

# Work Experience and Income of the Population Aged 60 and Older, 1971

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*Utilizing data obtained from the March 1972 Current Population Survey, this article—the first report on the 1972 Social Security Survey of the Elderly—describes the work experience and concomitant variations in earnings levels, total money income, and poverty status of units aged 60 and older during calendar year 1971. The analysis focuses upon differences among four major age groups—60–61, 62–64, 65–72, and 73 and older—and between married and nonmarried aged units. The findings demonstrate that work and earnings are critical factors in maintaining income adequacy in old age.*

THE 1972 SOCIAL SECURITY SURVEY of the Status of the Elderly (STATEL), one in a series of surveys of the aged,<sup>1</sup> examines data from the March 1972 Current Population Survey (CPS) of the Bureau of the Census, matched with beneficiary data from the Social Security Administration benefit record system. Its primary objective is to provide the Social Security Administration and its Advisory Council with information on work rates, size and sources of total money income, and beneficiary characteristics of the population aged 60 and older during calendar year 1971. A subsidiary objective is to provide data comparable with those obtained from the 1963 and 1968 Social Security Surveys of the

Aged in order to note similarities and differences in work experience and money income of the older population.

This article describes the work experience and relationship between work patterns, earnings levels, and total income of units aged 60 and older in 1971. The data are drawn exclusively from the March 1972 CPS because the matching of Social Security Administration and CPS data is not yet complete. The specific questions addressed are:

What was the relative frequency of work experience and full-year/full-time employment among married and nonmarried aged units during calendar year 1971, and what was the magnitude of the differences in work rates among four major age groups—60–61, 62–64, 65–72, and 73 and older?

What were the reasons, as perceived by the respondents, for working only part-year or for not working at all?

Were there age and marital status differences in earnings levels and, if so, did they persist when controlled for differences in amount of work?

How do total money income and poverty status relate to work? Can the observed income differences between age and marital groups be explained primarily in terms of differences in the amount of work performed?

The Social Security Administration is interested in work and earnings among the elderly for several reasons. First, there is concern with the effect of benefit levels and the retirement test on work incentives.<sup>2</sup> Second, there is need for information on the effectiveness of the old-age, survivors, disability, and health insurance

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<sup>1</sup> Several surveys of social security beneficiaries were carried out by the Office of Research and Statistics between 1941 and 1957. Nationwide surveys of the entire aged population were conducted in 1963 and 1968. The 1963 survey investigated persons aged 62 and older; the 1968 survey was limited to those aged 65 and older. For detailed accounts of the latter two studies, see Lenore A. Epstein and Janet H. Murray, *The Aged Population of the United States: The 1963 Social Security Survey of the Aged* (Research Report No. 19), Social Security Administration, 1967; Lenore Bixby et al., *The Aged Population of the United States: The 1968 Social Security Survey of the Aged* (Research Report No. 45), Social Security Administration (forthcoming).

<sup>2</sup> For a discussion of this issue, see Joseph A. Pechman, Henry J. Aaron, and Michael K. Taussig, *Social Security: Perspectives for Reform*, Brookings Institution, 1968, pages 119–148, 296–298; Edna G. Wentworth, *Employment After Retirement* (Research Report No. 21), Social Security Administration, 1968; U.S. Congress, *Reports of the 1971 Advisory Council on Social Security* (92d Cong., 1st sess., April 5, 1971), House Doc. No. 92–80, pages 23–25; and U.S. Senate, Special Committee on Aging, *Hearings, Future Directions in Social Security*, Part I (93d Cong., 1st sess., pages 29–38).

(OASDHI) program in meeting the income needs of those who have reduced their work effort—either partly or completely—because of ill health, outmoded skills, mandatory retirement, or the desire for free time. Finally, the Social Security Administration seeks data on past and future trends in work and retirement so that it can more realistically project future demands upon the system and evaluate the effect of possible program changes.

The unit of analysis employed here is the aged unit. An “aged unit” is defined as a married couple living together with one or both members aged 60 or older or a nonmarried individual who is aged 60 or older and is widowed, divorced, never-married, or married but living apart from the spouse. The aged unit is used in place of alternative analytical concepts such as the aged person or the aged family—concepts employed by the Bureau of the Census and the Bureau of Labor Statistics (BLS)—because it more closely corresponds to the retired OASDHI beneficiary unit, typically a nonmarried person or an aged couple without dependent children, and because it is more meaningful in investigating income and poverty among the older population of the Nation.<sup>3</sup>

The analysis focuses on differences in work experience and accompanying variations in earnings and total money income between aged units in three major age groups: 60–61, 62–64, and 65 and older. Data are presented separately for married and nonmarried units. These age categories correspond to the preretirement, early retirement, and “traditional” retirement years as specified by the age requirements for retired-worker benefits under the OASDHI program. During the time period under consideration

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<sup>3</sup>The Bureau of Labor Statistics publishes annually some work-experience data for aged persons, based on the March CPS. For the March 1972 CPS, the BLS did not publish this information, but similar data from the March 1971 CPS are reported in Department of Labor, Bureau of Labor Statistics, *Work Experience of the Population in 1970* (Special Labor Force Report No. 141), 1972, table A-1 especially.

For a discussion of the different findings resulting from use of the aged unit in place of the aged person and family concepts, see Gayle B Thompson, *Income of the Aged Population: 1971 Money Income and Changes From 1967* (Research and Statistics Note No. 14), Social Security Administration, Office of Research and Statistics, 1973, pages 3–4.

(1971), insured workers and their wives were entitled to actuarially reduced benefits<sup>4</sup> at age 62 and to full benefits at age 65; widows were entitled to reduced and full benefits at ages 60 and 62 respectively.

The group aged 65 and older is further subdivided into those aged 65–72 and those aged 73 and over. As in the 1963 and 1968 surveys, 73 was the age selected to subdivide this group so that persons subject to the earnings test under OASDHI could be distinguished from those not subject to that test for at least one full year.<sup>5</sup> Under the program, insured workers and their dependents and survivors may draw benefits regardless of their earnings when they reach age 72. This subdivision also separates out that age group eligible for cash benefits under the transitionally insured and “special age-72” provisions of the Social Security Act.

#### AGE AND MARITAL STATUS OF SAMPLE UNITS

The sample of 14,935 aged units examined in this study represents an estimated 21,949,322 units aged 60 and older living in the United States in 1971—10,001,268 married couples and 11,948,054 nonmarried persons. Table 1 displays how these units were distributed by age and marital status.<sup>6</sup>

Nearly three-fourths of the units under study were aged 65 and older. This group was evenly split between those aged 65–72 and those aged 73 and older. Among married couples, the wife's age fell in the same or a younger group than the husband's in all but 9 percent of the cases (table 2).

A greater proportion of married couples than of nonmarried persons was in the two youngest age groups. The reverse was true for the class aged 65 and older. An increase in the proportion of widowed units accounts for this shift in marital-

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<sup>4</sup> Benefits were reduced  $\frac{5}{8}$  of 1 percent for each month benefits were collected before age 65.

<sup>5</sup> In 1971, benefits were reduced \$1 for each \$2 of earnings from \$1,681 to \$2,880 and \$1 for each \$1 of earnings over \$2,880 for persons under age 72.

<sup>6</sup> Age and marital characteristics are defined according to the aged unit's status at the time of the CPS interview in March 1972. The age of a married couple is defined by the age of the husband except in those few cases (446,000) in which he was under age 60.

status composition, as the data in the following tabulation indicate.

Age	Widowed as percent of—		
	All units	Nonmarried men	Nonmarried women
60-61.....	20	21	66
62-64.....	25	33	69
65 and older.....	47	63	83
65-72.....	37	52	77
73 and older.....	57	72	87

## WORK PATTERNS

### Work Experience and Extent of Employment

*Nonmarried aged units.*—Among the nonmarried, work experience was negatively related to age for both men and women—that is, the proportion of units with work experience in 1971 was substantially lower among older than younger units (table 3).<sup>7</sup> Age differences aside, a substantial proportion of all nonmarried units were without work experience in 1971. Among nonmarried women, for example, more than one-third of those aged 60-61, 45 percent of those aged 62-64, and 84 percent of the group aged 65 and older did not work at all during the year. These low work-experience rates among nonmarried women primarily reflect the low rates observed for widows, since they comprised the vast majority of this marital group. Never-married women were much less likely than widows to have been without work (table 4).

