

# PROFILE & PROJECTIONS OF THE 60+ POPULATION OHIO

## PROJECT TEAM:

**Shahla A. Mehdizadeh, Ph.D.**  
*Principal Investigator*

Disability Projections  
Data Analysis

**Sarah Poff Roman, MGS**  
Primary Author  
Report Design/Layout

**Valerie Wellin**  
Data Management  
Graphic Design  
Online Project Management

**P. Neal Ritchey, Ph.D.**  
*Department of Sociology  
University of Cincinnati*

Population Projections

**William Ciferri, MGS, MBA**  
Secondary Author

**Suzanne Kunkel, Ph.D.**  
Project Consultant



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# FAST FACTS

ABOUT

## The State of Ohio

### and its 60+ Population



[WWW.SCRIPPS.MUOHIO.EDU](http://WWW.SCRIPPS.MUOHIO.EDU)

- Over 17% of Ohio's population is age 60+ (or 1,963,489 individuals)
- By 2020, there will be 2,822,000 individuals age 60+ in Ohio (This is a 44% increase in the 60+ population)
- Nearly 3 in 4 individuals age 85+ are female
- Disability increases with age: Only 3% of 60-69 year olds have a severe disability, compared to 44% of those 90+
- Over one third of individuals age 60+ have at least one disability
- By 2020, over 220,000 individuals age 60+ with a severe disability will reside in the state of Ohio
- Over 12% of the age 60+ population live in poverty
- One in 10 individuals age 60+ are racial or ethnic minorities
- Of men age 60+, 75% are married, compared to only 46% of women
- More than 7 in 10 individuals age 60+ have 12 or fewer years of education
- Of women age 60+, 41% live alone, compared to 20% of men



396 UPHAM HALL  
MIAMI UNIVERSITY  
OXFORD, OH 45056  
PHONE: (513) 529-2914



MIAMI  
UNIVERSITY  
OXFORD OHIO





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## **Preface**

During the next 20 years, the national population, as well as the population in Ohio, will grow older. In anticipation of this impending change, we have created this series of reports to help Ohio area agencies on aging, service providers, and other organizations that are not directly involved in aging services to better plan for the needs of the aging population.

The purpose of this report is to provide the profile of the **older population (60+)** in Ohio and to project the number of older people and the prevalence of disability among this population. Trends and projections are provided for ages 60 and above, because this is the eligibility age for some state and local home care programs. Specific topics explored include disability, poverty, marital status, living alone, and educational attainment among the older population. Throughout the report, trends are compared according to gender and age group. To provide a better understanding of the state's standing in relation to the rest of the nation, Ohio's population characteristics are compared with corresponding measures of U.S. older population. In order to provide insight into the direction the state is moving some population trends are also presented.

In preparing this report, we used data from the Census short form, which is available for all residents of all states, and the Census long-form, which is available for a representative sample of states' residents. The actual Census count from the Census short-form and the weighted sample counts from the long-form may be slightly different.

To obtain the Census long-form data for the U.S. population, we downloaded the 5 percent sample for each of the 50 states and compiled them to create a national data set.

Sources used to create all tables and figures are specified.





# PROFILE & PROJECTIONS OF THE 60+ POPULATION: STATE OF OHIO

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## Background

This report illustrates the demographic changes that occurred in the State of Ohio between 1990 and 2000, and presents projections of the older population, including the number of older adults with disabilities. The report also covers other population characteristics that have been shown to be associated with the need for long-term care services among older adults, such as the prevalence of poverty, living alone, lack of education, and not being married. State-level data are compared to the United States as a whole in order to show differences or similarities in population characteristics. By examining both demographic patterns and informed projections, the State of Ohio will be better prepared to address the needs of its aging and disabled populations.

## State of Ohio Overview

The State of Ohio has 1,963,489 persons over the age of sixty. Ohio has one of the largest aging populations in the United States. Only California, Florida, New York, Texas, and Pennsylvania have a higher number of persons age 60 and over. As shown in the Summary Table, the 60+ population represents 17.3% of the total population in the State of Ohio.

**Summary Table  
Ohio, 2000**

Total Population Age 60+	1,963,489
% Population Age 60+	17.3
Population Age 40+	5,004,592
% Population Age 40+	44.1
% Population 60+ at or Below Poverty Level	12.4
Total Population Age 60+ with Self-Care Disabilities	210,751
% Population Age 60+ with at Least one Physical, Mental, Sensory or Self-Care Disability	35.2
% Population 60+ who are White	89.7
% Population Age 60+ who are Married	58.3
% Population Age 60+ who are Living Alone	32.1
% Population Age 60+ who Have Less Than a High School Diploma	31.5

In some instances in this report, data are presented for the population age 40+. This cohort is important to consider when developing projections, because the population age 40+ in 2000 will be age 60+ in 2020. The population that is currently 40+ is also significant because it contains the baby boom generation. As shown in the summary table, 44.1% of the population in the State of Ohio is currently over the age of 40.

In the remainder of this report, we explore variables (touched on in the Summary Table) that are related to long-term care needs. Factors related to one’s need for long-term care include disability, income, race and ethnicity, marital and educational status, and living arrangements. The following sections provide detailed analyses of these risk factors according to gender, age group, State and U.S. comparisons, and ten-year trends.

**Population Profile**

The total population of the State of Ohio increased by 4.7% between 1990 (10,848,169 residents) and 2000 (11,353,140 residents). In 2000, 17.3% of the State population was 60+. Table 1 provides a detailed breakdown of the older population in the State of Ohio in 2000 by age group and gender.

