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**Poverty Experience of Older Persons**  
A poverty study from a long-term perspective

by  
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## EXECUTIVE SUMMARY

### Background

In recent years, older persons in the United States have been perceived by some analysts as being better off financially than younger persons (Hurd, 1990; Crystal, 1996; Schultz, 1995). According to a recent Census Bureau report, the poverty rate for persons age 65 and older was 10.1 percent in 2001, a rate lower than that for persons under age 65 (12.1 percent) (U.S. Bureau of the Census, 2002). The decline in the poverty rate for older persons in recent years, however, does not present a complete picture of their economic status. The official poverty measure in the United States is based on the March Current Population Survey (CPS), an annual cross-sectional survey. However, one cannot tell from cross-sectional data whether the poverty population contains the same individuals from year to year or whether it consists of a much higher number of individuals, each of whom spends only a relatively short period (i.e., only one year) living in poverty. From a long-term perspective, older persons might be more likely to be poor than younger persons, even if their poverty rate is lower in a given year.

### Purpose

This paper examines two questions regarding long-term poverty for older persons and younger persons. Given that the annual official poverty rate for older persons is now lower than the poverty rate for the entire population, (1) are older persons more or less likely than younger persons to fall into poverty for a long period, and (2) are older persons more or less likely than younger persons to escape poverty after they become poor?

### Methodology

This study employed a longitudinal survey, the Panel Study of Income Dynamics (PSID), over 12 years (1981-1992) (1992 is the last year that complete PSID public-use micro data are available) to track long-term poverty status for the same individuals. The goal was to attempt to compare the long-term poverty experience of older persons with that of younger persons. First, we examined how often individuals fell into poverty during a five-year subset of the period 1988-1992. After reporting the percentage of persons in poverty by age group during 1988-1992, we tabulated the percentage of older persons in poverty by various demographic factors. From these distributions, we explored the characteristics of older persons who were more frequently in poverty and who, therefore, were the most vulnerable to long-term poverty. Then, we applied survivor analysis to estimate exit probabilities from poverty during the 12-year period, 1981-1992. A *poverty spell exit probability* is the probability (ranging from 0 to 1.0) that a person will escape

from poverty after having a poverty spell. Based on the exit probabilities, we estimated the distributions of completed poverty spells for older and younger persons.

## Principal Findings

During the five-year period (1988-1992), 24.3 percent of older persons experienced *at least* one year in poverty, and 5.6 percent were in poverty all five years. For younger persons (under 65), 20.1 percent were poor at least one year, and 3.6 percent spent all five years in poverty. Older persons, as an age group, were more likely to experience poverty than any other age group except those under age 18 (Table 1).

The chances older persons would fall into poverty varied substantially by demographic factors during the five-year period (1988-92). Older women were at a higher risk of falling into poverty for a relatively long-term period. A higher percentage of older women (27.8 percent) experienced at least one year in poverty during the 1988-1992 period than did older men (17.6 percent). About 7 percent of older women, but only 2.4 percent of older men, lived in poverty all five years. Combining the different demographic factors, women age 85 and older who were never married, widowed, or divorced and living alone were the most likely to be poor for a relatively long period (Table 2).

During the 12-year period, older persons were less likely than young persons to escape from poverty once they had fallen into it. For an older person who spent one year in poverty, the probability of exiting from poverty was 35.2 percent, compared to 40.3 percent for persons under age 65. Regardless of length of poverty spell, the results indicate that escaping from poverty was more difficult for older individuals than for younger ones (Table 7).

Although poverty exit probabilities for older persons were lower than for younger persons, the *pattern* of exit probabilities in the first three consecutive years in poverty for older persons is somewhat similar to that for younger persons in that the probabilities drop at comparable rates as length of poverty spells increases. After three consecutive years in poverty, however, the probability of an older person, especially an older woman, escaping from poverty is substantially lower than that for a younger person (7.3 percent for the older persons, compared with 21.3 for younger persons) (Table 7).

Over one-third (35.2 percent) of older persons who were ever poor completed their poverty spell in one year (compared with more than 40 percent of younger persons who were ever poor). For both older and younger persons, a substantial fraction of poverty spells last three years or less. After three years, however, the situation is significantly different. Among persons age 65 and older, 31 percent remain poor for ten years or more (compared with 11 percent of those under age 65) (Table 8).

## Conclusion

This research revealed that individuals' poverty experience in their older years is significantly different from that in their younger years. Not only are older persons more likely than younger persons to fall into poverty for a long period, they are also less likely than younger persons to escape from poverty once they have fallen into it. Moreover, a considerable percentage of older persons' completed poverty spells lasted 10 or more years. For older persons, especially older women, poverty spells are either relatively short or extremely long. The majority of the older persons who spent more than four consecutive years in poverty will stay in poverty for a long time, and some of them will remain poor until death. Over time, older persons with long-term poverty spells make up an increasingly larger proportion of the current poverty population in any given year.

This research shows significant differences between findings derived from a single-year cross-sectional perspective (such as official CPS cross-sectional data) and a long-term perspective (based on the PSID longitudinal data). During the 1988-1992 portion of the period examined, the annual poverty rate reported by the Census Bureau for the older population was lower than that for the entire population. However, when the older population was traced continuously over the same five-year period, the picture was quite different: older persons, especially older women, were more likely to be poor. This research also examined the 12-year period, 1981-1992, when the annual poverty rate reported by the Census Bureau for the older population was lower than that for the entire population in each year. The characteristic long-term poverty experience for older persons found in this research is similar to that found in Coe's study (1988) examining the 1970s PSID longitudinal data, when the annual poverty rate for older persons was higher than that of the entire population. In short, even though the poverty status of older persons appears better in the cross-sectional survey (the March CPS) in recent years than it did in the 1970s, elderly people still experience higher rates of long-term poverty than younger age groups do.

## **POVERTY EXPERIENCE OF OLDER PERSONS**

### **A poverty study from a long-term perspective**

#### **Introduction**

In recent years, older persons in the United States have been perceived by some analysts to be better off financially than younger persons (Hurd, 1990; Crystal, 1996; Schultz, 1995). For example, according to a recent Census Bureau report, the poverty rate for persons age 65 and older was 10.1 percent in 2001, a rate lower than that for persons under age 65 (12.1 percent) (U.S. Bureau of the Census, 2002). Comparing the poverty rate in 1997 with that in 1989, older persons were the only age group whose poverty rate decline was statistically significant, falling from 11.4 percent to 10.5 percent between 1989 and 1997 (U.S. Bureau of the Census, 1998).

The perception that older Americans are financially well off can have an important impact on income support programs and social policies. For example, in the current Social Security reform debate, some proposals have suggested reducing Social Security benefits to enhance the solvency of the Social Security Trust Fund. The decline in the poverty rate for older persons in recent years, however, does not present a complete picture of the economic status of older persons. In 2001, the median household income for householders age 65 and older was \$23,118, while that for householders under age 65 was \$49,227 (U.S. Bureau the Census, 2002).

Perceptions about a person's or a group's economic status can be affected in important ways by methodology and technical choices made in estimating economic status (Radner, 1996). There is broad agreement that the current official measure of poverty<sup>1</sup> is less than ideal and needs to be revised (Ruggles, 1990; Citro and Michael, 1995). For example, Citro and Michael (1995) proposed a new approach to measuring poverty, including revising the definition of income, revising the definition of and adjusting the poverty threshold, and using different survey data. Citro and Michael (1995) also recommend that "appropriate agencies should develop poverty measures for periods that are shorter and longer than a year with data from the Survey of Income and Program Participation (SIPP) and the Panel Study of Income Dynamics (PSID) for such purposes as program evaluation."

The current annual official poverty measurement in the United States is based on the March Current Population Survey (CPS), an annual cross-sectional survey. These annual cross-sectional statistics on the poverty population help track changes in the low-income population and inform welfare policy decision-making over time. However, one

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<sup>1</sup> The current poverty measure has a set of lines, or thresholds, that are compared with families' resources to determine whether they are poor. The current thresholds were originally developed on the basis of the cost of a minimum diet times three to allow for expenditures on all other goods and services. Persons whose family income fell below this threshold were deemed to be poor.

cannot tell from cross-sectional data whether the poverty population contains the same individuals each year or whether a much higher number of individuals may be spending a relatively short period (e.g., only one year) in poverty.<sup>2</sup> Individuals who live in poverty for a long period may be different from those who spend a short period in poverty. Long-term and short-term poverty have quite different policy implications with regard to the most appropriate policies to alleviate them (Ruggles, 1990).

This study views individual poverty status from a long-term perspective, focusing particularly on older persons. The study uses a longitudinal survey, the Panel Study of Income Dynamics (PSID),<sup>3</sup> to track long-term poverty status<sup>4</sup> for the same individuals over a 12-year period (1981-1992) (1992 is the last year that complete PSID public-use micro data are available).

Most previous studies of long-term poverty have been based on PSID data collected between 1967 and 1981, when, in each year, the official annual poverty rate for older persons was higher than that for the entire population (Bane and Ellwood, 1986; Coe, 1978, 1988; Duncan et al., 1984; Hill, 1981; Levy, 1977; Rainwater, 1981). We examine older persons' long-term poverty status from more recent years when the official annual poverty rate for older persons has been *lower* than that for the entire population.

This research seeks to answer two questions: Given that the annual official poverty rate for older persons was lower than the poverty rate for the entire population, (1) are older persons more or less likely than younger persons to fall into poverty for a long period, and (2) are older persons more or less likely than younger persons to escape after they enter poverty status? To answer these questions, the research estimates (1) how often individuals in different age groups fall into poverty, and (2) the probability of older persons exiting from poverty spells compared to persons under age 65 during the 12-year period, 1981 to 1992.

To preview our conclusions, there is a significant difference between a single-year and a long-term perspective on the poverty experience of older Americans. We find that: (1) during the 1988-1992 period, older persons, as a group, were more likely to experience poverty than any other age groups except those under age 18; (2) among

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<sup>2</sup> The March CPS for any given year contains only 50 percent of the sample in the previous year's March CPS.