A substantial proportion of the nonmarried did not work full-year/full-time during 1971 (table 5). Moreover, the proportion engaged in full-year/full-time work was lower in each successive age group so that among those aged 73 and older, only 2 percent of the total group and 23 percent of the workers worked that extensively.

*Married couples.*—Except for those aged 73 and older, a majority of all married units worked at some time during the survey year, as table 3 shows. The proportion with work dropped dramatically with age from about 9 out of 10 units

<sup>7</sup> See the technical note, pages 16-20, for a definition of the work variables.

TABLE 1.—Marital status and sex: Percentage distribution of aged units, by age

Marital status and sex	Age of units					
	Total	60-61	62-64	65 and older	65-72	73 and older
Total number (in thousands).....	21,949	2,586	3,624	15,739	7,835	7,903
Percentage distribution, by age.....	100	12	16	72	36	36
Total percent.....	100	100	100	100	100	100
Married.....	46	62	58	40	49	32
Nonmarried.....	54	38	42	60	51	68
Men.....	13	12	12	13	12	14
Women.....	42	26	31	47	40	54

under age 65 to 6 out of 10 aged 65-72, and then to 3 out of 10 aged 72 and older. These work-experience rates for couples were substantially higher than those observed for nonmarried units—a fact partly explained by the presence of two potential workers, one of whom was frequently younger and hence more likely to work.

Extent and pattern of employment also varied with age (table 6). Among units with work experience, those in the “traditional” retirement years were about half as likely to have engaged in full-year/full-time work as those in the “pre-retirement” years.

Older married couples with work experience were also much more likely than younger couples to have been single-worker units. Three-fourths of those aged 65 and older with work experience were single-worker units, compared with only 55 percent of those aged 60-61.

Accompanying this increase, with age, in single-worker units was a noticeable rise in the proportion of working units in which only the wife

TABLE 2.—Age of wife: Percentage distribution, by age of husband

Age of wife	Age of husband					
	Under 60	60-61	62-64	65 and older	65-72	73 and older
Total number (in thousands).....	446	1,411	1,942	6,202	3,709	2,493
Total percent.....	100	100	100	100	100	100
Under 60.....	0	72	50	15	21	5
60-61.....	44	16	20	8	11	3
62-64.....	33	8	22	15	22	6
65 and older.....	22	4	9	62	46	86
65-72.....	22	4	8	41	42	38
73 and older.....	1	( <sup>1</sup> )	1	22	4	48

<sup>1</sup> Less than 1 percent.

TABLE 3.—Work experience in 1971: Percentage distribution of aged units, by marital status and age

Work experience and extent of employment	Age of units				
	60-61	62-64	65 and older	65-72	73 and older
All nonmarried					
Total number (in thousands).....	978	1,533	9,433	4,030	5,406
Total percent.....	100	100	100	100	100
Worked.....	67	57	18	29	9
Full-year/full-time.....	39	29	6	10	2
Less than full-year/full-time.....	28	28	12	19	7
Didn't work.....	33	43	82	71	91
Nonmarried men					
Total number (in thousands).....	298	415	2,069	920	1,149
Total percent.....	100	100	100	100	100
Worked.....	73	61	25	38	15
Full-year/full-time.....	44	36	9	14	4
Less than full-year/full-time.....	29	25	16	23	11
Didn't work.....	27	39	75	62	85
Nonmarried women					
Total number (in thousands).....	681	1,118	7,368	3,110	4,257
Total percent.....	100	100	100	100	100
Worked.....	64	55	16	26	8
Full-year/full-time.....	37	26	5	9	2
Less than full-year/full-time.....	27	29	11	18	6
Didn't work.....	36	45	84	74	92
Married couples					
Total number (in thousands).....	1,608	2,091	6,302	3,805	2,497
Total percent.....	100	100	100	100	100
Worked.....	93	89	49	61	30
Full-year/full-time.....	76	66	21	28	10
Less than full-year/full-time.....	18	23	28	33	20
Didn't work.....	7	11	51	39	70

worked. Six percent of the working couples aged 60-61 had only the wife in the work force, but she was the sole worker in as many as 22 percent of the working units aged 73 and older. This difference resulted from a substantial decrease in the proportion of couples in which the husband worked and not from any increase in the number of working wives. The following percentages—based on all couples, not just those working—demonstrate this.

Age of couple	Percent of all married couples in which—		
	Both worked	Husband only worked	Wife only worked
60-61.....	42	46	5
62-64.....	38	44	7
65-72.....	17	33	11
73 and older.....	5	18	6

TABLE 4—Percent of nonmarried women without work experience in 1971, by detailed marital status and age

Marital status	Age of units		
	60-61	62-64	65 and older
Widowed.....	38	48	86
Never-married.....	22	33	74
Divorced/separated.....	36	41	75
Married, spouse absent.....	(1)	(1)	92

<sup>1</sup> Not computed. base less than 75,000

These findings suggest a shift with age, among older couples, from two-worker to single-worker units with an assumption by the wife of a comparatively greater share of the work responsibility because of the husband's withdrawal from the work force. To investigate this point further, the work patterns of married units were examined for different combinations of ages of husband and wife. Interest centered on the extent to which the combined ages were related to work behavior.

Table 7 presents the work experience of couples cross-classified by age of husband and age of wife. These data demonstrate that, in general, married couples in which both members are under age 65 are much more likely to have worked in 1971, to have done so on a full-year/full-time basis, and

TABLE 5—Extent of employment in 1971: Percentage distribution of working nonmarried aged units, by age and sex

Extent of employment	Age of units				
	60-61	62-64	65 and older	65-72	73 and older
All nonmarried					
Total number (in thousands).....	654	871	1,670	1,162	508
Total percent.....	100	100	100	100	100
Full-year/full-time.....	59	51	31	34	23
Less than full-year/full-time.....	41	49	69	66	77
Nonmarried men					
Total number (in thousands).....	217	253	518	345	174
Total percent.....	100	100	100	100	100
Full-year/full-time.....	60	59	35	38	28
Less than full-year/full-time.....	40	41	65	62	72
Nonmarried women					
Total number (in thousands).....	437	618	1,152	818	334
Total percent.....	100	100	100	100	100
Full-year/full-time.....	58	48	29	33	20
Less than full-year/full-time.....	42	52	71	67	80

TABLE 6.—Extent and pattern of employment in 1971: Percentage distribution of working married couples, by age

Extent and pattern of employment	Age of married couples				
	60-61	62-64	65 and older	65-72	73 and older
Total number (in thousands).....	1,500	1,860	3,066	2,323	743
Total percent.....	100	100	100	100	100
Extent of employment:					
Full-year/full-time.....	81	75	43	46	34
Less than full-year/full-time.....	19	25	57	54	66
Pattern of employment:					
Two-worker unit.....	45	43	26	28	18
Full-year/full-time.....	40	36	15	17	9
Both full-year/full-time.....	18	18	5	6	3
Husband only full-year/full-time.....	17	14	6	6	5
Wife only full-year/full-time.....	5	5	4	5	1
Less than full-year/full-time.....	5	7	10	11	9
Single-worker unit.....	55	57	74	72	82
Full-year/full-time.....	41	38	28	29	24
Less than full-year/full-time.....	14	18	47	44	57
Husband only worked.....	49	49	58	55	60
Full-year/full-time.....	38	35	20	21	16
Less than full-year/full-time.....	12	15	36	34	44
Wife only worked.....	6	8	19	18	22
Full-year/full-time.....	3	4	8	8	8
Less than full-year/full-time.....	3	4	11	10	14

to have been two-worker units than are the couples in which one or both members were aged 65 or older. The primary exception were those couples in which the wife was aged 65 or older but the husband was of preretirement age; these couples were just as likely to have worked and to have engaged in full-year/full-time work as those with both members under age 65, al-

though they were less likely to have been two-worker units. Lowest rates of participation in the work force were observed among couples in which both spouses were aged 65 or older. The highest proportion of "wife only worked" units was found among those couples in which the husband was aged 65 and older and the wife was of preretirement age.