**Table 1**  
**Population Age 60+, by Gender and Age Group**  
**Ohio, 2000**

Age Group	Men		Women		Total
	Number	Percent	Number	Percent	
<b>60-64</b>	214,641	47.1	241,091	52.9	455,732
<b>65-69</b>	183,727	45.6	218,941	54.4	402,668
<b>70-74</b>	169,083	43.6	218,501	56.4	387,584
<b>75-79</b>	130,350	40.1	195,118	59.9	325,468
<b>80-84</b>	77,227	35.9	138,014	64.1	215,241
<b>85-89</b>	34,712	29.6	82,641	70.4	117,353
<b>90-94</b>	10,903	23.7	35,072	76.3	45,975
<b>95+</b>	2,557	19.0	10,911	81.0	13,468
<b>Total 60+</b>	823,200	41.9	1,140,289	58.1	1,963,489
<b>U.S. 60+</b>	19,546,252	42.7	26,250,948	57.3	45,797,200

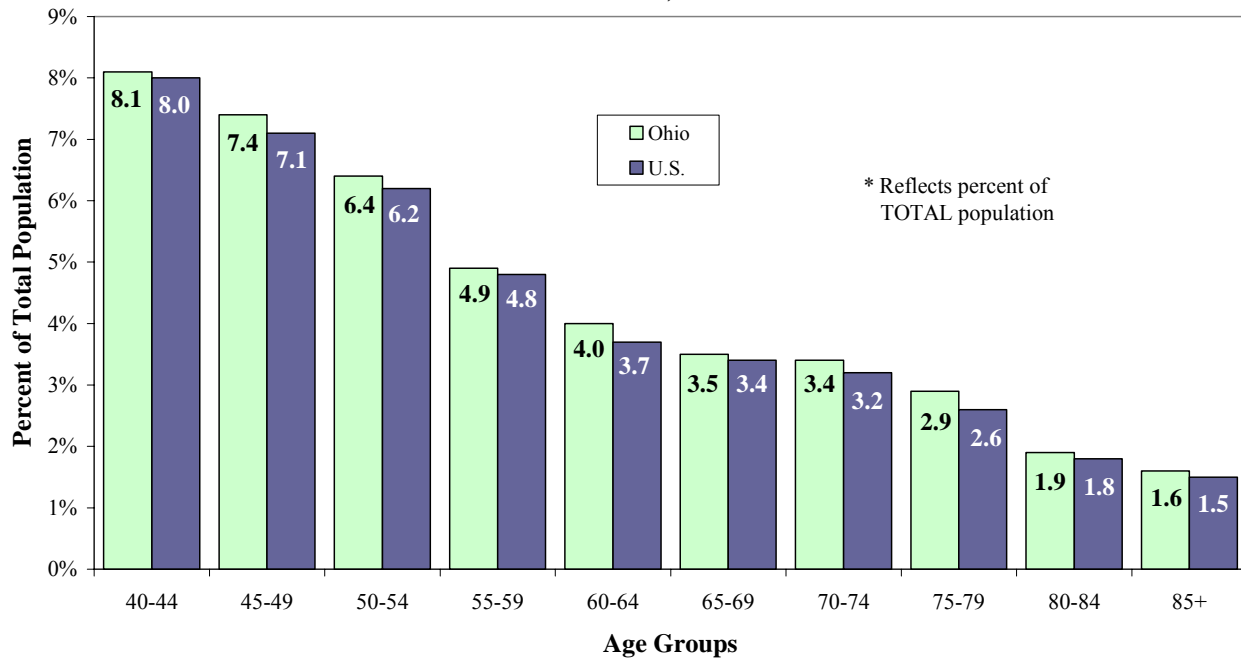
Source: U.S. Census Bureau, 2000 Census of Population: Table P12. SEX BY AGE [49] -  
 Universe: Total Population



**Gender Distribution** - The gender distribution of the older population in the State of Ohio is similar to other states. Of the entire State population age 60+, women comprise 58.1% (compared to 57.3% in the nation). As shown in Table 1, women outnumber men at all ages over 60; a disparity that increases with each advancing age group. Of particular interest is the gender ratio among the oldest age group. Of the population over the age of 84 in the State of Ohio, 72.8% are women. The higher proportion of women among the oldest age group suggests that the population potentially eligible for, and in need of long-term care services, is largely female.

**Growth in the Older Population** - As shown in Figure 1, there are only slight differences in the population distribution across age groups in the state compared to the nation. Although the majority of Ohioans are under the age of 60, the proportion of older adults in the State of Ohio will grow substantially over the next several decades. This growth in the older population is largely a result of the aging baby boomers. Currently ranging from 40 to 59 years of age, this cohort will dramatically impact the age distribution of the older population as they age. The influence of the baby boomers on both State and United States populations is evident in Figure 1.

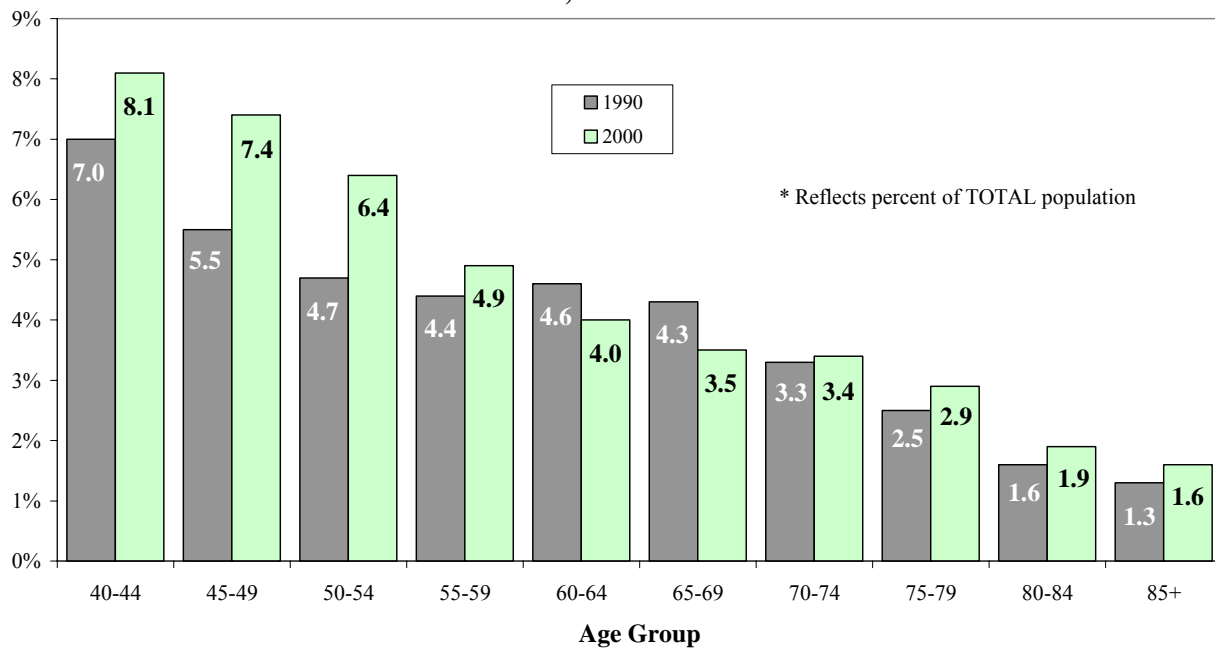
**Figure 1**  
**Population Distribution\* by Age Group (40-85+)**  
**Ohio & U.S., 2000**



Source: U.S.Census Bureau, 2000 Census of Population:P12. SEX BY AGE [49].