<sup>3</sup> The PSID is a longitudinal survey of a representative sample of U.S. individuals and the family members with whom they reside, which has been ongoing since 1968. The data files contain the full span of information collected annually over the course of the study. As of 1995, the PSID had collected information about more than 50,000 individuals spanning as many as 28 years of their lives. The major drawback of the PSID is its relatively small sample size--the panel as a whole consisted of 5,000 families first interviewed in 1968, and there has been some attrition since then. The study is being conducted at the Survey Research Center, Institute for Social Research, University of Michigan.

<sup>4</sup> Like the March CPS, the PSID defines an individual's poverty status as an *annual family* income/need ratio below 1.0; the method is similar to that used by the Census Bureau to calculate the annual official poverty rate. See: PSID, "Procedures and Data Codes, 1974 Interviewing Year," Wave VII. A Supplement, 1974. pp. 39-41.

older persons, women age 85 and above, women living alone, never-married women, widows, and divorced women were more often in poverty than others age 65 and older; (3) during the first three consecutive years of poverty, the *pattern* of poverty exit probabilities for an older person is somewhat similar to that for a younger person, even though the poverty exit probabilities for an older person were lower than for a younger person: after three consecutive years in poverty, however, the probability of an older person, especially an older woman, escaping from poverty is substantially lower than that for a younger person; and (4) among the older poor, nearly one-third of poverty spells last 10 or more years.

The findings from this research provide insights into the long-term poverty experience of older persons. These insights differ from those drawn from our knowledge based on cross-sectional survey information and hence may affect debate and decision-making in a wide range of social welfare policy areas, including Social Security.

The following section reviews the literature on long-term poverty based on longitudinal data, such as the PSID. The methods and findings of the study are presented next, followed by a discussion of implications.

## **Background**

Previously, poverty studies taking a long-term perspective have been of two types. One type focused on estimating the proportion of persons who stay in poverty for an extended period of time (the “persistently poor”) and explored the characteristics of those who experienced long poverty spells (Bane and Ellwood, 1986; Coe, 1978, 1988; Duncan et al., 1984; Hill, 1981; Levy, 1977; Rainwater, 1981; Rank and Hirschl, 1999). The other type focused on “income dynamics,” studying the impact of the individual’s life events (such as employment, death, and marriage) on his or her poverty status (Bane and Ellwood, 1986; Bound et al., 1991; Choudhury and Leonesio, 1997; Zick and Smith, 1986).

Most of those who have studied long-term poverty have relied on the PSID,<sup>5</sup> which has a number of advantages for such studies. The PSID is the only nationally representative survey that has followed a panel of the same individuals yearly over a long period, tracking their income and poverty status using the same methods.<sup>6</sup>

Three different approaches have been used in the first type of study--i.e., estimating the proportion of persons who are persistently poor. The first approach, which is essentially a cohort approach, is represented by Levy (1977). Levy created a PSID longitudinal data file (1967-1973) and estimated the probabilities that those who were poor in 1967 would remain poor in at least five of the next seven years. He found that fewer than half of the persons who were poor in 1967 stayed in poverty at least five of the seven years from 1967 to 1973 (Levy, 1977). This finding raised the possibility that the

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<sup>5</sup> Some have used other longitudinal surveys, such as the National Longitudinal Survey of Mature Women.

<sup>6</sup> Each annual PSID survey asks questions about individual family income in the same way and uses the same method, i.e., the family income/need standard ratio, to measure poverty.

long-term poor might be significantly different from the poverty population as a whole, as it was revealed from cross-sectional data (Ruggles, 1990).

The second method of examining long-term poverty, used by several experts (Coe, 1978; Duncan et al., 1984; Hill, 1981; Rainwater, 1981), tabulated the distribution of poverty status of individuals over a fixed time (typically 10 years) and estimated the percentage of persons who are “ever poor” and who are “persistently poor”<sup>7</sup> over a fixed period. For example, Duncan et al. (1984) studied the PSID longitudinal data for 1967-1978. They found that about one-quarter (24.4 percent) of the total population lived in families that fell below the poverty line in at least one of the 10 years, and 2.6 percent of the population were “persistently poor” during the 10-year period.

While the definition of “persistently poor” varies in these studies with regard to the number of years in poverty over a fixed time period, all of these studies found that the “persistently poor” were considerably more likely to be older persons. For example, Hill (1981) found that during the 1969-1978 period, 26.4 percent of the “persistently poor” were older persons. Duncan et al. (1984) found that one-third of older persons were among the “persistently poor” in the 1968-1977 period. All of the findings seem to indicate that older persons, regardless of race or sex, were a disproportionate share of the “persistently poor,” apparently because older persons have severely limited opportunities to escape from poverty through either of the two most common strategies, acquiring a job with decent pay or marrying someone who has one (Duncan et al., 1984).

The above-mentioned methods have some intuitive appeal as means of studying the characteristics of those who are poor for a long-term period, but these methods have their disadvantages. The major problem is that years of poverty falling outside the sample period are not observed.<sup>8</sup> As a result, estimation of the “persistently poor” is subject to bias.

The third approach, a comprehensive method developed by Bane and Ellwood (1986), used survivor (or hazard function) analysis (also see Coe, 1988). Bane and Ellwood used a PSID 12-year (1970-1981) longitudinal data set to estimate poverty exit probabilities for poverty spells of different lengths. Then, the authors generated a distribution of completed poverty spells based on these poverty spell exit probabilities.<sup>9</sup>

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<sup>7</sup> “Ever poor” was defined as at least one year in poverty during a fixed time period (for example, 10 years). The definition of “persistently poor” varies. For example, Hill (1981) defined “persistent” as being poor in at least eight years of the 10-year period, while Coe (1978) defined it as being poor in every year during a ten-year period.

<sup>8</sup> Some of those who are not poor for some specified number of years during the observation period—for example, eight, to use the number chosen by Duncan et al. (1984)—are in fact in the midst of spells of poverty that have been going on or will go on for a total of eight or more years, but some of these years fall outside the period for which data were collected. Thus, estimation of the true number of individuals in the sample who were actually “persistently poor” cannot be based on these data (Ruggles, 1990).

<sup>9</sup> Since individuals might experience two or more distinct poverty spells during the 12-year period, this method calculates an exit probability based on each separate “poverty spell.”

Bane and Ellwood (1986) have made an explicit effort to solve the problem of bias related to sample censoring.<sup>10</sup> To do so, they examined the poverty spells for which both the beginning point and the ending point could be observed over the years of PSID data. The results of this research suggest that most spells of poverty are quite short. Nearly 45 percent of the spells end after one year, and 70 percent within three years. Only 12 percent of the poor remain in poverty for 10 years or more. Bane and Ellwood (1986) found that the probability of exiting from poverty declined as time in the poverty spell increased. The longer a person has been poor, the less likely it is that he or she will escape from poverty (Bane and Ellwood, 1986). Their research provided a comprehensive analysis of poverty spell duration, exit probabilities, and transitions into and out of poverty, but it excluded the entire older population.

Coe (1988) estimated poverty exit probabilities and completed poverty spells using the same method and years of PSID data as Bane and Ellwood (1986) had, but Coe focused on the older population. He also explored differences between older men and older women. He found a dichotomy in the poverty experience of older persons--i.e., older persons in poverty either escape from poverty quickly or they do not escape at all. He noted that for older persons who have been in poverty, the probability of escaping from it was relatively high in the first three consecutive years, comparable to that for persons under age 65. After the first three years in poverty, however, the exit rates for older persons fell substantially below those for persons under age 65. Coe pointed out that the majority of older persons who fell into poverty can be expected to be poor only temporarily. However, some of them may stay in poverty for an extremely long period, even for the remainder of their lives. He also showed that exit probabilities from poverty for older women were uniformly lower than those for older men, and that the dichotomization of the poverty experience was more pronounced in the case of older women (Coe, 1988).

Recently, a study by Rank and Hirschl (1999) applying a “life table” method analyzed PSID longitudinal data from 1968-1992 to estimate the age-specific and cumulative proportions of American adults who will experience poverty at some point during their elderly years. Their analysis indicated that 40 percent of older Americans will experience a year below the poverty line at some point between the ages of 60 and 90.