**Reasons for Part-Year Work and No Work in 1971**

The following discussion of reasons for part-year<sup>a</sup> and no work during 1971 is based on data for aged persons, not aged units. (The two concepts differ only for married couples.) This shift was made because of the problems involved in meaningfully combining reasons for husband and wife and because data on the individual's reasons add an interesting dimension to analysis of the work behavior of couples.

*Nonmarried persons.*—Unemployment and ill health were the most frequently mentioned reasons given for part-year work among nonmarried

<sup>a</sup>The terms "part-year" and "less than full-year/full-time" are not synonymous, as the latter includes full-year/part-time work.

TABLE 7.—Work experience and extent and pattern of employment in 1971: Percentage distribution of married couples, by age of husband and age of wife

Work pattern	Age								
	Wife under 62			Wife 62-64			Wife 65 and older		
	Husband under 62	Husband 62-64	Husband 65 and older	Husband under 62	Husband 62-64	Husband 65 and older	Husband under 62	Husband 62-64	Husband 65 and older
Work experience									
Total number (in thousands).....	1,442	1,349	1,390	257	420	957	157	174	3,855
Total percent.....	100	100	100	100	100	100	100	100	100
Worked.....	93	91	72	97	85	63	90	77	35
Didn't work.....	7	9	28	3	15	37	10	23	65
Extent and pattern of employment									
Total number who worked (in thousands).....	1,345	1,226	1,008	250	356	604	141	135	1,362
Total percent.....	100	100	100	100	100	100	100	100	100
Extent of employment:									
Full-year/full-time.....	82	74	51	77	77	47	81	68	32
Less than full-year/full-time.....	18	26	49	23	23	53	19	32	68
Pattern of employment:									
Two-worker unit.....	47	47	35	36	34	28	21	28	18
Single-worker.....	53	53	65	64	66	72	79	72	82
Husband only.....	47	44	38	59	58	53	75	68	70
Wife only.....	6	8	29	5	8	19	4	4	12

men aged 60-61 and 62-64 (table 8). Men aged 65 and older who were part-time workers, on the other hand, were much less likely than those in the two younger groups to have been unemployed or to have reported themselves too ill to work on a full-year basis and much more likely to perceive themselves as being retired.

Among those nonmarried men who didn't work at all during 1971, ill health and retirement were by far the most frequent reasons given for not working. Inability to find work and "other" reasons were mentioned by a very small proportion (table 9). Nonworkers aged 60-64 were much more likely than those aged 65 and older to cite ill health as the major barrier to employment and much less likely to view themselves as retired.

Male nonworkers aged 60-64 appeared to be far more influenced by ill health than part-year workers in the same age cohort. Among those aged 60-61, the nonworkers were twice as likely to feel that ill health interfered with their ability to work.

Among nonmarried women, "taking care of

home" was a frequently reported reason for working less than full year, especially among those who did not work at all during 1971. Regardless of age, approximately one-half of those nonmarried women without work experience mentioned this reason. Part-year workers aged 60-64 were less likely than nonworkers of the same age and part-year workers aged 65 and older to report that home responsibilities curtailed their work.

Nonmarried women reporting reasons other than "taking care of home" followed the same response patterns observed among nonmarried men. Ill health and/or unemployment were the major reasons given by those aged 60-64 for part-year or no work, but retirement was the most frequently mentioned reason among the group aged 65 and older.

*Married persons.*—The age variations in response patterns with respect to both part-year and no work found among married men and women were basically the same as those observed for nonmarried men and women. Although in

TABLE 8.—Major reason for part-year work in 1971: Percentage distribution of aged persons who worked part year, by marital status, age, and sex

Reason for part-year work	Nonmarried persons aged—					Married persons aged—				
	60-61	62-64	65 and older	65-72	73 and older	60-61	62-64	65 and older	65-72	73 and older
<b>Men</b>										
Total number (in thousands) .....	85	89	217	142	174	280	423	1,110	852	257
Total percent .....	100	100	100	100	-----	100	100	100	100	100
Unemployed.....	32	45	11	15	-----	42	29	11	13	5
Illness or disability.....	33	22	15	14	-----	36	24	18	18	17
Retired.....	11	14	62	51	-----	8	29	58	58	60
Other <sup>2</sup> .....	24	20	22	20	-----	14	17	13	12	18
<b>All women</b>										
Total number (in thousands).....	142	229	560	410	156	231	323	604	462	143
Total percent.....	100	100	100	100	100	100	100	100	100	100
Unemployed.....	24	16	7	8	3	19	21	14	15	13
Illness or disability.....	21	23	12	11	16	15	16	15	16	13
Taking care of home <sup>3</sup> .....	29	32	44	44	43	52	52	55	54	59
Retired.....	8	13	28	27	23	4	4	8	6	7
Other <sup>2</sup> .....	18	15	11	9	15	6	7	7	7	7
<b>Women, with "taking care of home" responses excluded</b>										
Total number (in thousands).....	101	155	318	229	89	101	155	270	212	158
Total percent.....	100	100	100	100	100	100	100	100	100	-----
Unemployed.....	33	24	12	15	5	43	44	32	32	-----
Illness or disability.....	30	34	22	20	29	34	34	34	34	-----
Retired.....	11	19	46	49	40	9	8	18	18	-----
Other <sup>2</sup> .....	26	22	19	17	27	14	14	16	16	-----

<sup>1</sup> Percentages not computed, base less than 75,000.

<sup>2</sup> Includes Armed Forces, going to school, and other reasons.

<sup>3</sup> Restricted to women.

TABLE 9.—Major reasons for not working in 1971: Percentage distribution of aged persons who did not work, by marital status, age, and sex

Reason for not working	Nonmarried persons aged—					Married persons aged—				
	60-61	62-64	65 and older	65-72	73 and older	60-61	62-64	65 and older	65-72	73 and older
Men										
Total number (in thousands).....	81	162	1,550	575	975	193	370	3,808	1,891	1,917
Total percent.....	100	100	100	100	100	100	100	100	100	100
Can't find work.....	4	0	1	2	1	4	2	( <sup>1</sup> )	1	( <sup>1</sup> )
Illness or disability.....	69	56	22	23	21	75	49	20	21	19
Retired.....	22	44	77	74	79	20	48	79	78	80
Other <sup>2</sup> .....	5	0	( <sup>1</sup> )	1	( <sup>1</sup> )	1	1	( <sup>1</sup> )	( <sup>1</sup> )	1
All women										
Total number (in thousands).....	244	500	6,216	2,293	3,923	849	1,146	4,948	2,750	2,198
Total percent.....	100	100	100	100	100	100	100	100	100	100
Can't find work.....	2	1	( <sup>1</sup> )	1	( <sup>1</sup> )	1	1	( <sup>1</sup> )	1	( <sup>1</sup> )
Illness or disability.....	37	30	23	22	23	8	9	10	9	10
Taking care of home <sup>2</sup> .....	50	52	48	49	47	88	86	82	83	79
Retired.....	9	15	28	27	28	2	3	8	7	10
Other <sup>2</sup> .....	2	2	2	2	2	1	1	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Women, with "taking care of home" responses excluded										
Total number (in thousands).....	121	239	3,239	1,162	2,078	100	159	915	462	452
Total percent.....	100	100	100	100	100	100	100	100	100	100
Can't find work.....	3	1	1	1	( <sup>1</sup> )	7	4	2	3	1
Illness or disability.....	75	62	43	42	44	71	67	52	53	61
Retired.....	18	32	53	53	52	13	20	45	42	48
Other <sup>2</sup> .....	3	5	3	3	4	9	9	2	2	1

<sup>1</sup> Less than 1 percent.

<sup>2</sup> Includes Armed Forces, going to school, and other reasons.

<sup>3</sup> Restricted to women

some cases the specific proportions citing each reason varied by several percentage points, these were generally not significantly different (tables 8 and 9).

The only major difference in the responses of the two marital groups was that a substantially and significantly higher proportion of married than nonmarried women in each age group cited home responsibilities as the reason for not working at all or for working only part of the year.