The impact of the baby boomers on the age distribution of the 40+ population is also evident when population data from 2000 are compared to data from 1990. As shown in Figure 2, 26.8% of the Ohio's population was age 40-59 in 2000, compared to 21.6% in 1990. Also noteworthy is the increase in the population over the age of 85. In the State of Ohio, this age group comprised 1.6% of the population in 2000 compared to 1.3% in 1990 (a 23% increase in the 85+ population). In the United States, 1.5% of the population was over the age of 85, compared to 1.2% in 1990 (a 25% increase in the 85+ population).

**Figure 2**  
**Population Distribution\* by Age Group (40-85+)**  
**Ohio, 1990 & 2000**



Source: U.S. Census Bureau, 1990 Summary Tape File 1 (STF1) P011 & 2000 Census of Population: P12. SEX BY AGE [49].

Another indication that the population in the State of Ohio is aging is the increase in median age<sup>1</sup>. Between 1990 and 2000, median age increased from 33 years (1990) to 36 years (2000). This increase closely reflects that of the nation, where the median age rose from 32.9 to 35.3 years in the same period. As these segments of the State population reach advanced age, the need for long-term care services may increase.

<sup>1</sup> The **median age** of a population is that age that divides a population into two groups of the same size, such that half the total population is younger, and the other half is older.

## Population Projections

This section of the report focuses on the expected growth of the overall older population, and on the growth of the older population who will experience some limitation in their ability to perform basic *activities of daily living* (ADLs) such as bathing, dressing, and preparing meals.

First, using the methodology outlined below (and detailed at the end of the report) the expected population of each county is projected for the years 2005 to 2020, then the projected county populations are combined to arrive at the state's projected population.

To project the size of the population age 60 and older for the years 2005 to 2020, we began with the population (already born) that has reached at least the age of 40. Using the *cohort component* methodology of population projection (Shryock & Siegel, 1996), we made the following assumptions about both survival and migration rates:

*Survival Rate:* Ohio's survival rates are based on national projected survival rates. These rates include improvements in national mortality rates, while maintaining deviation from the national rates observed in Ohio in the 2000 Vital Statistics.

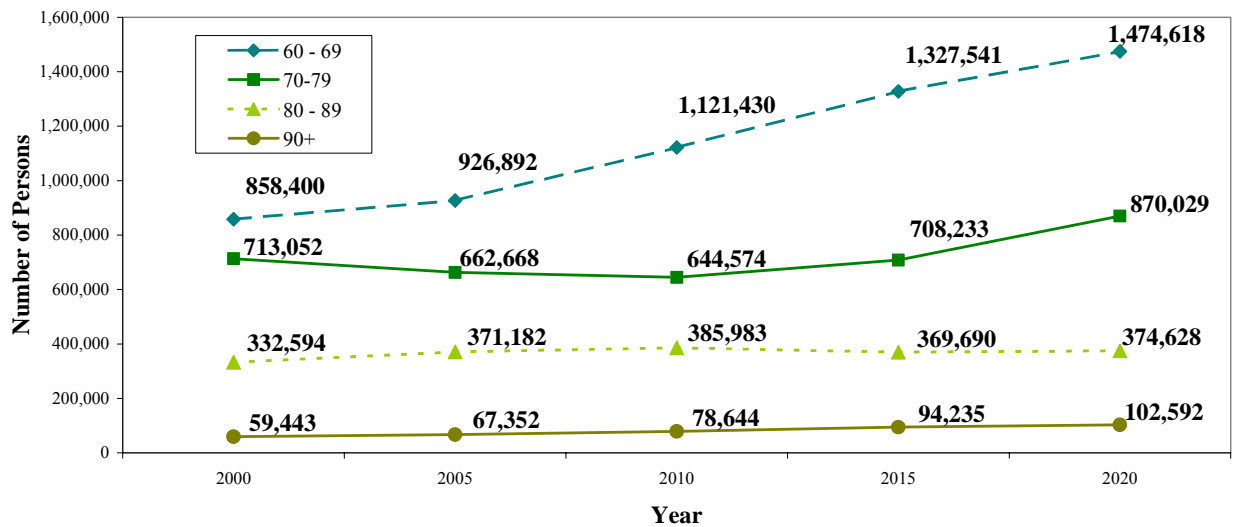
*Migration Rate:* The 10-year net migration rates were estimated using age-sex counts of each county's population in the 1990 and 2000 Censuses adjusted for the deaths occurring to the age-sex group from April 1, 1990 through March 31, 2000. Of course, in calculating the deaths occurring to an age group, adjustment was made for the group's aging during the decade. The age-sex specific rates of net migration for each county during 1995-2000 are assumed to hold for that county during the period 2000-2005 and 2005-2020. For a more detailed explanation of the procedures used for determining survival or migration rates see the Methodology section.

A beneficial feature of these population projections is the detailed presentation of the 85-89, 90-94, and 95+ age groups for the following reasons:

- 1.) The high rate of growth of the population 85 years and over;
- 2.) Rates of disability vary considerably among these age groups;
- 3.) The Federal Interagency Forum on Aging-Related Statistics now recommends that data be presented for ages 85-89, 90-94, and 95+ (<http://www.agingstats.gov/chartbook2000/dataneeds.html>).