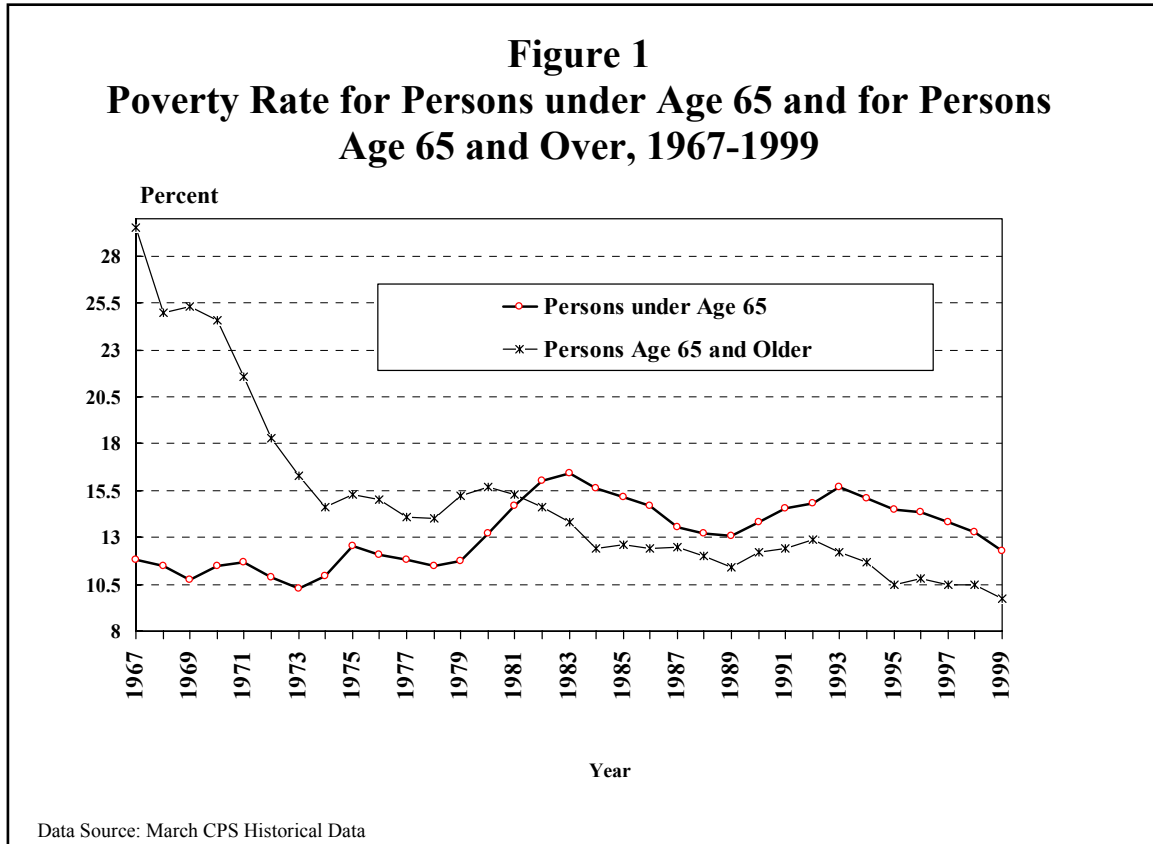
The above-mentioned studies (with the exception of Rank and Hirschl) were based on 1970s PSID longitudinal data for a period during which the official annual poverty rate for older persons exceeded that for the younger population in every year.<sup>11</sup> Figure 1 displays the Census Bureau’s annual poverty rate data for older persons and for persons under age 65 from 1966-1999. The historical data show that the annual poverty rate for the older population has declined significantly since 1966. Much of that decline was due to the increase in Social Security benefits in the early 1970s and their indexation

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<sup>10</sup> See footnote 8.

<sup>11</sup> An exception is Rank and Hirschl’s study (1999), which used PSID data from 1968 to 1992.

after 1975, but since then, poverty has continue to decline due to real growth in Social Security benefits. However, the annual poverty rate for the older population still remained higher than that for the younger population (under age 65) until 1982 (see Figure 1), and since 1982 has dropped and has been lower than that for younger population.



In this paper we examine how often individuals fell into poverty and how often individuals fell into “near-poor” and “low-income” ranges by age and other demographic characteristics during the five-year period from 1988 to 1992. Then, we examine differences in poverty exit probabilities and the distribution of completed poverty spells between older persons and persons under age 65 over the 12-year period from 1981 to 1992.<sup>12</sup> Each analysis begins with a discussion of methodology and data.

### Percentage of Persons in Poverty from 1988 to 1992

#### Methodology and Data

This section reports how often individuals fell into poverty<sup>13</sup> during the 1988-

<sup>12</sup> 1992 is the last year that complete PSID public-use micro data are available.

<sup>13</sup> To estimate how often individuals fall into poverty, this study calculated the percentage of persons in poverty for at least one year, at least two years, at least three years, at least four years, and all years in poverty during a five-year period. For convenience in calculating and presenting the results, this part of the

1992 period. After reporting the percentages of persons in poverty by age group during 1988-1992, we tabulated the percentage of persons age 65 and older in poverty by various demographic factors. Based on these distributions, the characteristics of older persons who were more frequently in poverty and who, therefore, were the most vulnerable to long-term poverty were explored. We then repeated the analysis for near-poor (below 1.25 times the poverty line) and low-income persons (below twice the poverty line). The PSID provides a “need standard” variable calculated on the basis of household size that is essentially equivalent to the poverty threshold used by the Census Bureau to calculate the poverty rate.<sup>14</sup> The “need standard” as a threshold is adjusted by the Consumer Price Index (CPI) each year. In this paper, poverty was defined as an income/need ratio of below 1.0 without any further adjustment.<sup>15</sup>

Data used in this part of the research are from the 1989-93 PSID. A longitudinal PSID data file was constructed to estimate how often a person was in poverty during the five-year period. Variables in this data set included: the need standard; total family income; and the demographic factors of age, gender, living arrangement, and marital status. Detailed income sources for family members are also included in this data file. The unit of analysis is the individual. The sample includes 21,541 individuals; 1,021 of the sample individuals were age 65 or older in 1988. Data are weighted by the 1993 individual weight variable.<sup>16</sup> In this data file, the age group is defined based on individual age in 1988. Each age group is an age cohort in this longitudinal data set. In other words, a person age 65 in 1988 would be 70 by 1992. After 1988, for example, individuals who reach age 65 in each year were not included in the older age cohort population.<sup>17</sup>

### **Percentage of Persons in Poverty by Age<sup>18</sup>**

Figure 2 displays percentages of persons age 65 and older and persons under age 65 falling into poverty during the five-year period (1988-1992). Among older persons, 24.3 percent experienced *at least* one year in poverty, and 5.6 percent were in poverty all

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report focuses on the five-year period (1988-1992) rather than on the 12-year period (1981-1992).

<sup>14</sup> The “need standards” in the PSID are generally not the same as “poverty thresholds” in the Census CPS data. The “food needs” are the “low-cost” food budget rather than the more stringent “economy” budget used by the Census, and “need standards” for all years are based on the 1967 prices. See PSID, “Procedures and Data Codes, 1974 Interviewing Year,” Wave VII. A Supplement, 1974. pp. 39-41.

<sup>15</sup> Because the PSID reports more income than the CPS, the annual poverty rate is lower in the PSID survey than in the CPS. See Minarik (1975) for details on poverty measurement in the PSID. As an illustration, Appendix Table I presents the median family income within each 5 percentile family income interval in 1988 in the PSID and in the CPS. The average family income in the PSID is \$79 higher than that in the CPS.

<sup>16</sup> In the PSID, data on income and other pertinent information are collected for the previous year. Therefore, the PSID 1989-1993 surveys contain yearly income information from 1988 to 1992.

<sup>17</sup> The purpose of this part of the research is to estimate the percentage of different age groups falling into poverty *during the five-year period*, 1988-1992.

<sup>18</sup> Figure 2 and Tables 1 to 7 present the percentage of people falling into poverty in at least one year, at least two years, at least three years, at least four years, and all five years in poverty during the five-year period. The years are not necessarily continuous (see footnote 12).

five years. For younger persons (under age 65), 20.1 percent were poor at least one year, and 3.6 percent spent all five years in poverty. Older persons were in poverty more frequently than were younger persons during the five-year period.<sup>19</sup>

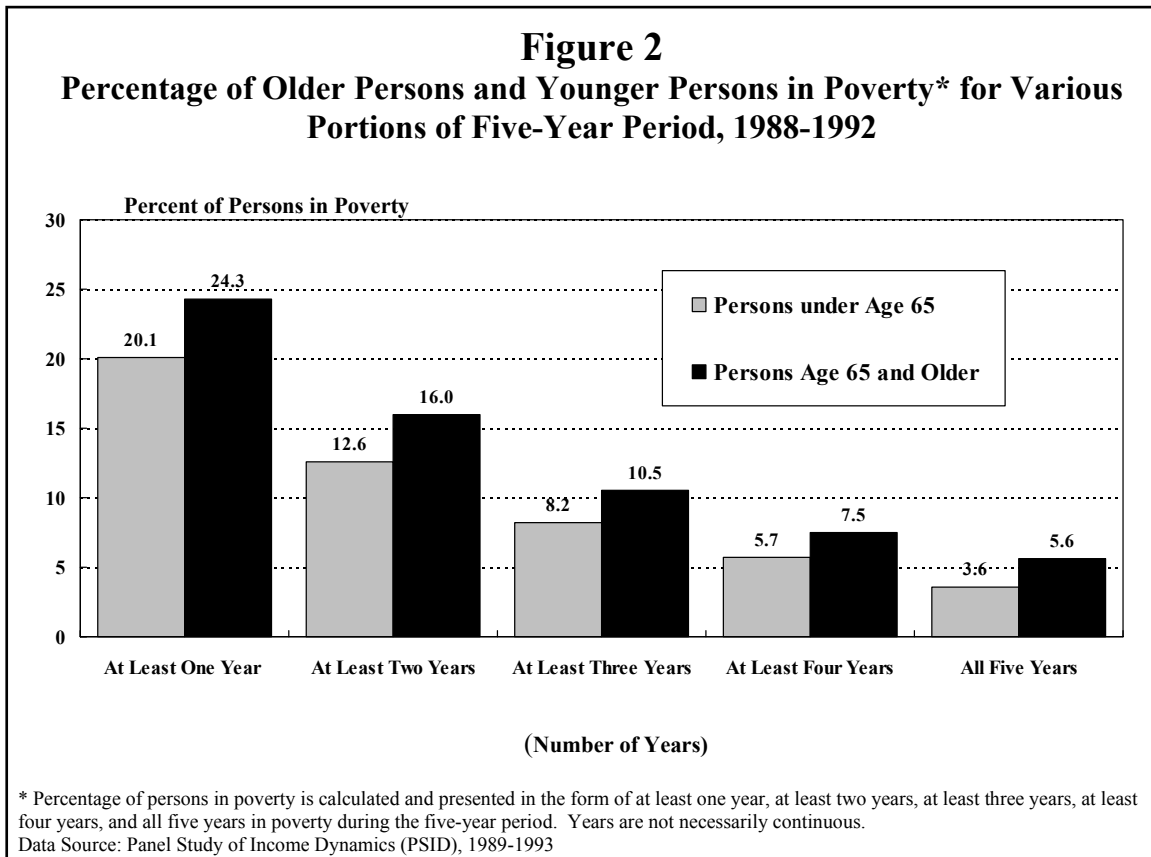


Table 1 reports the percentage of persons in poverty by age group during the 1988-1992 period. Older persons, as an age group, were more likely to be poor than all other age groups except those under age 18. The percentage who are poor declines fairly steadily as age increases through age 60-64, but increases sharply at age 65 and above. For example, during the five-year period, 12.7 percent of persons age 60-64 spent at least one year in poverty, and 2.7 percent of persons age 60-64 spent all five years in poverty. Compared with persons age 60-64, persons age 65 and older were about twice as likely to fall into poverty for any given period, presumably due to an abrupt decline in income after retirement.