*Summary.*—Among both married and nonmarried aged units, substantial age differences occurred in the proportion of persons mentioning unemployment, ill health, and retirement as the primary reason for part-year work or for not working at all during 1971. In general, those aged 65 and older were much more likely than those aged 60-64 to view themselves as retired and much less likely to report that ill health hindered their employment. Moreover, these older persons were much less likely to have reported unemployment during the year.

These findings do not necessarily mean that a smaller proportion of those aged 65 and older have work-limiting health problems or that they are less vulnerable to unemployment. They may simply reflect the fact that these older persons are more likely to be eligible for full pension benefits and may choose to collect benefits rather than look for work in a labor market prejudiced against the aged. Others may prefer to view themselves as retired rather than admit that they are too ill to work since, in American society, ill health implies personal deficiency but retirement by itself carries no such connotation.

The latter interpretation is supported by much of the gerontological literature on the social-psychological effects of retirement and health. One study argued that Americans tend to view ill health as a personal flaw and that, as a result, illness can have a negative effect on the older person's self-concept.<sup>9</sup> In another study, a comparison of age-associated morale among employed

<sup>9</sup> Ethel Shanas et al., *Old People in Three Industrial Societies*, Atherton Press, 1963, pages 57-58.

and retired men aged 65 and older indicated that a negative perception of health was a more important determinant of this morale dimension than retirement itself.<sup>10</sup> On the other hand, a third study suggested that illness and physical incapacity may serve as a justification for not working among older workers and that the sick role is more socially acceptable than the unemployed or retired role.<sup>11</sup>

## EARNINGS, POVERTY, AND WORK EXPERIENCE

This section focuses on the magnitude of the income differences—earnings, median total money income, and poverty rates—existing between units with different work-experience rates.<sup>12</sup> Special attention is given to income differences between married and nonmarried units and between units aged 65 and older and those in the two younger age groups.

### Earnings

*Nonmarried aged units.*—As expected, full-year/full-time workers<sup>13</sup> had substantially higher earnings in 1971 than part-year workers did (table 10). This difference explains in part why the earnings of units aged 65 and older were so

<sup>10</sup> Gayle B. Thompson, "Work Versus Leisure Roles: An Investigation of Morale Among Employed and Retired Men," *Journal of Gerontology*, July 1973, pages 339-344.

<sup>11</sup> Lawrence D. Haber, "Age and Capacity Devaluation," *Journal of Health and Social Behavior*, September 1970, pages 167-182.

<sup>12</sup> The poverty rates reported here deviate from those reported in publications that use the aged family as the unit of analysis. (See text footnote 3 and compare tables 10 and 11 of this article with tables 9 and 10 of the *Annual Statistical Supplement 1971, Social Security Bulletin*.) It should also be noted that some of the elderly poor identified here live in families with incomes above the poverty line. Median total income also differs slightly from the data in Gayle B. Thompson, *Income of the Aged Population* (op. cit.), although both articles use the aged unit concept and are based on March 1972 CPS income data. There are two reasons for this: (1) Medians in this article were calculated from a 17-interval rather than an 11-interval income distribution and (2) differences in the age group under study that resulted in different age classification of married units in which the husband was aged 60-61 (the unit is classified here as aged 60-61 but was classified in the earlier paper by the wife's age or excluded altogether). See the technical note, pages 16-20, for a full definition of all income variables discussed here.

<sup>13</sup> Throughout this section, "part-year" refers to less than full-year/full-time.

low, compared with those of the younger units—that is, earnings were lower partly because these older units were less likely to have worked on a full-year/full-time basis.

It is clear, however, that variations in extent of employment do not account for all of the earnings differential between younger and older units. Even when units aged 65 and older worked as much as younger units, they still earned considerably less money. Among full-year/full-time workers, for example, median earnings dropped from approximately \$6,000 among those under age 65 to \$5,120 and \$2,550 among those aged 65-72 and aged 73 and older, respectively. Whether these persistent differences result from job discrimination, from occupational differences, or from the retirement of the high earners at age 65 because their jobs are more likely to be subject to mandatory retirement practices or they can more readily afford to retire, or from other factors are questions that cannot be answered here.

The differences discussed above apply to nonmarried men as well as to nonmarried women. The only major difference between the two groups is that among full-year/full-time workers, men earned more than women.

*Married couples.*—Within each age category, the extent and the pattern of employment are both related to the dollar earnings of married couples (table 11). Extent of employment, however, appears to be the stronger determinant of earnings levels. Within each age group, the difference in median earnings between full-year/full-time and part-year workers controlled for pattern of employment was greater than the difference in medians between single-worker and two-worker units controlled for extent of employment. The following data for couples aged 62-64 exemplify this point. (Table 11 provides details for the other age groups.)

Together, these two work factors exerted sub-

Extent of employment	Median earnings		
	Pattern of employment		Difference in median earnings
	Two-worker unit	Single-worker unit	
Full-year/full-time.....	\$12,030	\$9,060	\$2,970
Less than full-year/full-time.....	5,180	3,380	1,800
Difference in median earnings.....	6,850	5,680	-----



stantial influence on the earnings levels of married couples. Within each age group, units with the highest earnings were those in which both husband and wife worked and at least one of them did so on a full-year/full-time basis. Those with the next highest earnings were single-worker full-year/full-time units. Lowest earnings were observed among single-worker part-year units.

Married couples aged 65 and older earned less than those under age 65 even after accounting for variations in extent and pattern of employment. Among full-year/full-time two-worker units, the median earnings of those under age 65 was one and one-half times greater than the median of the older couples. Similar trends were observed within the other work categories.

*Comparison of earnings levels of married and nonmarried aged units.*—Total money earnings were substantially higher for married than nonmarried aged units even after controlling for variations in the number of workers and the extent of employment. A comparison of the median earnings of full-year/full-time single-worker married units and full-year/full-time nonmarried workers reveals that the median for the nonmarried was 63 percent of the couples' median among those aged 60–61, 67 percent among those aged 62–64, and 72 percent among those aged 65 and older.

The median earnings of full-year/full-time workers by sex and marital status are compared below. The data show that the medians for non-

Age of unit	Nonmarried full-year/ full-time workers		Married full-year/ full-time workers	
	Men	Women	Men	Women
60-61.....	\$6,560	\$5,460	\$9,570	\$5,030
62-64.....	6,860	5,890	9,630	5,460
65 and older.....	4,570	4,360	6,800	5,250

married women do not differ substantially from those of married women but are considerably different from those of married men.

In view of the fact that women workers predominated among the nonmarried and men workers among the married, these data suggest that part of the earnings differences between married and nonmarried full-year/full-time units resulted from sex differences in earnings capacities. The existence of substantial sex differences in earn-

ings levels at all ages has been discussed in the 1973 *Economic Report of the President*.<sup>14</sup> According to that report, comparisons among full-year/full-time workers aged 14 and older revealed that women's median earnings in 1971 were 60 percent of the median for men—\$5,593 compared with \$9,399. When further adjustments were made to allow for differences in the length to the average full-time workweek, that proportion increased to 66 percent. The report attributed part of this differential to differences in the amount of job experience resulting from "the lack of continuity in women's attachment to the labor force."

### Median Total Money Income and Poverty Status

*Nonmarried aged units.*—Table 10 contains the poverty rates and median total money income for nonmarried aged units<sup>1</sup> with different work-experience rates. The data indicate a strong positive relationship between amount of work and the two measures of total money income. To illustrate, the poverty rate of full-year/full-time workers aged 65 and older was 14 percent, compared with 25 percent for part-year workers and 56 percent for nonworkers. This relationship between work and income was also observed within the group under age 65, although the income differentials between full-year/full-time workers and nonworkers were much larger.

The direction of the relationship between age and income factors—both median total income and the incidence of poverty—appears to be partly a function of differences in work-experience rates. Among full-year/full-time workers those aged 65 and older had lower incomes than those under age 65. A different pattern emerged for nonworkers and part-year workers, however. Among nonworkers, poverty rates were lower in each successive age group up to age 73 and older, at which point they increased slightly. Specifically, the proportion of nonworkers classified as "poor" declined from 74 percent of those aged 60–61 to 52 percent of those aged 65–72 and then increased to 59 percent of those aged 73 and older. Poverty rates also decreased with age, up to age 73, among part-year workers although the differences were fairly small. This partial

<sup>14</sup> *Economic Report of the President*, transmitted to Congress, January 1973, pages 103–107.

decline in poverty with age among part-year workers and nonworkers may relate to the greater incidence of OASDHI, private pension,

and government employee pension benefits among older persons. This area will be investigated in detail in a future report.