The number of residents age 60 and over is expected to increase from a total of 1,963,489 in 2000 to a projected 2,821,867 in 2020. As Figure 3 (and Table 1a in the Appendix) illustrates, the greatest increase is expected among the 60-69 year age group (those currently age 40-49). In 2000, there were 858,400 older adults age 60-69 in the State of Ohio. By the year 2020, when the bulk of the baby boomers move into this age group, it is expected that there will be approximately 1.5 million individuals age 60-69 in the State of Ohio. This projection suggests a 71.8% increase in the State's population in this age group. The 90+ age group is also expected to increase, from 59,443 in 2000, to 102,592 in 2020 (an increase of 72.6%).

**Figure 3**  
**Projections of Population Age 60+, by Year\* and Age Group,**  
**Ohio**

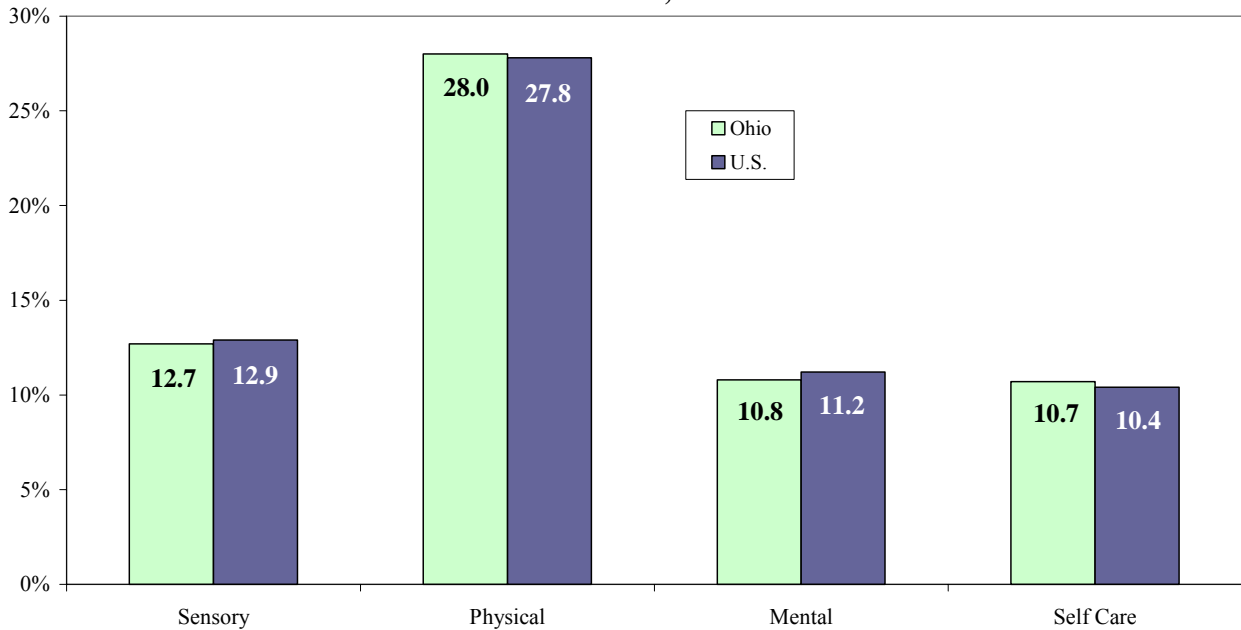


Source: Authors' projections.  
 \*Year 2000 data are actual population counts.

### Prevalence of Disability among the 60+ Population

The rate of disability among the 60+ population in the State of Ohio closely mirrors the nation. In 2000, the most common type of disability reported was physical, followed by sensory, mental, and self-care impairments. According to the Census, a physical impairment is defined as a long-lasting condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting or carrying. Sensory impairments include blindness, deafness, or any severe and long-lasting vision or hearing impairment. Mental health impairment is defined as having difficulty learning, remembering or concentrating because of a physical, mental, or emotional condition that lasts 6 months or more. Self-care impairments include difficulty dressing, bathing, or getting around the house as a result of a long-lasting condition (6 months or more). It should be noted that these categories are not mutually exclusive. Respondents could have multiple impairments, which may span more than one disability category. In 2000, 35.2% of the 60+ population in the State of Ohio had at least one disability.

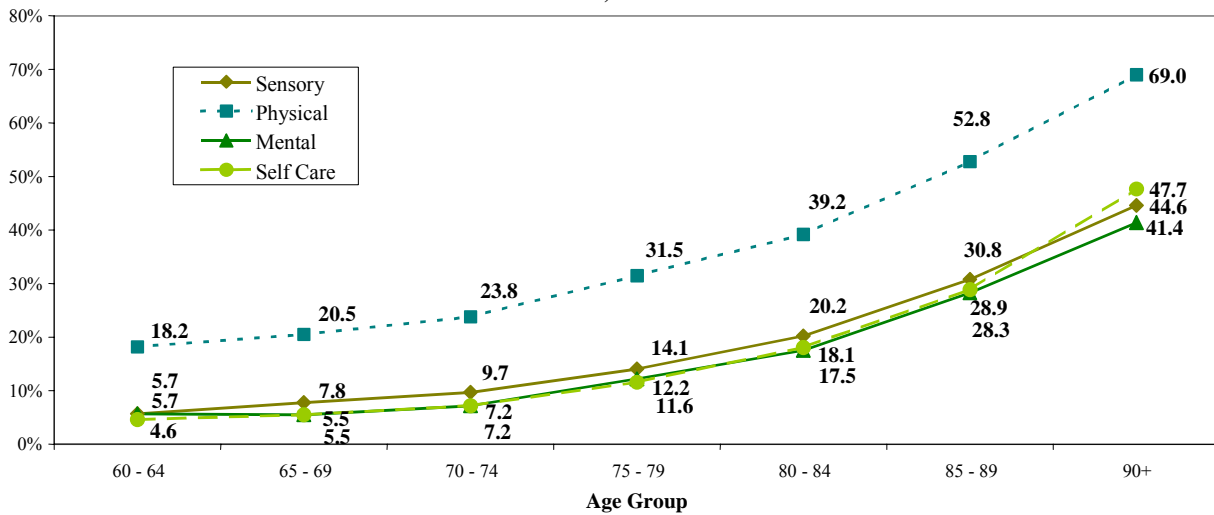
**Figure 4**  
**Proportion of Population Age 60+, with Sensory,**  
**Physical, Mental and Self-Care Disabilities,**  
**Ohio & U.S., 2000**



Source: U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.