Furthermore, among the older population, the oldest old (defined as persons age 85 and older) were the most frequently poor for a relatively long period. About 20 percent of the youngest old (defined as persons age 65-74), but almost 42 percent of the

<sup>19</sup> During the same period (1988-1992), in each year, the annual official poverty rate based on March CPS for older persons was lower than that for persons under age 65 (see Figure 1). Poverty rates based on the PSID annual cross-sectional data, 1981 to 1992, also indicate that poverty rates for persons age 65 and older were generally lower than for persons under age 65 (see Appendix Table II).

oldest old, were in poverty for at least one year. Among the youngest old, 3.6 percent were in poverty for all five years, compared with 17.4 percent of the oldest old. These figures suggest that not only did poverty increase with age in retirement, but its duration increased as well (see Table 1).

Age Group	Sample Size	At Least One Year in Poverty	At Least Two Years in Poverty	At Least Three Years in Poverty	At Least Four Years in Poverty	All Five Years in Poverty
	N	%	%	%	%	%
<b>All</b>	21,541	20.2	12.7	8.6	5.9	3.8
<b>Under 65</b>	20,520	20.1	12.6	8.5	5.7	3.6
Under 18 years	11,042	27.1	18.1	12.7	9.2	6.0
18-24 years	1,468	24.2	15.4	10.3	5.8	3.6
25-34 years	3,430	18.9	12.0	8.2	5.7	3.7
35-44 years	2,352	13.5	7.6	4.7	3.0	1.6
45-54 years	1,122	14.5	7.4	4.4	2.6	2.1
55-59 years	581	13.6	7.0	4.3	2.6	1.2
60-64 years	525	12.7	7.4	5.4	3.7	2.7
<b>65 years and older</b>	1,021	24.3	16.0	10.5	7.5	5.6
65-74 years	694	20.2	12.7	7.2	4.8	3.6
75-84 years	286	31.6	22.3	16.3	12.8	8.9
85 years and older	41	41.8	26.1	26.1	17.4	17.4

\* Years in poverty are not necessarily continuous.  
 Data Source: Panel Study of Income Dynamics (PSID) 1989-1993 machine-readable data  
 Sample Size: 21,541, weighted by 1993 longitudinal individual weight variable

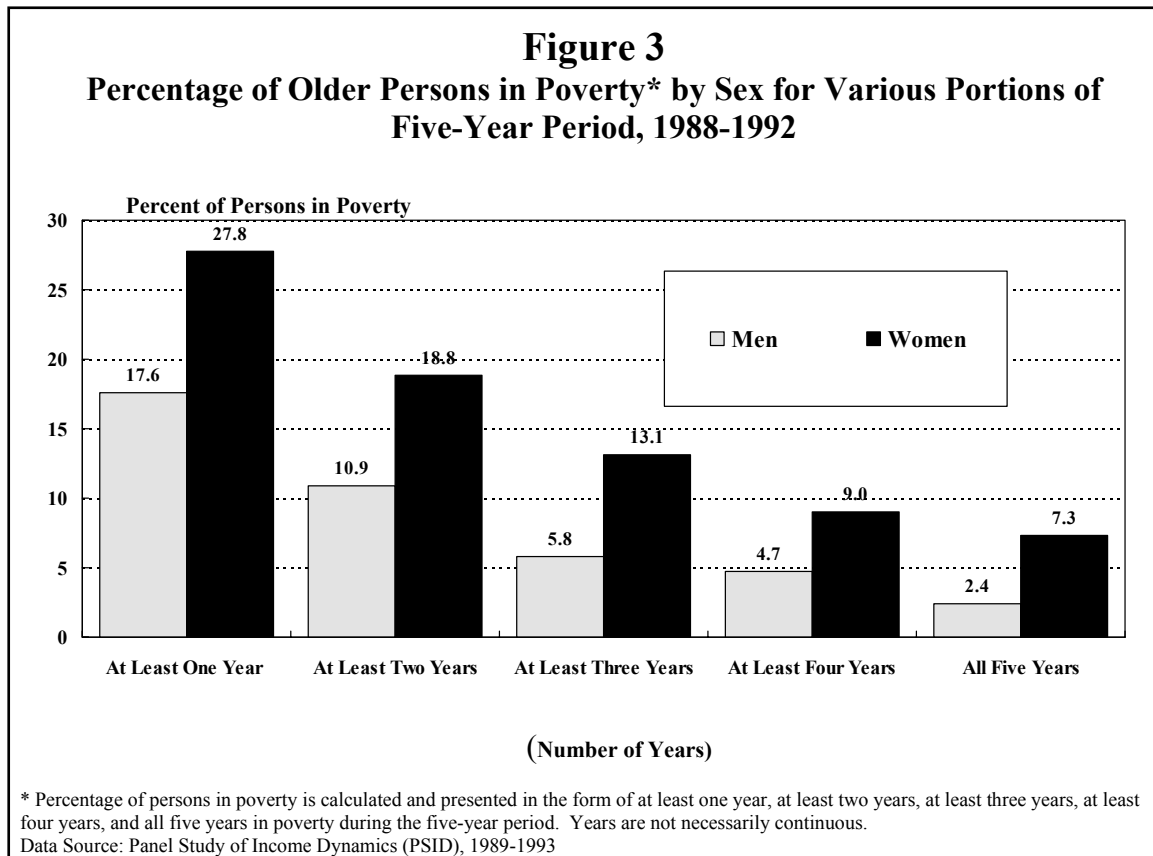
Table 1 also shows that, during the five-year period, the percentage of people in poverty decreased for all age groups as the number of years in poverty increased. However, as the number of years in poverty increased, the relative differences in percentages between older persons and younger persons (under age 65) also increased. The percentage of older persons in poverty for at least one year was 20 percent higher than that for younger persons (24.3/20.1), but the percent in poverty for five years was nearly 56 percent higher for older persons than for younger persons (5.6/3.6). This means older persons were more likely to be poor for a longer period (see Table 1).

### **Percentage of Older Persons in Poverty among Demographic Groups**

The chances that older persons would fall into poverty during the five-year period (1988-1992) varied substantially among demographic groups.

Older women were more likely to be poor than older men. According to the Census Bureau, the 1999 poverty rate for older men was about 6.9 percent, compared with 11.8 percent for older women (U.S. Bureau of the Census, 2000). Older women were also at a higher risk of falling into poverty for a relatively long-term period. Figure 3 shows that 27.8 percent of older women, compared with 17.6 percent of older men,

experienced at least one year in poverty in the 1988-1992 period. About 7 percent of older women, but only 2.4 percent of older men, lived all five years in poverty (see Figure 3).



Women age 85 and older were even more vulnerable than older women generally. Over 17 percent of women age 85 and over were in poverty for all five years (1988-1992)<sup>20</sup>.

Older female householders were twice as frequently in poverty as older male householders during the five-year period. Nearly 36 percent of older female householders, compared with 17.7 percent of older male householders, spent at least one year in poverty. Among older female householders, 20.9 percent spent at least three years, and 11.5 percent spent all five years in poverty. In contrast, among older male householders, only 5.8 percent spent at least three years, and 2.4 percent spent all five years in poverty in the five-year period (see Table 2).

The relatively high poverty rate for elderly women living alone has been recently explored by Waehrer and Crystal (1995). They noted the importance of shared living arrangements that provided an important source of economic support for aged widows.

<sup>20</sup> For men age 85 and older, the highest percentage of poverty rates was found for one year, and zero poverty rates was found for four and five years. These figures may not be valid due to the small sample size in the data file for this group. The same situation was found in the case of older never-married men and women.

Table 2 Percentage of Older Persons Falling into Poverty* by Demographic Factors during the Five-Year Period 1988-1992						
Demographic Characteristics	Sample Size	At Least One Year in Poverty	At Least Two Years in Poverty	At Least Three Years in Poverty	At Least Four Years in Poverty	All Five Years in Poverty
	N	%	%	%	%	%
<b>Sex</b>						
<b>65 years and older</b>	1,021	24.3	16.0	10.5	7.5	5.6
Men	391	17.6	10.9	5.8	4.7	2.4
Women	630	27.8	18.8	13.1	9.0	7.3
<b>65-74 years</b>	694	20.2	12.7	7.2	4.8	3.6
Men	285	12.9	7.8	2.5	2.4	2.1
Women	490	24.5	15.8	10.1	6.3	4.6
<b>75-84 years</b>	286	31.6	22.3	16.3	12.8	8.9
Men	95	29.1	19.1	14.3	11.6	3.5
Women	191	32.6	23.7	17.2	13.3	11.2
<b>85 years and older</b>	41	41.8	26.1	26.1	17.4	17.4
Men	11	43.6	21.8	21.8	0.0	0.0
Women	30	41.5	27.0	27.0	17.4	17.4
<b>Householder</b>						
Householder age 65 years and older	706	27.0	18.7	13.5	9.6	7.1
Male householder	636	17.7	11.1	5.8	4.7	2.4
Female householder	343	35.8	26.1	20.9	14.2	11.5
<b>Living Arrangement</b>						
Older persons living with others	651	16.6	9.0	4.3	2.8	1.4
Men living with others	351	13.9	7.5	3.1	2.7	1.3
Women living with others	336	19.0	10.2	5.3	2.9	1.6
Older persons living alone	370	36.3	27.1	20.4	14.8	12.0
Men living alone	76	33.4	25.5	17.5	13.3	7.2
Women living alone	294	36.9	27.5	21.0	15.1	13.0
<b>Marital Status</b>						
<b>Married</b>	444	13.0	6.1	2.2	2.2	1.3
Men	266	11.3	5.1	1.6	1.6	1.0
Women	178	15.1	7.2	3.0	3.0	1.7
<b>Never Married</b>	34	54.2	40.7	23.9	16.1	11.9
Men	9	29.4	29.4	29.4	28.9	13.2
Women	25	63.1	44.7	21.9	11.5	11.5
<b>Widowhood</b>	397	33.5	24.9	18.4	12.2	8.9
Widower	75	42.1	31.4	21.3	15.1	6.9
Widow	322	32.0	23.7	17.9	11.7	9.3
<b>Divorced or Separated</b>	616	41.5	25.9	15.8	13.3	9.4
Men	172	25.5	15.5	4.3	3.7	1.8
Women	444	48.5	30.4	20.8	17.5	12.6

\* Years are not necessarily continuous.  
Data Source: Panel Study of Income Dynamics (PSID) 1989-1993 machine-readable data  
Sample Size: 1,021, weighted by 1993 longitudinal individual weight variable

Results from Table 2 show that older persons living alone were more likely than older persons living with others to fall below the poverty line. Among older women living alone, nearly 37 percent spent at least one year in poverty during the five-year period, and 13 percent spent all five years in poverty. In contrast, among older women living with others, 19 percent experienced at least one year in poverty, but only 1.6 percent lived all five years in poverty (see Table 2).