TABLE 10.—Earnings, median total money income, and percent poor in 1971: Percentage distribution of nonmarried units, by age, work experience, extent of employment, and sex

Age, work experience, and extent of employment	Total number (in thousands)	Percentage distribution, by amount of earnings														Median <sup>1</sup>		Percent poor
		Total percent	None	\$1-499 <sup>1</sup>	\$500-999	\$1,000-1,499	\$1,500-1,999	\$2,000-2,499	\$2,500-2,999	\$3,000-3,999	\$4,000-4,999	\$5,000-5,999	\$6,000-7,999	\$8,000-9,999	\$10,000 and over	Earnings	Total money income	
All nonmarried																		
Aged 60-61, total.....	978	100	33	6	4	4	3	3	3	0	0	5	10	3	8	\$2,000	\$3,190	36
Worked.....	654	100	0	8	6	6	4	5	4	13	13	8	14	5	13	4,310	4,650	17
Full-year/full-time.....	384	100	0	3	1	1	1	2	4	14	16	12	20	7	19	5,670	6,150	5
Less than full-year/full-time.....	270	100	0	16	14	13	8	9	5	10	10	2	6	2	4	1,940	2,930	35
Didn't work.....	325	100	99	*1	0	0	0	0	0	0	0	0	0	0	0	0	1,200	74
Aged 62-64, total.....	1,593	100	43	7	5	3	4	2	2	5	6	5	8	5	6	600	2,850	36
Worked.....	871	100	0	12	8	5	8	3	3	10	10	9	13	8	11	4,100	4,680	17
Full-year/full-time.....	444	100	0	2	2	( <sup>4</sup> )	3	2	2	11	13	19	19	13	20	6,210	6,910	4
Less than full-year/full-time.....	427	100	0	22	14	10	13	5	5	8	7	4	7	3	2	1,650	2,890	29
Didn't work.....	663	100	99	*1	0	0	0	0	0	0	0	0	0	0	0	0	1,640	61
Aged 65 and older, total.....	9,436	100	82	4	2	2	2	1	1	1	1	1	1	1	1	0	1,960	50
Worked.....	1,670	100	*2	21	14	11	12	5	4	6	5	4	8	3	6	1,580	3,530	22
Full-year/full-time.....	515	100	1	6	6	4	12	2	5	9	9	9	16	7	13	4,560	5,230	14
Less than full-year/full-time.....	1,155	100	3	27	18	14	13	6	3	5	3	2	4	1	2	1,070	3,100	25
Didn't work.....	7,766	100	99	*1	0	0	0	0	0	0	0	0	0	0	0	0	1,800	56
Aged 65-72, total.....	4,030	100	71	6	4	3	4	1	1	2	1	1	2	1	2	0	2,240	43
Worked.....	1,162	100	2	17	13	11	14	5	3	7	5	4	9	4	7	1,750	3,650	20
Full-year/full-time.....	398	100	( <sup>4</sup> )	4	6	3	12	2	4	9	9	8	18	9	15	5,120	5,630	12
Less than full-year/full-time.....	765	100	2	26	17	14	15	6	3	5	3	2	4	1	3	1,180	3,170	25
Didn't work.....	2,868	100	99	*1	0	0	0	0	0	0	0	0	0	0	0	0	1,910	52
Aged 73 and older, total.....	5,406	100	90	3	2	1	1	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	0	1,820	55
Worked.....	508	100	*4	28	17	11	10	4	5	5	4	4	6	1	3	1,140	3,190	25
Full-year/full-time.....	118	100	5	13	10	7	11	3	10	7	10	11	7	0	7	2,550	4,470	20
Less than full-year/full-time.....	390	100	4	30	19	13	9	5	3	4	2	2	6	2	1	920	2,910	26
Didn't work.....	4,898	100	99	*1	0	0	0	0	0	0	0	0	0	0	0	0	1,750	59
Nonmarried men <sup>1</sup>																		
Aged 60-61, total.....	298	100	27	6	5	4	4	2	5	6	7	4	11	4	15	\$2,700	\$3,660	35
Worked.....	217	100	0	8	8	6	5	3	7	8	9	5	15	6	20	4,560	5,060	22
Full-year/full-time.....	130	100	0	4	1	2	0	4	6	8	11	9	18	7	29	6,560	6,640	7
Less than full-year/full-time.....	87	100	0	14	17	12	12	1	8	8	7	0	11	3	6	1,790	2,760	45
Didn't work.....	81	100	98	*2	0	0	0	0	0	0	0	0	0	0	0	0	1,350	69
Aged 62-64, total.....	415	100	39	6	5	2	3	3	1	6	5	5	11	3	12	1,000	3,460	33
Worked.....	253	100	0	9	8	3	5	5	1	9	8	8	19	5	20	5,250	5,900	16
Full-year/full-time.....	150	100	0	2	4	1	4	4	1	8	9	8	22	6	31	6,860	7,330	7
Less than full-year/full-time.....	103	100	0	19	13	6	6	7	2	12	6	8	14	4	3	2,430	3,200	30
Didn't work.....	162	100	99	*1	0	0	0	0	0	0	0	0	0	0	0	0	1,770	58
Aged 65 and older, total.....	2,069	100	75	6	3	3	3	1	1	1	1	1	2	1	2	0	2,470	36
Worked.....	519	100	*3	22	13	12	12	3	4	5	4	2	8	4	7	1,500	3,600	23
Full-year/full-time.....	180	100	3	10	6	4	12	2	3	6	7	6	16	11	14	4,570	5,630	16
Less than full-year/full-time.....	339	100	3	29	17	17	12	4	4	4	3	( <sup>4</sup> )	4	( <sup>4</sup> )	3	1,030	3,030	26
Didn't work.....	1,550	100	99	*1	0	0	0	0	0	0	0	0	0	0	0	0	2,270	40

See footnotes at end of table.

TABLE 10.—Earnings, median total money income, and percent poor in 1971: Percentage distribution of nonmarried units, by age, work experience, extent of employment, and sex—*Continued*

