance found regarding inclusion of weights in longitudinal analysis, both unweighted and weighted results are presented here.

Age was a significant factor when the analysis was not weighted, but was not significant when the data were weighted. It is reasonable that as people age, they are more vulnerable to financial strain because income sources tend to become restricted and medical and other costs may increase. The nonlinear results for the unweighted data suggest that people are less likely to become poor for a time, but then their chances of becoming poor increase with age. Including those aged 55 to 64 may have contributed to this result. The empirical results indicate that a one-year increase in age was associated with a 0.886 decrease in log odds of falling into poverty. Taking the age squared term into consideration, further analysis indicated that the inflection point occurs at age 63.29, an age that would have been excluded if analysis had focused on those aged 65 and older.

Males are less likely to become poor. Women are a special subgroup within the elderly. Women tend to live longer than men and are less likely to have pension income. Further, unlike young women, neither marriage nor employment were likely options for keeping older women out of poverty. In addition, losing a spouse or retiring from a job is likely to have relatively greater economic consequences of women as compared with men.

Those not having a high school degree have 109% greater odds of entering poverty than those with a high school degree. Blacks had 50% greater odds and those of other race had 108% greater odds of becoming poor than did whites.

Level of health in 1994 was a significant factor in moving into poverty. Those who reported poorer health were more likely to move into poverty. A decline in health over time, however, was not significant. A different result might have been obtained if it were possible to use objective measures of health status as opposed to subjective measures. In addition, the subjective measure used in this study had a fairly narrow range, limiting variation when change in health status over time was considered.

Table 3
Logistic Model of Factors Affecting Movement into Poverty

	Unweighted		Weighted	
	Parameter estimate (S.E.)	Odds ratio	Parameter estimate (S.E.)	Odds ratio
Intercept	27.657** (11.91)		24.353 (38.65)	
Age	-0.886** (0.39)	0.412	-0.734 (1.32)	0.480

Age squared	0.007** (0.00)	1.007	0.005 (0.01)	1.005
Male	-0.358** (0.14)	0.699	-0.318** (0.14)	0.727
LT high school	0.805*** (0.15)	2.238	0.740*** (0.15)	2.097
GT high school	-0.642*** (0.18)	0.526	-0.655*** (0.17)	0.519
Black	0.521*** (0.15)	1.684	0.408** (0.18)	1.504
Other race	0.823** (0.30)	2.277	0.735** (0.32)	2.085
Foreign-born	0.352* (0.21)	1.421	0.250 (0.23)	1.283
Health 94	0.218*** (0.06)	1.244	0.159** (0.07)	1.172
Decline in health	0.140 (0.15)	1.150	0.126 (0.15)	1.134
Number in HH 1994	0.241** (0.11)	1.273	0.112 (0.13)	1.118
Change in number in HH	0.517*** (0.05)	1.678	0.534*** (0.05)	1.705
Employed 94	-1.650*** (0.19)	0.192	-1.621*** (0.18)	0.198
Lost job	1.359*** (0.19)	3.892	1.343*** (0.19)	3.829
Gained job	-0.520* (0.29)	0.595	-0.615** (0.31)	0.541
Married 94	-1.294*** (0.19)	0.274	-1.221*** (0.19)	0.295
Lost spouse	1.612** (0.21)	5.014	1.691*** (0.22)	5.423
Gained spouse	-1.406** (0.61)	0.245	-1.658** (0.66)	0.191
Own car 94	-0.742*** (0.20)	0.476	-0.969*** (0.21)	0.380
Lost car	0.758** (0.25)	2.134	0.982*** (0.25)	2.669

*** is statistically significant at α =0.001, ** at α =0.05, and * at α =0.1

Those who were employed in 1994 or who gained a job were less likely to become poor, but those who lost a job had 282% greater odds of becoming poor. Being foreign born was positively associated with movement into poverty, but it was not a statistically significant factor in the weighted analysis.

Interestingly, the total number of household residents in 1994 was significant only in the nonweighted analysis. An increase in the number of household members, however, was a significant factor in movement into poverty in both analyses. This result suggests that the increase may represent gaining dependent family members who do not contribute to household resources.

Not surprisingly, those who had employment in 1994 or who gained a job in 1998 were less likely to be poor. Conversely, those loosing a job had 282% greater odds of becoming poor. Similarly, being married in 1994 or gaining a spouse between 1994 and 1998 were significant factors in not falling into poverty. Those who lost a spouse had 442 percent greater odds of becoming poor. Employment and marriage represent resources. To some extent, marital status also presents a proxy the permanence of the present economic situation. Kathleen (1995) noted that couples that are initially in poverty are less likely to be permanently poor than are single individuals.

People who have their own transportation are less likely to fall into poverty. Owning car is one aspect of asset ownership and represents an important economic resource. Those with a car in 1994 were less likely to be poor while those losing a car had 166% greater odds of becoming poor.

Conclusion

This study investigates the dynamics of poverty for the years 1994 to 1998. Tracking change for the same individuals across time gives opportunity to investigate the relative impact of various factors on the transition into poverty for those aged 55 and older. The years in this study are inclusive of the period just before and just after Welfare Reform. While results of this study cannot give conclusive evidence that Welfare Reform caused the changes in program participation observed in this research, it does describe the changes occurring in a period where understanding and implementation of quite different eligibility rules may have contributed to some program exits. Welfare Reform has been criticized for having a negative impact on elderly economic well-being. Overall, elderly tended to leave the Food Stamp and Medicaid programs between 1994 and 1998. However, it is not clear whether this trend is simply an extension of a phase in which the participation rate has decreased steadily or if it is a direct result of Welfare Reform. If the decline in welfare participation is from the unintentional effects of welfare reform, policy makers must be concerned about this decline. To avoid further decline, they may adopt some options such as less restrictive methods of counting assets and income, simplifying the application form and the recertification process, educating people through outreach or mass media and restoring the previous services related to Food Stamps such as food delivery. In addition, the existence of unintentional impacts from Welfare Reform might also affect the stayer indirectly because lower levels of participation might underestimate states' efforts to implement public services. The lower level of participation also could make it more difficult for policy makers to organize public service in a way that achieves economies of scale.