Many studies have found that older persons' incomes varied by their marital status. Among older persons, married couples are considerably less likely to be poor than unmarried individuals. Unmarried older women experience higher poverty rates than do unmarried older men (Choudhury and Leonesio, 1997). Other studies have also found that older women experience adverse economic consequences due to divorce (Crown et al., 1993) and widowhood (Bound et al., 1991; Holden, 1988; Zick and Smith, 1986, 1991). The present research found a similar pattern.<sup>21</sup> As Table 2 shows, among older married couples, 13 percent spent at least one year, and 1.3 percent spent all five years in poverty during the five-year period. In contrast, among never-married older persons, 54.2 percent spent at least one year, and 11.9 percent spent all five years in poverty. Among older widows, 32 percent lived at least one year in poverty, and 9.3 percent of older widows spent all five years in poverty. Table 2 shows that nearly half of divorced (or separated) older women spent at least one year in poverty, and 12.6 percent of these older women spent all five years in poverty. Combining the different demographic factors, women age 85 and over never married, widowed, or divorced and living alone were the most likely to be poor for a relatively long period.

### **The “Near Poor” and Low Income**

In the CPS, the threshold used to establish poverty status for older persons is about 10 percent lower than that for other age groups,<sup>22</sup> but a disproportionately large concentration of older persons is situated just above poverty line. Many of these older persons would be considered poor if the same poverty threshold were applied to them as to other age groups. The Census Bureau's annual report indicates that, although only 9.7 percent of older persons were poor in 1999, 15.8 percent were below 1.25 times the poverty line, and 35.9 percent were below twice the poverty line (U.S. Bureau of the Census, 2000). These percentages were higher than for all age groups except those under age 25. Indeed, these percentages would be higher still if the same poverty threshold were applied to both elderly and non-elderly persons. Because of their concentration just above the poverty line, it is worth exploring whether older persons are also more concentrated than other age groups below 1.25 times and twice the poverty threshold for a relatively longer-term period.

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<sup>21</sup> In this study we assume that there is no change in the older persons' marital status during the five-year period.

<sup>22</sup> For example, the poverty threshold in 1999 was \$7,990 for single persons age 65 and older and \$8,667 for single persons under age 65.

Table 3 Percentage of Persons below 1.25 Times the Family Income/Need Ratio* by Age Group during the Five-Year Period, 1988-1992						
Age Group	Sample Size	At Least One Year below 1.25 Income/Need Ratio	At Least Two Years below 1.25 Income/Need Ratio	At Least Three Years below 1.25 Income/Need Ratio	At Least Four Years below 1.25 Income/Need Ratio	All Five Years below 1.25 Income/Need Ratio
	N	%	%	%	%	%
<b>All</b>	21,541	26.0	16.9	12.5	9.0	5.9
<b>Under 65</b>	20,520	25.3	16.3	12.0	8.6	5.5
Under 18 years	11,042	33.0	22.7	17.2	13.3	8.5
18-24 years	1,468	32.5	20.7	15.0	8.9	5.3
25-34 years	3,430	23.8	15.2	1.6	8.2	5.2
35-44 years	2,352	17.6	10.7	6.9	4.9	3.4
45-54 years	1,122	17.7	10.1	6.7	4.4	3.4
55-59 years	581	16.6	9.0	6.4	4.4	2.7
60-64 years	525	19.9	11.1	8.2	5.6	4.4
<b>65 years and older</b>	1,021	36.6	26.1	20.1	14.8	10.2
65-74 years	694	30.4	20.4	13.9	10.4	7.1
75-84 years	286	48.9	37.7	33.0	21.8	16.4
85 years and older	41	53.4	37.3	31.7	22.9	19.9

\* Years are not necessarily continuous.  
Data Source: Panel Study of Income Dynamics (PSID) 1989-1993 machine-readable data  
Sample Size: 21,541 weighted by 1993 longitudinal individual weight variable

Table 3 shows that older persons were more likely than any other age group to be below 1.25 times the income/need ratio for a longer period. During the five-year period (1988-1992), 36.6 percent of older persons were below 1.25 times the income/need ratio for at least one year, and 10.2 percent were below 1.25 times the income/need ratio all five years, higher than for any other age group.

Older women, especially those living alone, the never-married, widowed, or divorced, were more frequently below 1.25 times the poverty threshold than similarly situated older men. Table 4 shows that over half (56.2 percent) of older women living alone were, at least in one year, below 1.25 times the income/need ratio, and over 18 percent were below 1.25 times the income/need ratio for all five years. Nearly 64 percent of the divorced older women spent at least one year below 1.25 times the income/need ratio, and 17.6 percent of divorced older women were below 1.25 times the poverty line for all five years (see Table 4).

Table 4 Percentage of Older Persons below 1.25 Times the Family Income/Need Ratio by Demographic Factors during the Five-Year Period, 1988-1992						
Demographic Characteristics	Sample Size	At Least One Year below 1.25 Income/Need Ratio	At Least Two Years below 1.25 Income/Need Ratio*	At Least Three Years below 1.25 Income/Need Ratio	At Least Four Years below 1.25 Income/Need Ratio	All Five Years below 1.25 Income/Need Ratio
	N	%	%	%	%	%
<b>Sex</b>						
<b>65 years and older</b>	1,021	36.6	26.1	20.1	13.8	10.2
Men	391	26.4	16.6	11.7	8.9	6.7
Women	630	42.1	31.1	24.6	17.0	12.1
<b>65-74 years</b>	694	30.4	20.4	13.9	10.4	7.1
Men	285	21.0	12.5	7.0	4.5	3.0
Women	490	36.1	25.2	18.0	13.9	9.5
<b>75-84 years</b>	286	48.9	37.7	33.0	21.8	16.4
Men	95	38.6	26.9	23.5	19.4	16.4
Women	191	53.4	42.4	37.2	22.8	16.4
<b>85 years and older</b>	41	53.4	37.3	31.7	22.9	19.9
Men	11	75.9	38.3	38.3	38.3	19.5
Women	30	49.1	37.1	30.4	20.0	20.0
<b>Householder</b>						
Householder age 65 years and older	706	40.6	29.8	23.2	16.6	11.9
Male householder	636	26.6	16.8	11.8	9.0	6.8
Female householder	343	54.0	42.2	34.0	23.8	16.8
<b>Living Arrangement</b>						
Older persons living with others	651	25.2	15.5	10.4	7.3	5.0
Men living with others	351	21.6	13.1	8.9	6.0	3.9
Women living with others	336	28.2	17.5	11.7	8.4	6.0
Older persons living alone	370	54.7	42.8	35.4	25.0	18.5
Men living alone	76	47.0	32.0	23.6	21.2	18.8
Women living alone	294	56.2	44.9	37.7	25.8	18.4
<b>Marital Status</b>						
<b>Married</b>	444	22.2	12.5	8.0	5.1	3.3
Men	266	19.3	10.4	6.5	4.2	2.5
Women	178	25.6	15.1	9.8	6.2	4.2
<b>Never Married</b>	34	64.2	55.3	37.9	23.5	18.7
Men	9	49.7	49.7	29.4	29.4	29.4
Women	25	69.3	57.3	40.9	21.4	14.8
<b>Widowhood</b>	397	48.0	36.8	31.1	22.6	16.7
Widower	75	52.1	37.9	33.4	27.8	22.4
Widow	322	47.3	36.6	30.7	21.7	15.7
<b>Divorced or Separated</b>	616	54.3	38.4	25.8	19.3	13.0
Men	172	33.2	20.9	10.7	6.6	2.5
Women	444	63.4	46.1	32.3	24.8	17.6

\* Years are not necessarily continuous.

Data Source: Panel Study of Income Dynamics (PSID) 1989-1993 machine-readable data  
Sample Size: 1,021, weighted by 1993 longitudinal individual weight variable

Older persons were also more likely than other age groups to be below twice the income/need ratio, as Table 5 indicates. About 61 percent of older persons were below twice the income/need ratio for at least one year, and nearly 30 percent of older persons were below twice the income/need ratio for all five years, the highest figures for any age group.