Age, work experience, and extent of employment	Total number (in thousands)	Percentage distribution, by amount of earnings														Median <sup>1</sup>		Percent poor
		Total per cent	None	\$1-499 <sup>2</sup>	\$500-999	\$1,000-1,499	\$1,500-2,499	\$2,500-2,999	\$3,000-3,999	\$4,000-4,999	\$5,000-5,999	\$6,000-7,999	\$8,000-9,999	\$10,000 and over	Earnings	Total money income		
<i>Nonmarried men—Continued</i>																		
Aged 65-72, total	920	100	63	8	5	5	5	1	1	2	2	1	3	2	3	0	\$2,600	34
Worked	345	100	<sup>2</sup> 2	20	12	12	13	3	2	6	4	2	9	6	8	\$1,650	3,670	24
Full-year/full-time	130	100	1	8	6	1	11	1	2	8	7	5	20	15	14	6,000	6,280	14
Less than full-year/full-time	214	100	2	28	17	19	14	4	2	4	3	( <sup>4</sup> )	2	1	4	1,080	2,660	30
Didn't work	575	100	99	<sup>1</sup> 1	0	0	0	0	0	0	0	0	0	0	0	0	2,280	41
Aged 73 and older, total	1,149	100	85	5	2	2	1	1	1	( <sup>4</sup> )	1	( <sup>4</sup> )	1	0	1	0	2,400	37
Worked	174	100	<sup>5</sup> 5	27	15	12	9	4	6	3	4	3	6	0	5	1,120	3,460	21
Full-year/full-time	<sup>4</sup> 49																	
Less than full-year/full-time	124	100	4	31	18	8	4	6	5	4	1	6	0	1	920	3,370	20	
Didn't work	975	100	99	<sup>1</sup> 1	0	0	0	0	0	0	0	0	0	0	0	0	2,280	40
<i>Nonmarried women</i>																		
Aged 60-61, total	681	100	34	6	4	4	2	4	2	10	10	6	9	3	6	\$2,000	\$3,000	36
Worked	437	100	0	9	6	6	4	6	3	15	15	9	14	5	9	4,070	4,390	15
Full-year/full-time	254	100	0	3	1	( <sup>4</sup> )	2	1	2	17	18	13	21	8	14	5,460	5,940	4
Less than full-year/full-time	183	100	0	18	12	14	7	13	4	12	12	3	3	1	2	1,930	2,980	30
Didn't work	244	100	99	<sup>1</sup> 1	0	0	0	0	0	0	0	0	0	0	0	0	1,140	75
Aged 62-64, total	1,118	100	44	8	5	3	5	1	2	5	6	5	6	5	4	380	2,640	37
Worked	618	100	0	13	8	6	9	3	4	10	11	9	11	9	8	3,700	4,400	17
Full-year/full-time	294	100	0	1	1	0	3	1	2	13	15	16	18	16	14	5,880	6,690	3
Less than full-year/full-time	323	100	0	23	15	11	15	4	5	7	7	3	5	3	2	1,530	2,840	29
Didn't work	500	100	99	31	0	0	0	0	0	0	0	0	0	0	0	0	1,600	62
Aged 65 and older, total	7,368	100	84	4	2	2	2	1	1	1	1	1	1	( <sup>4</sup> )	1	0	1,860	54
Worked	1,152	100	<sup>2</sup> 2	20	14	10	13	5	4	7	5	5	8	2	5	1,650	3,490	21
Full-year/full-time	336	100	1	4	7	4	12	2	6	10	11	10	15	5	13	4,380	5,140	12
Less than full-year/full-time	816	100	3	26	18	13	13	7	2	5	2	3	5	2	2	1,120	3,120	25
Didn't work	6,216	100	99	<sup>1</sup> 1	0	0	0	0	0	0	0	0	0	0	0	0	1,720	60
Aged 65-72, total	3,110	100	73	5	3	3	4	2	1	2	1	1	2	1	2	0	2,140	45
Worked	818	100	<sup>1</sup> 1	18	13	10	14	6	3	7	5	5	9	3	6	1,790	3,640	19
Full-year/full-time	287	100	0	3	6	4	13	2	5	10	10	9	17	6	15	4,700	5,270	11
Less than full-year/full-time	551	100	2	25	17	13	15	7	3	5	3	3	4	1	2	1,230	3,280	23
Didn't work	2,293	100	99	<sup>1</sup> 1	0	0	0	0	0	0	0	0	0	0	0	0	1,850	54
Aged 73 and older, total	4,257	100	92	2	1	1	1	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	0	1,710	60
Worked	1,334	100	<sup>4</sup> 4	26	18	11	10	5	4	5	4	4	6	2	1	1,090	3,000	27
Full-year/full-time	<sup>6</sup> 68																	
Less than full-year/full-time	266	100	4	30	20	13	10	5	1	4	2	2	6	2	1	900	2,740	29
Didn't work	3,923	100	99	<sup>1</sup> 1	0	0	0	0	0	0	0	0	0	0	0	0	1,650	63

<sup>1</sup> Includes those reporting a loss in net income from farm and nonfarm self-employment or in rental income

<sup>2</sup> Calculated by linear interpolation within the income interval in which the median fell. Median earnings calculated from the 14-interval income distribution and rounded percentages displayed above. Median total income calculated from a 17-interval income distribution and weighted counts.

<sup>3</sup> Earnings reported by a few nonworkers who presumably worked during the latter part of 1970 but did not receive their earnings until 1971.

<sup>4</sup> Less than 1 percent.

<sup>5</sup> Worked without pay on a family-operated farm or business

<sup>6</sup> Percentages not computed; base less than 75,000.

*Married couples.*—Total money income and the incidence of poverty were highly related to work experience and extent and pattern of employment among married couples (table 11). Income levels were higher among workers than nonworkers, among full-year/full-time workers

than either part-year workers or nonworkers, and among two-worker than single-worker units.

As expected, highest total money income was found among those couples in which both husband and wife worked and at least one of them did so on a full-year/full-time basis. Single-



whatever the cause, is a very real economic liability for the older population.

Nonworking units of preretirement age (aged 60-61) were the most financially disadvantaged of the married couples. They were from one and one-half to two times more likely to have been poor than the nonworkers in the other age groups, perhaps because they were less likely to receive OASDHI benefits or private and government employee pensions.

*Comparison of married and nonmarried aged units on total money income and poverty status.*— Nonmarried aged units were substantially worse off financially than married couples. Fifty percent of the nonmarried aged 65 and older had incomes at or below the poverty level, but only 14 percent of the married couples in this age group were classified as "poor." Large differences in poverty rates were also observed within the younger age classes.

Part of these income differences can be explained by the fact that many married units had both the husband and the wife in the work force and that couples were more likely than nonmarried persons to have worked on a full-year/full-time basis. Income differences existed, however, even after controlling for these variations in work rates. Among the nonworking units aged 65 and older, for example, 56 percent of the nonmarried, compared with 20 percent of the couples, were classified as poor and the median income of the nonmarried was 45 percent of the couples'. Differences were also observed among full-year/full-time workers although they were somewhat smaller.

Some of the differences in total money income between married and nonmarried single-worker full-year/full-time units appear to result from differences in their annual earnings. Among those under age 65 the dollar difference between their median total money incomes closely approximated the dollar difference between their median annual earnings, as the following tabulation indicates:

Age of unit	Difference in median earnings	Difference in median total money income
60-61.....	\$3,410	\$3,620
62-64.....	2,850	3,470
65 and older.....	1,710	3,150

This finding suggests that among single-worker full-year/full-time units under age 65, a substantial portion of the differences in total money income between the married and nonmarried results from differences in annual earnings. These differences, as indicated earlier, seem to be largely the product of differences between men and women in earnings capacity.

Additional factors appear to explain a substantial portion of the marital-status differences in total money income among full-year/full-time units aged 65 and older and all of the variation among nonworkers. One possible explanatory factor, at least for the nonworkers, is that the sex differences in earnings capacity cited above undoubtedly become reflected in differences in the level of OASDHI and other pension benefits. Another factor may be the wife's financial contribution in the form of a second pension, dependent's benefits based on the husband's pension, interest on a separate savings account, and so on. The value of the wife's contributions will be explored in detail in a future report, focusing on the size and sources of total money income based on matched data from the March 1972 CPS and the Social Security Administration's benefit record system.

## SUMMARY AND CONCLUSIONS

The objectives of this article have been to describe the work experience of the population aged 60 and older during calendar year 1971 and to investigate the relationship between amount of work and income levels. Utilizing data obtained from the March 1972 CPS, the analysis focused on differences in amount of work and concomitant variations in earnings levels, median total money income, and poverty rates among nonmarried and married aged units. The principal findings are summarized below:

*Work patterns by age and marital status.* Work experience was negatively related to age among both nonmarried and married aged units although married couples were more likely to have worked and to have done so on a full-year/full-time basis within each age category. Moreover, among married couples who worked, the proportion of two-worker units declined with age and the proportion of working couples in which the wife was the sole worker increased.

*Reasons for part-year work or for not working at all in 1971.* Among both married and nonmarried

aged units, there were substantial age differences in the primary reasons for part-year work or for not working at all during 1971. In general, those aged 65 and older were much more likely than those in the two younger age classes to perceive themselves as retired and much less likely to report that ill health or unemployment hindered their working.

*Extent of employment and earnings.*—As expected, extent of employment was positively related to earnings. Extent and pattern of employment exerted considerable influence on the earnings levels of married couples.

Earnings varied considerably by age and marital status, a fact that can be partly but not completely explained by differences in the amount of work performed during the year.

*Work patterns, poverty rates, and total money income.* There was a strong relationship between work, median total money income, and poverty rates among both married and nonmarried aged units. Total income was higher among workers than nonworkers, among full-year/full-time workers than among part-year workers, and, for married couples, among two-worker than single-worker units.

Substantial age and marital-status differences in income levels were revealed. Part of these income differentials were due to variations in the amount of work performed. Even when work differences were taken into account, however, income differences between the age and marital groups continued to exist.