As illustrated in Figure 5, the percentage of individuals reporting sensory, physical, mental and self-care disabilities in the State of Ohio steadily increases with age, not surprisingly, with the oldest age group reporting the highest levels in all four types of disability. For example, the proportion of people with physical disabilities increases from 18.2% of the population age 60-64, to 69.0% of the population age 90+.

**Figure 5**  
**Disability Among Population Age 60+**  
**by Type of Disability and Age Group,**  
**Ohio, 2000**



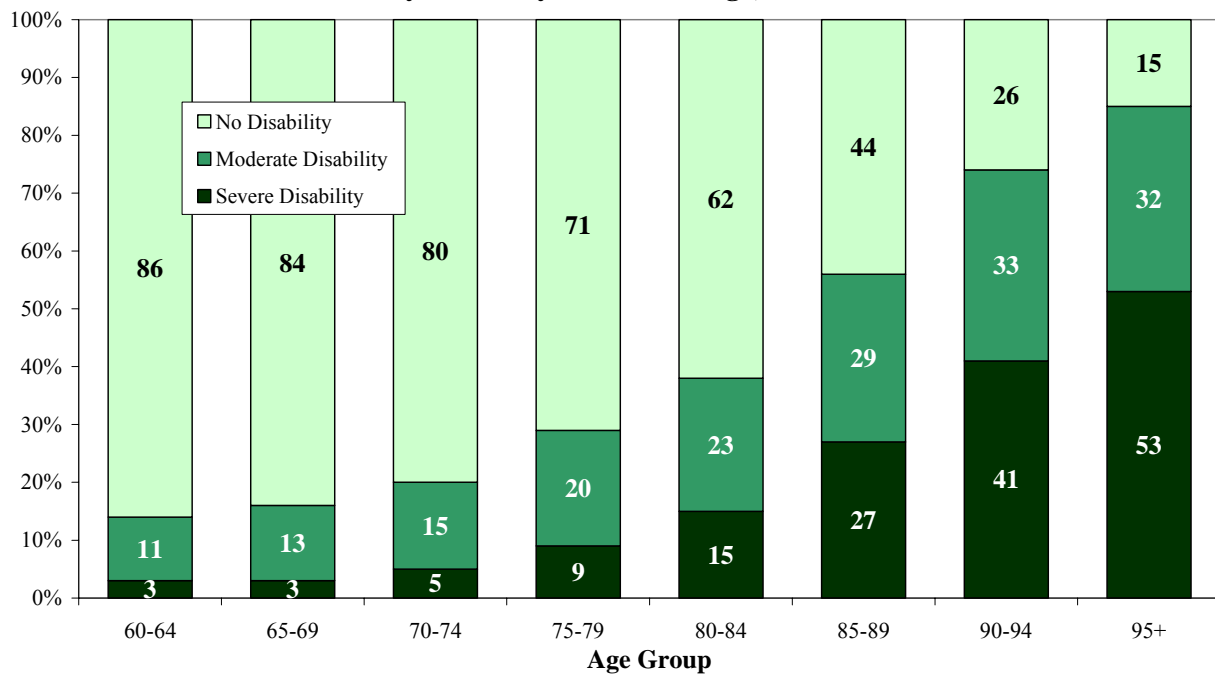
Source: U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.

### Projections of Population with Disability

In this study, disability is defined as a measure of impairment in Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs). Three levels are assigned to this measure: Severe Disability, Moderate Disability, and Little or No Disability. Individuals are classified as moderately disabled if they received assistance in one of the following ADLs: eating, transferring in or out of bed or chair, using the toilet, dressing, bathing, or remaining continent; or in at least one of the following instrumental tasks of daily living: walking, shopping, meal preparation, housekeeping, or using transportation or telephone. Severe disability refers to receiving assistance in at least two of the following ADLs: eating, bathing, transferring in or out of bed or chair, using the toilet, dressing, or remaining continent, or to having cognitive impairment. The disability rates by sex and age group are assumed to remain the same from 2000 to 2020 as they were in 1995.

The prevalence of disability increases with age. As Figure 6 shows, only 3% of the population age 60-64 have a severe disability, compared to more than half (53%) of the people age 95 and older. Women experience higher rates of severe and moderate disability at every age compared to men of the same age. For more information on the prevalence of disability among men and women by age group, see the Methodology section.

**Figure 6**  
**Estimated Percentage Distribution of Total Population**  
**by Disability Status and Age, 1995**



Source: Mehdizadeh, S.A., Kunkel, S.R., Ritchey, P.N. (2001). *Projections of Ohio's Older Disabled Population: 2015 to 2050*. Oxford, OH: Scripps Gerontology Center, Miami University.

Since the rate of disability by gender and age group was held constant throughout the timeline (see the Methodology section for a more detailed explanation), any fluctuations in the number of persons with disabilities across time are attributed to projected changes in the number of people in each age-gender group. As was discussed in the population projections section (see Figure 3), the most significant increases in the 60+ population are expected in the 60-69 and 90+ age groups, while more modest increases are expected in the 70-79 and 80-89 age groups. Because increases are expected in all segments of the 60+ population, the projected number of persons with disabilities is expected to increase from 2000-2020 in the State of Ohio (see Table 2 below, and Table 1a in the Appendix). When broken down by age group, projections suggest the greatest increases in both moderate and severe disability among the 60-69 and 90+ age groups because of projected increases in these populations. Table 1a in the Appendix provides a breakdown of the projected number of disabled persons for each age group for the State of Ohio.