	Sample Size	At Least One Year below 2.0 Income/Need Ratio	At Least Two Years below 2.0 Income/Need Ratio <sup>1</sup>	At Least Three Years below 2.0 Income/Need Ratio	At Least Four Years below 2.0 Income/Need Ratio	All Five Years below 2.0 Income/Need Ratio
	N	%	%	%	%	%
<b>All</b>	21,541	43.7	34.2	27.4	20.8	15.4
<b>Under 65</b>	20,520	42.3	32.8	26.1	19.4	14.2
Under 18 years	11,042	51.3	42.0	35.4	27.4	20.6
18-24 years	1,468	53.6	40.6	29.2	21.1	15.1
25-34 years	3,430	41.1	31.8	24.6	18.2	12.9
35-44 years	2,352	32.2	23.8	18.7	13.1	9.7
45-54 years	1,122	30.0	22.4	16.8	12.2	8.5
55-59 years	581	30.0	19.9	15.4	9.9	7.6
60-64 years	525	39.1	30.1	24.0	17.5	12.3
<b>65 years and older</b>	1,021	61.2	50.8	43.5	37.0	29.2
65-74 years	694	54.8	44.7	36.1	29.3	23.1
75-84 years	286	74.0	62.9	58.3	50.0	41.3
85 years and older	41	76.3	65.5	62.9	52.8	45.7

\* Years are not necessarily continuous.  
Data Source: Panel Study of Income Dynamics (PSID) 1989-1993 machine-readable data  
Sample Size: 21,541 weighted by 1993 longitudinal individual weight variable

Again, older women, especially those living alone, the never-married, widowed, and divorced, were more likely than older men in these categories to be below twice the income/need ratio. As Table 6 shows, nearly two-thirds of all older women were below twice the income/need ratio for at least one year, and more than one-third of all older women fell below twice the income/need ratio for all five years. Eight out of 10 older women living alone fell below twice the income/need ratio at least one year, and nearly four of 10 older widows were below twice the income/need ratio for all five years.<sup>23</sup>

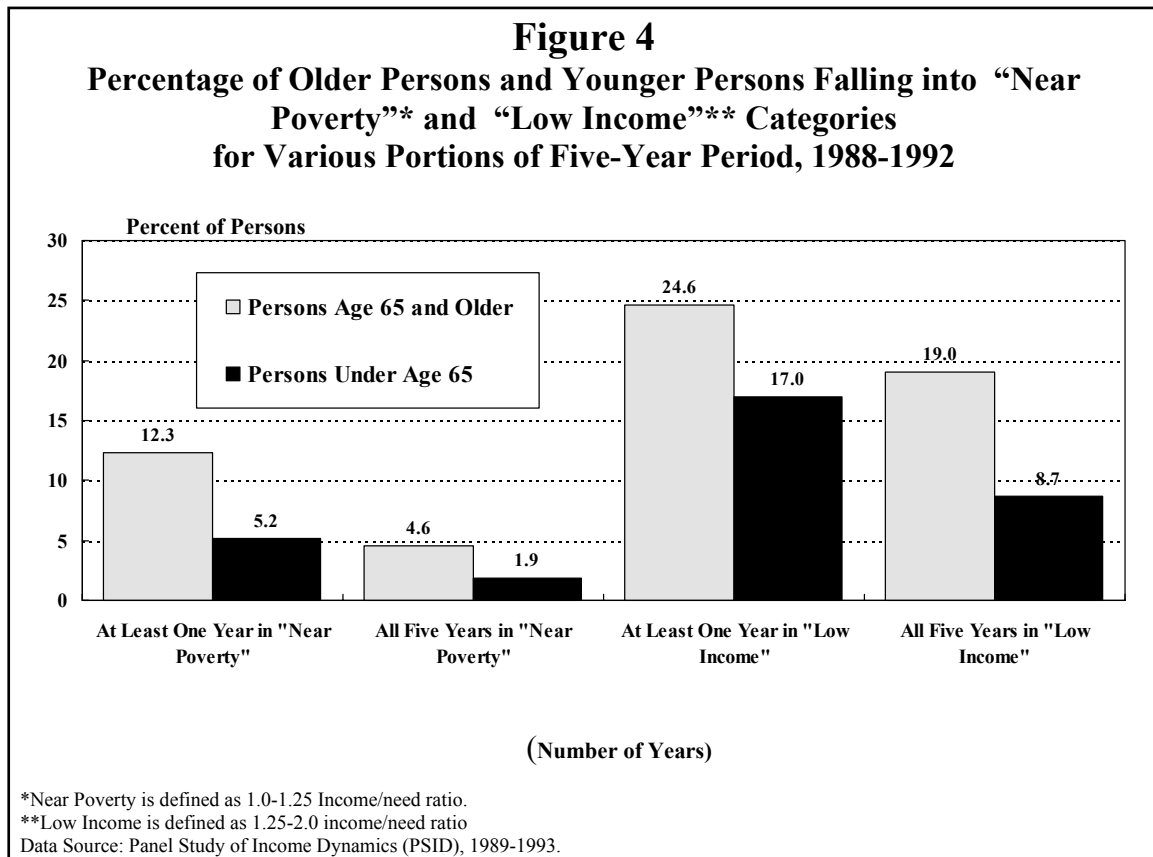
<sup>23</sup> The high percentages of men age 85 and older below 1.25 times income/need ratio and twice the income/need ratio were found in Tables 4 and 6. These figures may not be valid due to the small sample size in the data file for this group. The same situation was found in the case of older never-married men and women.

Table 6 Percentage of Older Persons Below 2.0 Times the Family Income/Need Ratio by Demographic Factors during the Five-year Period, 1988-1992						
Demographic Characteristics	Sample Size	At Least One Year below 2.0 Income/Need Ratio	At Least Two Years below 2.0 Income/Need Ratio*	At Least Three Years below 2.0 Income/Need Ratio	At Least Four Years below 2.0 Income/Need Ratio	All Five Years below 2.0 Income/Need Ratio
	N	%	%	%	%	%
<b>Sex</b>						
<b>65 years and older</b>	1,021	61.2	50.8	43.5	35.8	29.2
Men	391	53.4	42.9	33.8	27.6	20.1
Women	630	65.4	55.0	48.7	41.2	34.1
<b>65-74 years</b>	694	54.8	44.7	36.1	29.3	23.1
Men	285	48.5	38.5	29.8	24.1	15.5
Women	490	58.7	48.4	39.9	34.4	27.7
<b>75-84 years</b>	286	74.0	62.9	58.3	50.0	41.3
Men	95	65.1	53.0	43.4	35.8	31.1
Women	191	77.9	67.3	64.3	56.3	45.7
<b>85 years and older</b>	41	76.3	65.5	62.9	52.8	45.7
Men	11	91.7	79.7	63.9	54.1	54.1
Women	30	73.3	62.8	62.8	52.5	44.1
<b>Householder</b>						
Householder age 65 years and older	706	65.0	54.3	47.8	41.7	32.4
Male householder	636	53.0	42.4	33.2	27.8	20.3
Female householder	343	76.5	65.7	61.7	54.9	44.0
<b>Living Arrangement</b>						
Older persons living with others	651	49.5	39.9	31.8	26.4	19.7
Men living with others	351	46.7	36.6	29.1	24.1	16.5
Women living with others	336	51.9	42.8	34.2	28.4	22.2
Older persons living alone	370	79.5	67.8	61.9	53.8	44.2
Men living alone	76	82.2	70.0	54.0	42.6	35.7
Women living alone	294	79.0	67.3	63.5	56.0	45.9
<b>Marital Status</b>						
<b>Married</b>	444	47.6	36.4	28.1	22.9	16.6
Men	266	44.9	34.1	26.6	21.8	14.4
Women	178	50.7	39.2	29.9	24.2	19.7
<b>Never Married</b>	34	78.0	77.9	53.2	43.9	39.3
Men	9	82.2	82.2	49.7	49.7	49.7
Women	25	76.5	76.3	54.4	41.8	35.6
<b>Widowhood</b>	397	73.1	61.5	56.5	49.2	39.4
Widower	75	79.4	67.9	56.3	46.1	38.2
Widow	322	72.0	60.3	56.5	49.7	39.8
<b>Divorced or Separated</b>	616	69.9	60.0	51.7	42.3	32.2
Men	172	53.6	42.9	33.2	26.7	21.0
Women	444	77.0	67.4	59.7	49.0	37.0

\*Years are not necessarily continuous.

Data Source: Panel Study of Income Dynamics (PSID) 1989-1993 machine-readable data  
Sample Size: 1,021, weighted by 1993 longitudinal individual weight variable

Older persons, especially older women, were disproportionately represented in the “near-poverty” range (defined as between 1.0 and 1.25 times the income/need ratio) and in the “low-income” range (defined as between 1.25 and 2.0 times the income/need ratio) over the long term. As Figure 4 indicates, about 12.3 percent of older persons were in the “near poverty” range for at least one year. This rate was 2.4 times higher than that for persons under age 65 (5.2 percent). Nineteen percent of older persons were in the “low-income” range for all five years, more than twice the percentage for the “under 65” age group (see Figure 4).



## Poverty Exit Probabilities and Completed Poverty Spells

### Methodology and Data

This section applies the survivor analysis method used by Bane and Ellwood (1986) and Coe (1988) to estimate exit probabilities and the distribution of completed poverty spells during the 12-year period (1981-1992) to determine whether older persons are more or less likely to escape poverty than younger persons once they fall into it.

A poverty spell exit probability is the probability (0 to 1.0) that a person will escape from poverty after having a poverty spell. The procedure used to calculate this probability consists of two steps. The first step is to identify a length of “poverty spell,” i.e., a defined continuous period (one or more consecutive years) during which a

person's family income/need ratio was below 1.0, by identifying the beginning year and ending year in poverty for all those who have had a "poverty spell." In our PSID data set, poverty spells could have begun in any year from 1981 to 1992 inclusive.<sup>24</sup> The next step is to calculate the exit probabilities for poverty spells of different lengths.<sup>25</sup> Since individuals might experience two or more distinct poverty spells during the 12-year period, each spell would be included in the calculation of exit probabilities. By these procedures, we generated a table of exit probabilities for poverty spells of different lengths (see Table 7).

Based on the reported table of poverty exit probabilities (see Table 7), distributions of completed poverty spells for those who were ever poor and for those poor at a point in time (see Table 8) can be produced. These two distributions provide insights into the persistence of poverty in the older population.