In conclusion, the data presented here demonstrate that work and earnings are critical factors in maintaining income adequacy in old age. Although pensions may provide important protection to those who, for one reason or another, reduce their work output or don't work at all, they are far from adequate substitutes for work.

## Technical Note

### The Sample

The estimates presented here are based on data derived from the March 1972 CPS. The sample was spread over 449 areas comprising 863 counties and independent cities covering the 50 States and the District of Columbia.<sup>15</sup> Approximately 47,000 occupied households were eligible for interview each month. These households represented

<sup>15</sup> For a detailed description of the basic CPS sample design, see the Bureau of the Census, *The Current Population Survey: A Report on Methodology*, Technical Report No. 7, 1963.

the civilian noninstitutionalized population and members of the Armed Forces living off post or with their families on post in the United States. During the year, an average of 2,000 of these occupied households were visited, but interviews were not obtained because the occupants were unavailable.

The 1972 Survey of the Aged (STATEL) extracted annual work and income information from the March 1972 CPS for all individuals aged 60 and older and their spouses. Estimates of the size of this older population were obtained by inflating the weighted sample results to independent estimates of the civilian noninstitutionalized population by age, race, and sex. The independent estimates were based on statistics from the 1970 Census of Population; statistics of births, deaths, immigration, and emigration; and statistics on the Armed Forces. The sample of 14,935 aged units examined in STATEL represents an estimated 21,949,322 units aged 60 and older (10,001,268 married couples and 11,948,054 non-married individuals).

### Definitions of Work and Income Variables

*Work experience.*—Separate work-experience classification schemes have been devised for married and nonmarried aged units. Both types of units are classified according to whether or not they worked in 1971 and, if they did work, whether they worked on a full-year/full-time basis or less than that. A married unit is further classified according to the number and identity of the workers. The following description provides more detail on the terms "work experience," "extent of employment," and "pattern of employment."

1. *Work experience.* Units with work experience (referred to as "workers") are those who worked at civilian jobs during 1971 on a full- or part-time basis for pay or profit or who worked without pay on a family-operated farm or business at any time during the year. Nonworkers are those who performed no work at all during 1971. The term "work experience" also includes "extent of employment," defined below. A married couple is defined as a working unit if either the husband or the wife worked at some time during the year.

2. *Extent of employment.* This term refers to the amount of work performed during 1971 and combines data on the number of weeks worked and

whether the work was usually performed on a full-time (35 hours or more per week) or part-time basis (less than 35 hours per week). It is subdivided into the following two categories: (a) Full-year/full-time—worked 50–52 weeks full time; and (b) less than full-year/full-time—worked less than 50 weeks and/or worked part time.

A married couple is defined as a full-year/full-time unit if either the husband or the wife worked on that basis.

**3 Pattern of employment.** A married couple is classified according to whether the unit was a two-worker or a single-worker unit, the amount of work performed during the year by each of these broad types, and the amount of work performed during the year by the husband and wife. A married couple is defined as a two-worker unit engaged in full-year/full-time work if both husband and wife worked and at least one of them did so on a full-year/full-time basis.

*Reason for not working or for part-year work during 1971.*—All nonworkers and part-year workers were queried about their reasons for not working on a full-year basis during 1971. Nonworkers were asked to cite the “main reason” they did not work at all during the survey year. Part-year workers were classified on the basis of what they were doing most of the weeks in which they did not work.

The codes used in this paper are based on Bureau of the Census and Bureau of Labor Statistics classifications and have been collapsed as follows:

- Inability to find work (nonworkers) or unemployed—that is, without work for 1 or more weeks but looking for a job
- Illness or disability
- Taking care of home (restricted to women)
- Retired
- Other (Armed Forces, going to school, other).

For married couples, reasons are reported separately for husband and wife.

*Income from earnings.*—Money earnings is the sum of wages and salaries, net income from farm self-employment, and net income from a nonfarm business, professional practice, or partnership received during 1971 before deduction for taxes. The value of earnings-in-kind, such as rent-free housing and goods produced on a farm, are not included in this variable.

There are some inconsistencies between work and earnings data. Specifically, the data show

working units with no reported earnings and some earners with no weeks of work, as the following totals demonstrate:

Earning status	Work experience		
	Total	Worked	Didn't work
Total.....	21,949,322	9,620,922	12,328,400
Earner.....	9,666,953	9,554,164	112,789
Nonearner.....	12,282,369	66,758	12,215,611

Nonpaid workers in family businesses account for those workers with zero earnings. The presence of earners with no work experience apparently results from a lag between the time income was earned and the time it was received.<sup>16</sup> For example, an individual may have earned \$150 for work performed during the last week in December 1970 but not have received a pay check until January 1971.

*Total money income.*—Total money income is calculated as the sum of all income received by the aged unit (the aged person and his spouse, if any), before deduction for taxes, from the following sources: (1) Earnings; (2) social security and railroad retirement benefits; (3) dividends, interest (on savings or bonds), income from estates or trusts, net rental income or royalties; (4) public assistance or welfare payments such as old-age assistance, aid to families with dependent children, and aid to the permanently and totally disabled; (5) unemployment compensation, government employee pensions, veterans' payments, or workmen's compensation; and (6) private pensions, annuities, alimony, regular contributions from persons not living in the household, and other periodic income.<sup>17</sup>

Money receipts from the following sources were

<sup>16</sup> Since 1968, the Bureau of the Census has applied editing procedures to correct for inconsistencies between work and earnings data. Whenever the amount of earnings falls at or below \$300, the Bureau assumes that the discrepancy between work and earnings results from this time lag and does not edit the data. Inspection of the CPS data available to STATEL revealed that \$300 was the maximum amount earned by nonworking units.

<sup>17</sup> For more detail on the components of each of these items and for a discussion of the comparability of CPS income data with other data, see Bureau of the Census, “Money Income in 1971 of Families and Persons in the United States,” *Current Population Reports*, Series P-60, No. 85, pages 6–8, 13–16, 21–22.

not included as income: (1) The sale of property (stocks, bonds, and real estate, for example) unless the person was engaged in the business of selling property; (2) withdrawals of bank deposits; (3) loans; (4) tax refunds; (5) gifts; and (6) lump-sum inheritances or insurance payments.

*Poverty status.*—Official poverty lines are based on family size, urban-rural residence, and age of head (under age 65 and aged 65 and older). Poverty status as used in this paper was determined in accordance with the official 1971 poverty lines established for two-person and one-person adult families with head age 65 and older and living in nonfarm areas.<sup>18</sup> Since units aged 60–64 resembled units aged 65 and older on many demographic and work factors, the poverty thresholds for heads aged 65 and older rather than those for the group under age 65 were applied to their incomes. Aged units whose total money income fell at or below the poverty line were defined as “poor.” The 1971 poverty lines applied to the aged units were:

Married couples .....	\$2,449
Nonmarried men .....	1,960
Nonmarried women .....	1,936

### Imputation of Missing Data

In order to reduce the amount of nonsampling error resulting from nonresponses, the Bureau of the Census had devised procedures to impute work and income data<sup>19</sup> for all persons for whom

<sup>18</sup> Bureau of the Census, “Characteristics of the Low Income Population: 1971,” *Current Population Reports*, Series P-60, No. 86, table M, page 18.

<sup>19</sup> For detailed discussion of these imputation procedures, methods devised to reduce income nonresponse, and the characteristics of income nonrespondents in the CPS, see the American Statistical Association, *Proceedings of the Social Statistics Section* (years specified): Emmett F. Spiers and Joseph J. Knott, “Computer Method To Process Missing Income and Work Experience Information in the Current Population Survey,” 1969, pages 289–297; Mitsuo Ono and Herman P. Miller, “Income Nonresponses in the Current Population Survey,” 1969, pages 277–288; Mitsuo Ono, “Current Developments on Collecting Income Data in the Current Population Survey,” 1971, pages 342–347; Emmett Spiers, John Coder, and Mitsuo Ono, “Characteristics of Income Nonrespondents in the Current Population Survey,” 1971, pages 369–374.

this information is missing. When one or more income amounts are unreported, the nonrespondent is assigned the income amount(s) stored for the last respondent in the file who had similar demographic and economic characteristics such as age, sex, family status, race, number of weeks worked, earnings, and major occupational groupings. Work-experience data are imputed from earnings data when available; otherwise, they are allocated on the basis of other known data. Fortunately, both work and earnings data are rarely missing at the same time.