**Table 2**  
**Projections of Disability Among Population Age 60+**  
**Ohio, 2000\*-2020**

<b>Year</b>	<b>Total Population</b>	<b>No Disability</b>	<b>Moderate Disability</b>	<b>Severe Disability</b>
<b>2000</b>	1,963,489	1,468,476	328,128	166,885
<b>2005</b>	2,028,094	1,512,632	339,586	175,876
<b>2010</b>	2,230,631	1,676,101	365,941	188,589
<b>2015</b>	2,499,699	1,895,195	401,742	202,762
<b>2020</b>	2,821,867	2,152,479	448,469	220,919

**Source:** Authors' Projections

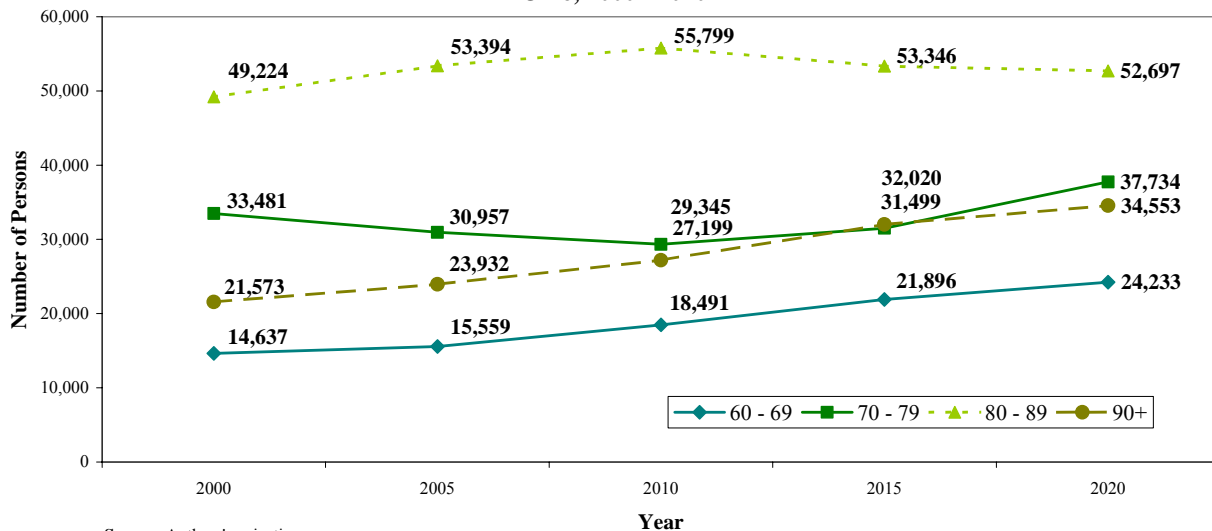
\* Year 2000 data are actual disability counts, years 2005-2020 are projections.



Figures 7 and 8 (and Tables 2a and 3a in the Appendix) show the projected number of disabled women and men (respectively) in the State of Ohio according to age group. Because the rates of disability are assumed to be constant over the future time horizon, projected changes in the number of people with disabilities reflect changes in population composition.

With regard to the older female population, 118,915 were severely disabled in 2000, compared to a projected 149,217 in 2020. Changes in the number of disabled older adults are expected to vary in age groups where population changes are anticipated. Figure 7 shows that between 2000 and 2020, an increase is expected in the number of severely disabled women in all age groups. A more significant increase in numbers of severely disabled women is projected among the 60-69 and 90+ age groups in the State of Ohio, as these populations are expected to increase.

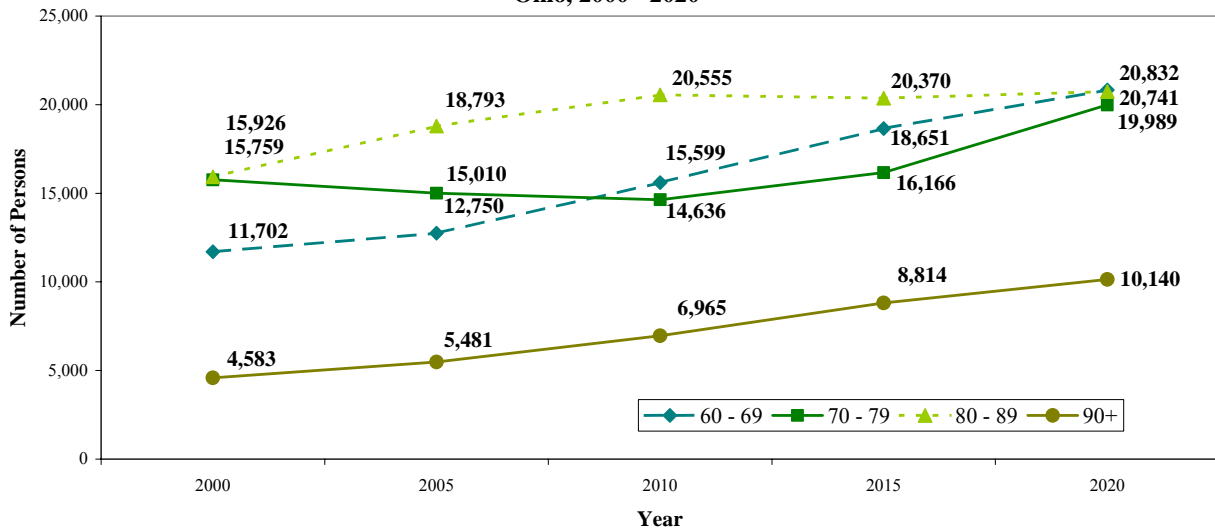
**Figure 7**  
**Projections of the Number of Women Age 60+**  
**with Severe Disability, by Age Group,**  
**Ohio, 2000\*-2020**



Source: Authors' projections.  
 \*Year 2000 data are actual disability counts.

The population with severe disabilities in the State of Ohio is largely female. In 2000, a total of 47,940 males age 60 and over were severely disabled (compared to 118,915 females). By the year 2020, it is expected that the number of disabled older men will increase to 71,702 (compared to 149,217 older women). Figure 8 shows that the largest increase in the number of severely disabled men is expected among the 60-69 and 90+ age group.