A completed poverty spell in a given length of years  $t$  for those who were ever poor can be calculated as the product of the exit probability in year  $t$  times the proportion of persons who remain poor in year  $t-1$ , and "the proportion of persons who remain poor" is equal to 1 minus the proportion of persons who completed a poverty spell from year 1 to year  $t-1$ .<sup>26</sup>

A completed poverty spell in a given length of years  $t$  for those who will be poor at exactly year  $t$  can be calculated as the length of years  $t$  times the proportion of persons who *ever* have poverty spells that last exactly year  $t$ . The result is divided by the sum of each length of year  $j$  times the percentage of completed poverty spells in the year  $j$  ( $j$  is from year 1 to year 15 in this program).<sup>27</sup>

<sup>24</sup> This study examines poverty exit probabilities during the 12-year period (1981-1992). To calculate the "length of poverty spell," we check the individual poverty status beginning in 1981 and assume individuals were not in poverty in the previous year (1980).

<sup>25</sup> A poverty exit probability in a given length of year  $t$  can be calculated as those who are out of poverty in year  $t+1$  divided by those who were in poverty in year  $t$  ( $t > 0$ ).

<sup>26</sup> The distribution of completed poverty spells for those who were *ever poor* by length of years in poverty is given by the following equations, taken from Bane and Ellwood (1986):

$$D(t) = P(t) \left[ 1 - \sum_{j=1}^{t-1} D(j) \right] \text{ for } T > t > 1;$$

Where  $D(t)$  is the proportion of persons who have poverty spells that last exactly  $t$  years,  $P(t)$  is the poverty exit probability, and the terms in brackets represent the proportion of persons who remain poor in year  $t-1$ .

$D(j)$  is the proportion of persons who completed a poverty spell in a given length of year  $j$  and  $\sum D(j)$  is sum of the proportion of persons who completed a poverty spell when  $j$  is from 1 to  $t-1$ .  $T$  is the maximum length of poverty spells.

$$D(T) = 1 - \sum_{j=1}^{T-1} D(j)$$

$D(T)$  is the percentage of the poor who remain poor for the maximum spell length where  $T$  is the maximum length of spells.  $\sum D(j)$  is the sum of the proportion of persons who completed a poverty spell when  $j$  is from 1 to  $T-1$ .

<sup>27</sup> The distribution of the length of poverty spells for those who will be *poor at a point in time* (a calendar

A PSID longitudinal 12-year data file (from 1982 to 1993) was constructed for this part of the study. This longitudinal data file contains variables, including an individual's family income, a "need standard," age, and gender for each year from 1981 to 1992 (the sample consisted of 11,412 individuals, weighted by the PSID 1993 individual weight variable). It should be noted, first, that older persons were defined as individuals age 65 and over in 1981. After 1981, those individuals who reached 65 in each year were included in the older population.<sup>28</sup> By 1992, the sample size for the older population was 1,340. The data for examining individuals' poverty spells start in 1981. For the older population, the starting point for examining their poverty spells is the year in which they turned 65. In other words, this study focuses only on their poverty experience in their elderly years. Thus, older persons' poverty status was not explored before they reached age 65. A person who *began* his or her elderly years in poverty (i.e., was poor at 65 and over) would not be *beginning* a poverty spell if that person had been poor at age 64. Thus, results regarding length of poverty spells for older persons should be interpreted as the length of poverty spells that began in their elderly years rather than as total amounts of time they may have spent in poverty over their lifetimes.

It should be noted as well that in the PSID, an individual is removed from the sample once he or she dies. As a consequence, no exit from poverty can be observed for individuals who might be in poverty but died during the 12-year period. Since people are more likely to die at older ages, there is a sample bias for older persons. Therefore, the exit probabilities tend to be biased downward for older persons, and the length of poverty spells for older persons tends to be overstated. As Coe (1988) has pointed out, results are interpreted more correctly as the distribution of poverty spells if the older persons had lived long enough to complete their spells.<sup>29</sup>

### Exit Probabilities by Length of Poverty Spell

Not only are older persons more likely than younger persons to fall into poverty for a long period, they are also less likely than young persons to escape from poverty once they have fallen into it. Table 8 compares exit probabilities by length of poverty

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year) is given by the following formula taken from Bane and Ellwood (1986):

$$F(t) = \frac{t \cdot D(t)}{\sum_{j=1}^T j \cdot D(j)} \quad \text{for } T > t > 1;$$

$F(t)$  is the proportion of persons *at a given time* who will be poor for exactly  $t$  years, and  $D(t)$  the proportion of persons who *ever* have poverty spells that last exactly  $t$  years. The denominator is the sum of each length of years  $j$  multiplied by the percentage of completed poverty spells in the year  $j$  (in this program,  $j$  is from year 1 to year 15).

<sup>28</sup> For those persons who reached age 65 after 1981, we check their poverty status beginning when they turn 65 for calculation of "length of poverty spell." For example, for those persons who reached age 65 at 1984, we check their poverty status starting at 1984 for calculation of their "length of poverty spell." Thus, the period for which we examine those older persons' poverty exit probability is only nine years (1984-1992), rather than for 12 years (1981-1992).

<sup>29</sup> This problem can be viewed as one of sample selection bias. Because the PSID removes from its sample individuals who have died, there is no random selection for individuals who reached age 65 at any time period examined. Instead, there is a random sample of surviving individuals (Coe, 1988).

spell for persons age 65 and older and persons under age 65.<sup>30</sup> For an older person who spent one year in poverty, the probability of exiting from poverty was 35.2 percent, compared to 40.3 percent for persons under 65. After two consecutive years in poverty, the probability of an older person exiting poverty in the third year was about 24 percent; that of a person under 65 was 31.2 percent. The poverty exit probability in the fourth year was 15.2 percent for an older person, compared to 24.5 percent for a person under 65, for someone who spent three consecutive years in poverty (see Table 7). Regardless of length of poverty spell, the results indicate that escaping from poverty was more difficult for older individuals than for younger ones.

Although poverty exit probabilities for older persons were lower than for younger persons, the *pattern* of poverty exit probabilities in the first three years is somewhat similar for both older and younger persons in that the probabilities drop at comparable rates as length of poverty spells increases. Substantial fractions of poverty spells were short for both older and younger persons. As the length of poverty spell increased, the probability of escaping from poverty decreased for both groups. These findings suggest that the longer individuals stay in poverty, the less likely they are to escape poverty. After the first three years in poverty, the exit rate in the fourth year for an older person was substantially lower than that for a younger person (7.3 percent for older persons, compared with 21.3 for younger persons).

Length of Spell Year	65+		Under 65	
	Exit Probabilities	Standard Errors	Exit Probabilities	Standard Errors
1	0.3520	0.00764	0.4032	0.00189
2	0.2399	0.00853	0.3123	0.00231
3	0.1517	0.00829	0.2445	0.00263
4	0.0732	0.00691	0.2129	0.00293
5	0.0486	0.05980	0.1564	0.00298
6	0.0099	0.00296	0.1441	0.00324
7	0.1043	0.00938	0.1569	0.00375
8	0.0510	0.00743	0.1579	0.00420
9	0.0060	0.00268	0.1076	0.00402
More than 9	0.1000*	n/a	0.1000*	n/a
15**	1.0000*	n/a	1.0000*	n/a

\* Exit probabilities were assumed after nine years of poverty spell because the sample size is small.  
 \*\* Assuming maximum length of time in poverty to be 15 years.  
 Data Source: Panel Study of Income Dynamics (PSID) 1982-1993 machine-readable data  
 Sample Size: 11,412, weighted by 1993 longitudinal individual weight variable

For an older person who spent four or more consecutive years in poverty, the average of exit probabilities for years four through eight was less than 5.8 percent. In contrast, for a person under age 65 who spent the same number of years in poverty, the average of exit probabilities for years four through eight was about 17 percent (see Table

<sup>30</sup> Regarding poverty status, the poverty experience of older persons refers only to the individuals' poverty experience in their older years (age 65 and above).

7).<sup>31</sup> In other words, the majority of the older persons who spent more than three consecutive years in poverty will stay in poverty for a long time, and some of them may never escape. This is what Coe (1988) called the “dichotomization of poverty experience of older persons,” a major distinguishing characteristic of the poverty experience for individuals in their older years, compared with the experience of individuals in their younger years. This dichotomization of poverty experience for older persons is shown further by comparing the distributions of completed poverty spells by older and younger persons.

### Distributions of Completed Poverty Spells for Older and Younger Persons

Percent distributions of completed poverty spells for those *ever poor* are reported by age group in columns 2 and 3 of Table 8. Over one-third (35.2 percent) of older persons who were ever poor completed their poverty spell in one year, and about 58 percent of older persons who were ever poor remained in poverty three years or less. This means that for older persons, the majority of the poverty spells were, in fact, relatively short. On the other hand, nearly 31 percent of completed poverty spells of older persons who were ever poor can be expected to last 10 or more years.