### Rounding Procedures and Size of Base

All percentages are rounded to the nearest whole number. As a result, the percentages in a distribution do not always add to exactly 100 even though the totals are shown as 100. Moreover, individual base counts are rounded to the nearest thousand without being adjusted to group totals, which are independently rounded. Percentages, however, are based on the unrounded numbers.

Whenever the base of a percentage distribution is very small, the medians and percentages are extremely unreliable. To conform to Bureau of the Census procedures, medians and percentage distributions are not displayed when the base is less than 75,000.

### Reliability of the Estimates

Since the analysis in this report is based on a sample of the older population, all reported statistics—counts, percentages, and medians—are only estimates of population parameters and may deviate somewhat from their true values—that is, from the values that would have been obtained from a complete census, using the same schedules, instructions, and enumerators.<sup>20</sup> Particular care should be exercised in the interpretation of figures based on relatively small numbers of cases as well as small differences between figures. As in any

<sup>20</sup> Most of this discussion of estimation procedures has been excerpted from the Bureau of the Census, *Current Population Reports*, Series P-60, No. 85, *op. cit.*, pages 16–18.



survey work, the results are subject to errors or response and nonreporting and to sampling variability.

The standard error is primarily a measure of sampling variability—that is, of the variations that occur by chance because a sample rather than the entire population is surveyed. As calculated for this report, the standard error also partly measures the effect of response and enumeration errors but does not measure systematic biases in the data. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census figure by less than the standard error. The chances are about 95 out of 100 that the difference would be less than twice the standard error.

The figures presented in tables I and II are approximations to the standard errors of estimated numbers and percentages of persons respectively. These tables provide an indication of the order of magnitude of the standard errors rather than the precise standard error for any specific item.

*Standard error of estimated numbers.*—Table I presents approximations of the standard errors of estimated numbers of aged persons and aged units. The standard error and confidence limits for estimated numbers of aged persons may be calculated as follows:

Nearly 1,152,000 nonmarried women aged 65 and older had some work experience during 1971. Interpolation from table I indicates that the standard error of an estimate of this size is approximately 41,000. The chances are 68 out of 100 that the results of a complete count would not differ by more than 41,000 from the estimate of 1,152,000. The chances are 95 out of 100 that the results of a complete count would not have been different from that estimate by more than 82,000 (twice the standard error).

*Standard error of estimated percentages.*—The reliability of an estimated percentage, computed by using sample data for both numerator and denominator, depends upon both the size of the percentage and the size of the total upon which the percentage is based. Estimated percentages are relatively more reliable than the corresponding absolute estimates of the numerators of the percentages, particularly if the percentage is large (50 percent or greater).

Table II shows the standard errors of the estimated percentages of persons. Use of this table

TABLE I.—Standard errors of estimated numbers of all persons and white persons

[68 chances out of 100 Numbers in thousands]

Size of estimate	Standard error	Size of estimate	Standard error
100.....	12	5,000.....	86
250.....	20	10,000.....	119
500.....	28	25,000.....	178
1,000.....	39	50,000.....	224
2,500.....	61	100,000.....	218

in calculating the standard error of a single percentage and the standard error of a difference between two estimated percentages is illustrated below.

An estimated 16 percent of all nonmarried women aged 65 and older had some work experience during 1971. Since the base of this percentage is approximately 7,368,000—the number of nonmarried women aged 65 and older—interpolation in table II shows that the standard error of the estimated 16 percent is approximately 0.6 percent. The chances are 68 out of 100 that the estimate would have shown a figure differing from a complete census by less than 0.6 percent. The chances are 95 out of 100 that the estimate would have shown a figure differing from a complete census by less than 1.2 percent (rounded to 1.0 percent). That is, this 95-percent confidence interval would range from 15 percent to 17 percent.

For a difference between two sample estimates, the standard error is approximately equal to the square root of the sum of the squares of the standard errors of each estimate considered separately. This formula will represent the actual standard error quite accurately for the difference between two estimates of the same characteristics in two different areas, or for the difference between separate and uncorrelated characteristics in the same area. If, however, there is a high positive correlation between the two characteristics, the formula will overestimate the true standard error.

TABLE II.—Standard errors of estimated percentages of persons

[68 chances out of 100]

Estimated percentage	Base of estimated percentage (in thousands)									
	100	250	500	1,000	2,500	5,000	10,000	25,000	50,000	100,000
2 or 98.....	1 7	1 1	0 8	0 5	0 3	0 2	0 2	0 1	0 1	0 1
5 or 95.....	2 7	1 7	1 2	9	5	4	3	2	1	1
10 or 90.....	3 7	2 3	1 7	1 2	7	5	4	3	2	1
25 or 75.....	5 4	3 4	2 4	1 7	1 1	8	5	3	2	2
50.....	6 2	3 9	2 8	2 0	1 2	9	6	4	3	2

A comparison of the difference in the percentage of nonmarried women aged 62-64 and 65 and older who had work experience in 1971 illustrates how to calculate the standard error of a difference between two percentages.

Fifty-five percent of the 681,000 women aged 62-64 and 16 percent of the 7,368,000 women aged 65 and older worked in 1971—a difference of 39 percentage points. The standard error of each of these percentages is 1.9 and 0.6, respectively. The standard error of the estimated difference of 39 percentage points is about:

$$2.0 = \sqrt{(1.9)^2 + (0.6)^2}$$

The chances are thus 68 out of 100 that the estimated difference based on the sample would differ from the difference derived using complete census figures by less than 2.0 percentage points. The 68-percent confidence interval around the 39 difference is from 37 percent to 41 percent ( $39 \pm 2$  percent). The 95-percent confidence interval is from 35 percent to 43 percent; the estimated difference in percentage would therefore range from 35 to 43 in 95 percent of all possible samples drawn from the same population.

*Confidence limits of medians.*—The sampling variability of an estimated median depends upon the distribution as well as on the size of the base. Confidence limits of a median based on sample data may be estimated as follows: (1) From table II using the appropriate base, determine the standard error of a 50-percent characteristic; (2) add to and subtract from 50 percent the standard error determined in step 1; and (3) the confidence interval for the median corresponding to the two points established in step 2 are then read off the distribution of the characteristic. A two-standard-error confidence limit may be determined by finding the values corresponding to 50 percent plus and minus twice the standard error shown in table II.

To illustrate, the median earnings of the estimated 618,000 nonmarried women aged 62-64 who worked in 1971 was \$3,700.

1. From table II, the standard error of 50 percent of these nonmarried women expressed as a percentage is about 2.6 percent.

2. As interest usually centers on the confidence interval for the median at the two-standard-error level, it is necessary to add and subtract twice the standard error obtained in step 1 from 50 percent. This procedure yields limits about 44.8 and 55.2 (rounded to 45 and 55).

3. Since 43 percent of the women had earnings below \$3,000 and 10 percent had earnings between \$3,000 and \$3,999, the dollar value of the lower limit may be found by linear interpolation to be:

$$\frac{45 - 43 \times \$1,000}{10} + \$3,000 = \$3,200$$

4. Since 53 percent had earnings below \$4,000 and 11 percent had incomes between \$4,000 and \$4,999, the dollar value of the upper limit may be found by linear interpolation to be:

$$\frac{55 - 53 \times \$1,000}{11} + \$4,000 = \$4,180$$

Thus, the chances are about 95 out of 100 that a census would have shown the median to be greater than \$3,200 but less than \$4,180.

The distributions of total money income are not given, and so confidence intervals on median total money income cannot be calculated. An estimate of the approximate size of the interval may be obtained, however, from the interval on median earnings for the same subgroup. For example, the median earnings of all nonmarried units aged 60-61 working less than full-year/full-time is \$1,940. A 95-percent confidence interval would range from \$1,480 to \$2,380, a difference of \$900. The median total money income is \$2,930, and a 95-percent confidence interval of approximately \$900 would thus range from \$2,480 to \$3,380.