**Figure 8**  
**Projections of the Number of Men Age 60+**  
**with Severe Disability, by Age Group,**  
**Ohio, 2000\*-2020**



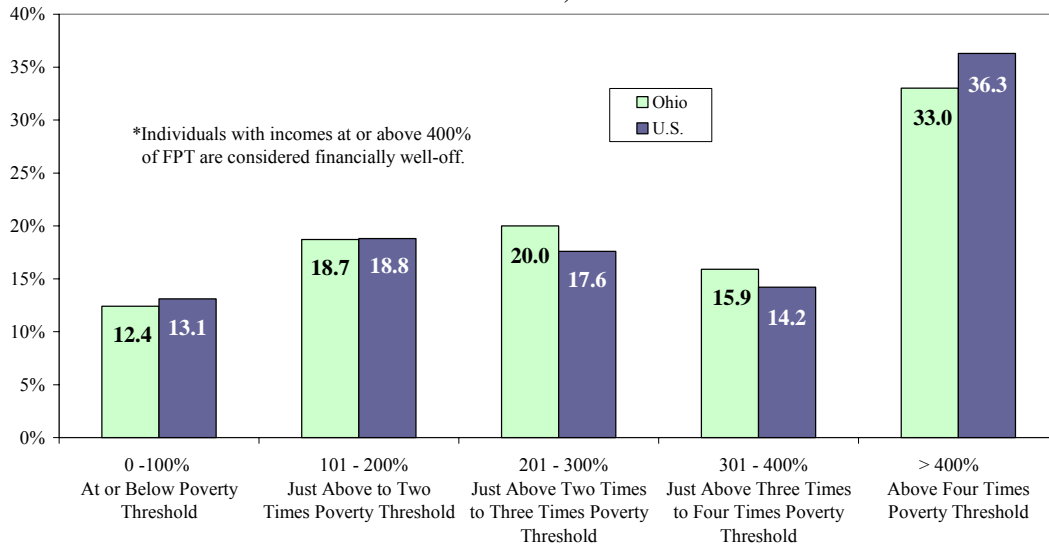
Source: Authors' projections.  
 \*Year 2000 data are actual disability counts.

## Population Characteristics that Could Affect Need for Care

Several variables have been found to be related to the prevalence of disability and the need for long-term care services as one ages. These variables include poverty, racial and ethnic background, marital status, living alone, and educational attainment ([http://www.aoa.gov/prof/statistics/future\\_growth/aging21/Program.asp](http://www.aoa.gov/prof/statistics/future_growth/aging21/Program.asp)). In the following sections, these issues are explored in the context of the older population in the State of Ohio.

**Poverty** - Standards for gauging poverty levels are set by the Federal Poverty Threshold<sup>2</sup>, which delineates income levels (or thresholds) that vary by family size, age of householder, and number of related children under 18 years of age. Rates of poverty are typically discussed as percentages of the Federal Poverty Threshold (FPT), for which those with incomes below 100% of the FPT are the most impoverished, and those with incomes above 400% of the FPT are the most economically advantaged. In the following discussion, data regarding individuals with incomes greater than 400% of the poverty level are included for comparison, although these individuals are not considered impoverished. As shown in Figure 9 a significant number of older adults in the State of Ohio are potential candidates for state and federal assistance based on income eligibility. In 2000, 51.1% of the State's 60+ population (or 1,001,379 individuals) had incomes at or below 300% of the federal poverty level. Of this population, 12.4% (or 243,489 individuals) were living at or below 100% of the poverty level.

**Figure 9**  
**Proportion of Population Age 60+ by Poverty Threshold Ratio,**  
**Ohio & U.S., 2000**

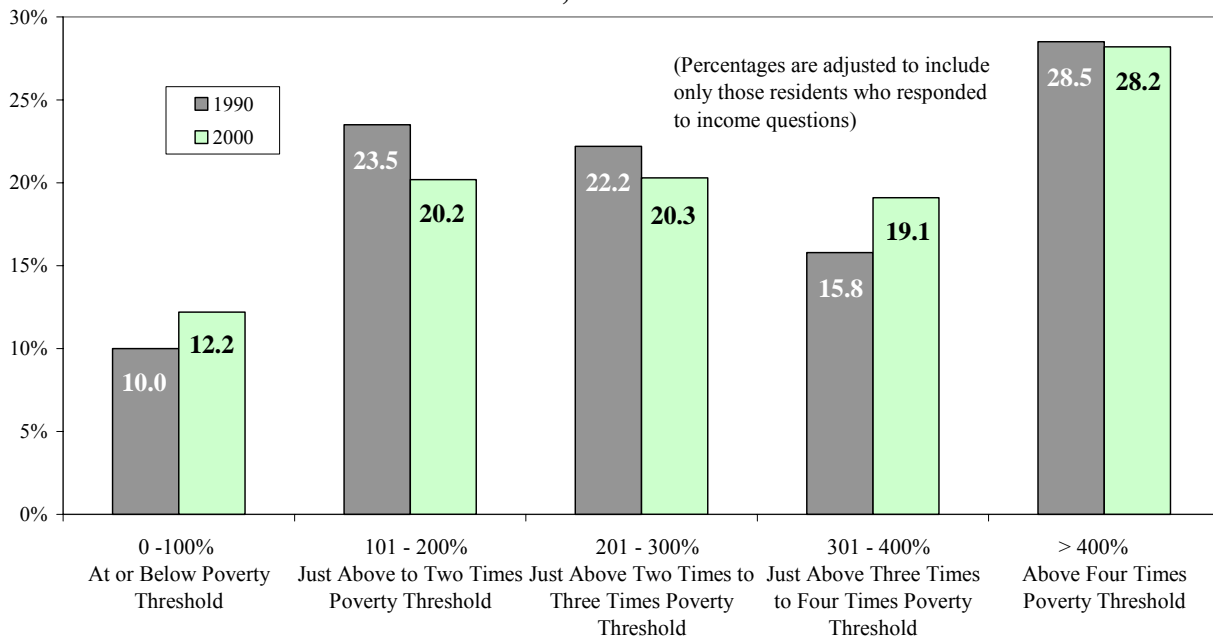


Source: U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.