From the logistic model on moving into poverty, the results are consistent with hypotheses. People who are less educated, female, black and other race, foreign -born, less healthy, unemployed, widowed are more likely to fall into poverty.

There are several limitations in this study. The need for actual dollar estimates to test the benefit/cost issue is both a limitation of this study and something to note for the future research on the effect of Welfare Reform on the elderly well-being. Because of missing information involved in the application process (resource and income limits), an estimate of Food Stamp benefits could not be calculated. Additionally, public benefits vary from state to state but no information is given in the HRS regarding where respondents live. So, it is also a limitation on calculating the amount of public benefits.

Another limitation is that the HRS does not reveal individuals' citizenship information. This fact generates errors in eligibility determination. With more detailed information about citizenship, the analysis could generate more accurate analysis regarding the eligibility limitation.

Yet another limitation is that previous research shows that single individuals including widowed, divorced or never married are more likely to be in poverty. Because of limited sample size, specific change in marital status such as from married to widowed, from married to divorced, or from widowed to married, was not measured. If this change could be measured, it might reflect an interesting view of the relationship between specific marital status change and public benefit receipt among the elderly.

References

Alecxih, L., & Kennell, D. (1994). The Economic Impact of Long-Term Care on Individuals. U. S. Department of Health and Human Services. Retrieved March, 2004 from the World Wide Web: http://aspe.os.dhhs.gov/daltcp/reports/ecoimpes.htm#TABLE1.

Bechill, W. (1997). Welfare reform act-its impact on older persons. Perspective on aging, 26(1), 21-24.

Beedon, L. (2000). Supplemental Security Income (SSI): Yesterday, today and tomorrow. Public Policy Institute, Research Group, AARP.

Betson, D. M., & Warlick, J. L. (1998). Reshaping the Historical Record with a Comprehensive Definition of Poverty. South Bend, IN: Department of Economics, University of Notre Dame, 1998.

Blank, R. (2002) Evaluating Welfare reform in the United States. *Journal of Economic Literature*, 40(1105-1166).Burns, S. (2004, February 22) Singled out of benefits. *Dallas Morning News*. Available http://www.dallasnews.com/sharedcontent/dws/us/scottburns/columns/2004/stories/022204dnbusburns.2280.html

Bryant, W. K. (1995). The economic organization of the household. New York: Cambridge University Press.

Burns, S. (2004, February 22) Singled out of benefits. *Dallas Morning News*. Available http://www.dallasnews.com/sharedcontent/dws/us/scottburns/columns/2004/stories/022204dnbusburns.2280.html

Centers for Medicare and Medicaid Services (2004). Welcome to Medicaid. Centers for Medicare and Medicaid Services. Available http://www.cms.hhs.gov/medicaid/

Hungerford, T., Rassette, M., Iams, H, & Koenig, M. (2001). Trends in the economic status of the elderly 1976-2000. Social Security Bulletin, 64(3), 12-22.

Iceland, J. (2003). Dynamics of economic well-being, poverty 1996-1999. Current Population Reports, P70-91. Washington, D.C.: U. S. Census Bureau.

McGarry, K. (1996). Factors Determining Participation of the Elderly in Supplemental Security Income. *Journal of Human Resources* 31(2):331-358.

Kennickell, A., Starr-McCluer, S. & Surete (2000) Recent changes in U. S. Family financial: results from the 1998 Survey of consumer finances. *Federal Reserve Bulletin*, 86, 1-29.

McKernan, S., & Ratcliffe, C. (2002) *Transition events in the dynamics of poverty*. Washington, D. C.: The Urban Institute.

Miller, C. J. & Montalto, C. P. (1998). Comparison of economic status of elderly households: nonmetropolitan versus Metropolitian residence, *Family Economics and Nutrition Review*, 11(4), 19-30

Miller, J. (1998) Poverty fact sheet series – poverty among the elderly. Ohio State University Extension Fact Sheet HYG-5706-98.

Porter, K. H., Larin, K., & Primus, W. (1999) Social Security and poverty among the elderly: A national and state perspective. Washington, DC: Center on Budget and Policy Priorities.

Quinn, J. (1999). Retirement patterns and bridge jobs in the 1990s. EBRI Issue Brief NO. 206. Washington, D. C.: Employee Benefit Research Institute.

Radner, D. B. (1996). Family unit incomes of the elderly and children, 1994. Social Security Bulletin, 59 (4):12-28.

Schoeni, F. Robert., & Blank, M. Rebecca. (2000). What has welfare reform accomplished? Impacts on welfare participation, employment, income, poverty, and family structure. Working paper 7627 National Bureau of Economic Research March, 2000

Social Security Administration (2001) Income of the aged chartbook, 2001. Washington, D. C.: Social Security Administration.

USDA (2002) Characteristics of food stamp households: fiscal year 2002 United States Department of Agriculture [USDA]. (2004) A short history of the food stamp program. USDA. Available http://www.fns.usda.gov/gsp/rules/Legislation/history.htm

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