By comparison, more than 40 percent of the younger persons who were ever poor in poverty completed their poverty spells in one year. Nearly 69 percent of younger persons’ completed poverty spells lasted three years or less. Only 11.2 percent of poverty

Length of Spell	The Ever Poor		The Poor at a Point in Time*	
	65+	Under 65	65+	Under 65
Year				
1	35.2	40.3	5.7	10.4
2	15.5	18.6	5.0	9.6
3	7.5	10.0	3.6	7.7
4	3.1	6.6	2.0	6.8
5	1.9	3.8	1.5	4.9
6	0.4	3.0	0.4	4.6
7	3.8	2.8	4.3	5.0
8	1.7	2.3	2.2	4.8
9	0.2	1.3	0.3	3.1
10 and more**	30.9	11.2	75.0	43.1
Total	100.0	100.0	100.0	100.0
Average	5.9	4.2	10.7	8.5

\* Distribution derived assuming no growth steady state.  
 \*\*Assuming maximum length of time in poverty to be 15 years.  
 Data Source: Panel Study of Income Dynamics (PSID) 1982-1993 machine-readable data  
 Sample Size: 11,412, weighted by 1993 longitudinal individual weight variable

<sup>31</sup> These figures are calculated based on exit probabilities for poverty spells of four to eight years in Table 7.

spells completed by those under age 65 can be expected to last 10 or more years (see Table 8). Thus, older persons who remain poor for more than three years have only one chance in four of getting out of poverty in fewer than 10 years (i.e., 11/42), while younger persons who stay in poverty for more than three years have a two in three chance (i.e., 20/31) of exiting poverty within 10 years (see Table 8).<sup>32</sup>

The longer-term poor tend to accumulate on the poverty rolls because they are unable to escape from poverty. Thus, at any point in time, the longer-term poor will comprise a disproportionately large fraction of the current poverty population. Over time, people having long-term poverty spells make up an increasingly larger proportion of the poverty population (Bane and Ellwood, 1986). Columns 4 and 5 in Table 8 report the distribution of completed poverty spells for persons who are poor at a point in time, assuming that the number and distribution of new spells remain constant over time. The results show that among older persons who are identified as poor in a current poverty population in a given year, 75 percent are in the midst of a poverty spell that can be expected to last 10 or more years. In contrast, among younger persons who are identified as poor in a given year, only 43 percent are in the midst of a poverty spell that will last 10 years or more. Less than 6 percent of the older poor in a given year will be in the midst of a poverty spell that will last just one year, while 10.4 percent of the younger poor in a given year will be in the midst of a poverty spell that will last only one year.

### **The Difference between Poverty Experiences of Older Men and Older Women**

Older women's poverty experiences differ from those of older men. Table 9 shows that the poverty spell exit probability for an older woman was lower than that for an older man, regardless of length of spell experienced. For example, the exit probability was 44.6 percent for an older man but only 32.1 percent for an older woman who had spent one year in poverty. The exit probability for an older man who had spent three consecutive years in poverty was 26.3 percent, compared to 16.2 percent for an older woman who had been poor for the same length of time (see Table 9).

Table 9 also indicates that for both older men and older women, a relatively high exit probability existed for the first three consecutive years in poverty. After three years, however, the exit probability for an older woman was significantly lower than that for an older man. For example, after five consecutive years in poverty, the exit probability for an older man was 16.1 percent, but only 3.3 percent for an older woman. The dichotomization *pattern* of the poverty experience for older persons that had been observed was more clearly pronounced for older women, as can be seen in the

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<sup>32</sup> The distribution of completed poverty spells also shows the characteristic of dichotomization of poverty experience of older persons. After three years, the percentage of completed poverty spells of older persons dropped dramatically, and by six years, the completed poverty spells dropped to 0.4 percent. From four years to nine years, the total percentage of completed poverty spells of older persons was only 11.1 percent, while near 31 percent of completed poverty spells of older persons can be expected to last 10 or more years (see Table 8).

distributions of completed spell lengths for both those who were ever poor and those who were poor at a point in time.

Length of Spell	Men		Women	
	Exit Probabilities	Standard Errors	Exit Probabilities	Standard Errors
1	0.4456	0.01520	0.3205	0.00847
2	0.4148	0.01910	0.2297	0.00947
3	0.2634	0.02280	0.1624	0.00957
4	0.1108	0.01590	0.0236	0.00405
5	0.1607	0.02450	0.0333	0.00505
6	0.2707	0.03850	0.1441	0.00324
7	0.0625	0.01910	0.0011	0.00105
More than 7	0.1000*	n/a	0.1000*	n/a
15**	1.0000*	n/a	1.0000*	n/a

\* Exit probabilities were assumed after seven years of poverty spell because, after seven years, sample size is small.  
 \*\* Assuming maximum length of time in poverty to be 15 years.  
 Data Source: Data Source: Panel Study of Income Dynamics (PSID) 1982-1993 machine-readable data  
 Sample Size: 1,340, weighted by 1993 longitudinal individual weight variable

For the majority of older men and older women, poverty experience in their older years was relatively short. Columns 2 and 3 in Table 10 present distributions of completed poverty spells for older men and older women who were ever poor. Over 75 percent of older men and more than half (56.2 percent) of older women in poverty completed their poverty spell within three years. However, 35.4 percent of older women's poverty spells can be expected to last eight or more years, compared with about

Length of Spell	The Ever Poor		The Poor at a Point in Time*	
	Men	Women	Men	Women
1	44.6	32.1	13.8	5.9
2	23.0	15.6	14.2	5.7
3	8.6	8.5	9.4	4.7
4	2.6	1.0	3.3	0.8
5	3.4	1.4	5.3	1.3
6	4.8	6.0	8.9	6.6
7	0.8	0.0	1.8	0.0
8 and more**	12.2	35.4	43.3	74.9
Total	100.0	100.0	100.0	100.0
Average	4.2	6.3	8.0	10.4

\* Distribution derived assuming a no-growth steady state economy.  
 \*\* Assuming maximum length of time in poverty to be 15 years.  
 Data Source: Panel Study of Income Dynamics (PSID) 1982-1993 machine-readable data  
 Sample Size: 1,340, weighted by 1993 longitudinal individual weight variable

12.2 percent of older men's. This means that about 49 percent of older men who remained poor after three years still spent less than eight years in poverty, while 80 percent of older women who did not escape from poverty after three years spent at least eight years in poverty (up to the assumed maximum length of 15 years).

A similar pattern was found for older women for completed poverty spells in a given year. The results show that nearly three-quarters (74.9 percent) of these women were in the midst of a spell of poverty that could be expected to last eight or more years. Only 43.3 percent of older men were in the midst of a poverty spell that could be expected to last as long (see Table 10). In other words, the results suggest that a large number of older women who are poor can expect to face considerably longer poverty spells than those experienced by older men who are poor.

## **Conclusion**

This research studied older persons' poverty status and its characteristics from a long-term perspective using PSID longitudinal data for a 12-year period (1981-1992). Despite the limited sample size, this research provides an insight into the poverty experience of older persons. It reveals that individuals' poverty experience in their older years is significantly different from that in their younger years.

Older persons were more frequently in poverty than younger persons during the 1988-1992 period. Among the older population, the oldest old women, women living alone, widows, and divorced women were more frequently poor than other older persons during the same period. Moreover, older persons, especially older women, were over-represented in the "near poverty" and the "low income" range.

The poverty spell exit probabilities in the first three consecutive years of poverty for older persons were lower than for persons under age 65, although the *pattern* of poverty exit probability for older persons is similar to that for younger persons. After three consecutive years in poverty, however, a considerable percentage of older persons' completed poverty spells lasted 10 or more years. For older persons, especially older women, poverty spells are either relatively short or extremely long. The majority of the older persons who spent more than four consecutive years in poverty will stay in poverty for a long time, and some of them will remain poor until death. Over time, older persons with long-term poverty spells make up an increasingly larger proportion of the current poverty population in any given year.

This research shows significant differences between findings derived from poverty measurements using a single-year, cross-sectional perspective and a long-term perspective. During the 1988-1992 period examined, the annual poverty rate reported by the Census Bureau for the older population was lower than that for the entire population.<sup>33</sup>

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<sup>33</sup> Poverty rates based on the PSID annual cross-sectional data 1981 to 1992 also indicate that poverty rates for persons age 65 and over are generally lower than those for persons under age 65. See: Appendix Table II.

However, when the same age cohort was traced over the same five-year period, the picture was quite different; older persons, especially older women, were more likely to be poor. This research also examined the 12-year period of PSID longitudinal data, 1981-1992, when the annual poverty rate reported by the Census Bureau for the older population was lower than that for the entire population in each year. The characteristic long-term poverty experience for older persons found in this research is similar to that found in Coe's (1988) study examining the 1970s PSID longitudinal data, when the annual poverty rate for older persons was higher than that of the entire population. In short, even though the poverty status of older persons appears to be better in the cross-sectional survey (the March CPS) in recent years than it did in the 1970s, elderly people still experience high rates of long-term poverty--higher than younger age groups do.

**APPENDIX**

<b>Appendix Table I</b>			
<b>Median Family Income by Percentile According to PSID and CPS in 1988</b>			
<b>Family Income</b>	<b>PSID</b>	<b>March CPS</b>	<b>Difference</b>
<b>Lowest to Highest 5 Percentile Intervals</b>	Median Family Income	Median Family Income	Median Family Income
<b>5 Percentile</b>	\$	\$	\$
1	3,000	2,300	700
2	5,790	5,533	257
3	8,619	8,210	409
4	11,238	11,000	238
5	13,900	13,720	180
6	16,500	16,300	200
7	19,344	19,100	244
8	22,000	22,000	0
9	24,836	24,944	-108
10	27,656	27,614	42
11	30,650	30,640	10
12	34,030	34,000	30
13	37,050	37,200	-150
14	40,660	40,894	-234
15	44,690	45,081	-391
16	49,400	50,020	-620
17	55,442	56,000	-558
18	63,000	63,800	-800
19	76,900	76,664	236
20	108,100	106,200	1,900
Average	34,640	34,561	79

Data Sources: PSID 1989 and CPS March 1989 machine-readable data

<b>Appendix Table II</b>				
<b>Annual Poverty Rate by Age Group, 1981-1992</b>				
<b>Year</b>	<b>CPS</b>		<b>PSID</b>	
	<b>65+</b>	<b>Under 65</b>	<b>65+</b>	<b>Under 65</b>
	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
1981	15.3	14.7	10.1	8.6
1982	14.6	16.0	8.3	9.4
1983	13.8	16.4	8.9	9.6
1984	12.4	15.6	8.1	8.5
1985	12.6	15.1	8.9	9.0
1986	12.4	14.7	8.3	8.6
1987	12.5	13.6	8.4	8.7
1988	12.0	13.2	8.8	9.1
1989	11.4	13.1	9.2	9.5
1990	12.2	13.8	8.4	10.6
1991	12.4	14.6	10.3	9.1
1992	12.9	14.8	9.7	10.1

Data Sources: The March Current Population Survey (CPS) 1982-1993 and Panel Study of Income Dynamics annual cross-sectional data 1982-1993

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