<sup>2</sup> **Federal Poverty Threshold** - In 2000, the poverty level was \$8,959 for one person under the age of 65, and \$8,259 for an individual over 65. For two person households, the poverty level was \$11,590 if the householder was under 65 and \$10,419 when the householder was 65+. In 1990, the poverty threshold was \$6,800 (annual income) for one person under the age of 65, and \$6,268 for an individual over 65. For two person households, where the householder was under the age of 65, the poverty threshold was \$8,794, and \$7,905 when the householder was 65+. For more information about poverty thresholds, see: <http://www.census.gov/hhes/poverty/threshld.html>

Compared to 1990, there were a higher percentage of older adults at 0-100% and 301-400% of poverty in the State of Ohio in 2000. Figure 10 shows that the percent of adults 60+ living below the poverty level increased from 10.0% in 1990 to 12.2% in 2000. At the other end of the scale, the percent of older adults with incomes over 400% of the poverty level (the most economically advantaged) decreased slightly. A number of people did not complete income related questions properly in the 1990 Census. As a result, the difference in the percentage of people at or below poverty from 1990 to 2000 may be partially due to this responding pattern.

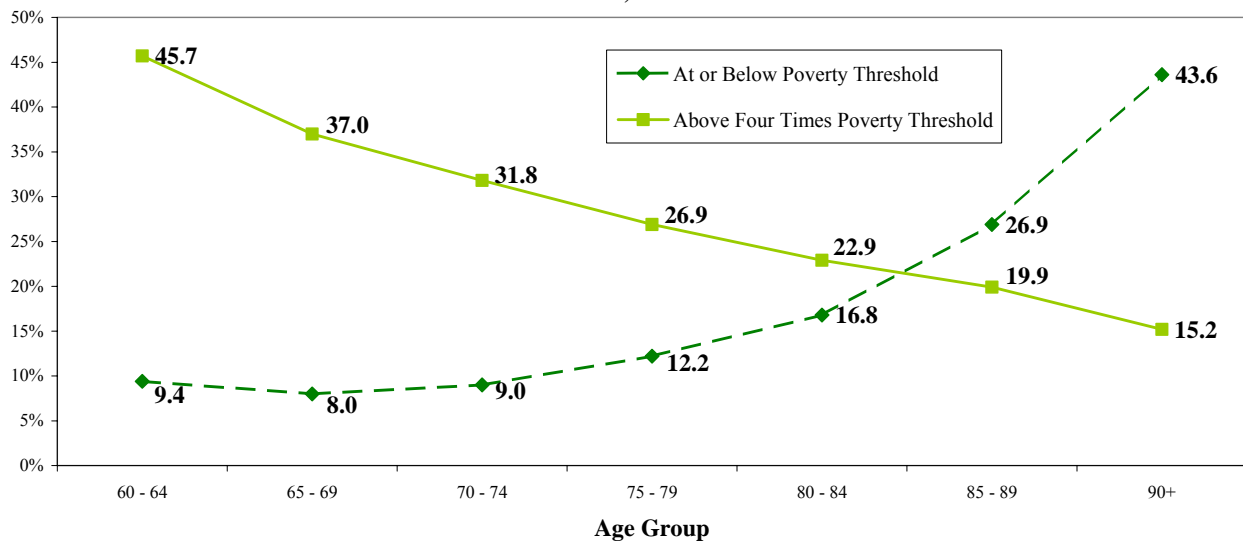
**Figure 10**  
**Proportion of Population Age 60+ by Poverty Threshold Ratio,**  
**Ohio, 1990 & 2000**



Source: U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.

A closer examination of poverty rates in the State of Ohio reveals striking trends in relation to age. As shown in Figure 11, the percentage of people at or below the poverty level increases dramatically with advancing age. To illustrate, 45.7% of 60-64 year olds reported incomes above four times the poverty threshold (the highest income category), compared to only 15.2% of those in the oldest age group (90+). In contrast, 9.4% of 60-64 year olds fall in the lowest income category, while 43.6% of the 90+ population reported incomes at or below the poverty threshold.

**Figure 11**  
**Proportion of 60+ Population in Poverty Compared to Those with Incomes**  
**Above Four Times Poverty Threshold, by Age Group,**  
**Ohio, 2000**



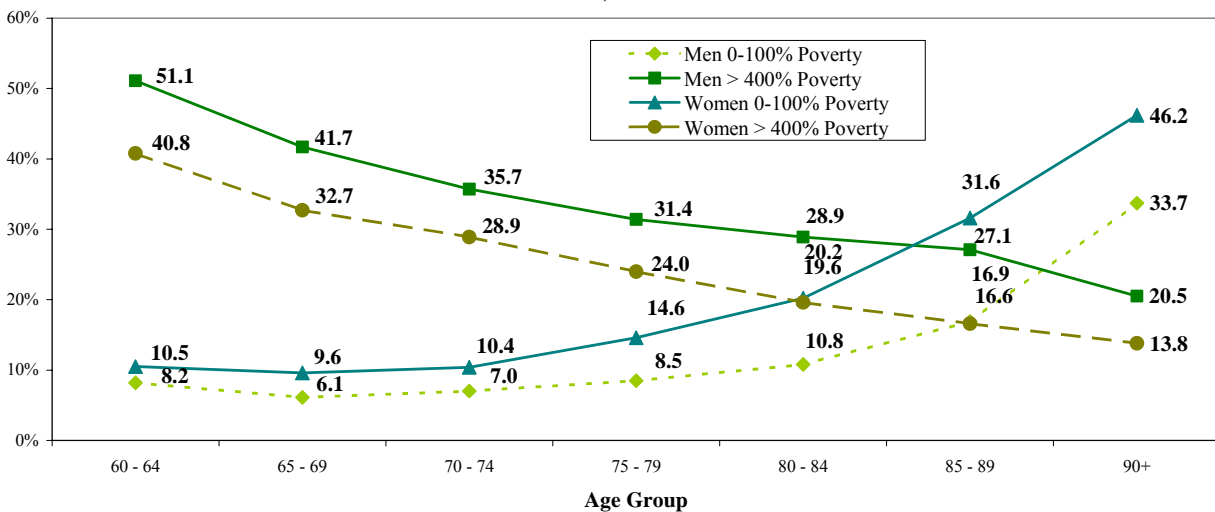
Source: U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.

Figure 12 shows a comparison of the most economically disadvantaged income category ( $\leq 100\%$  FPT) and the most economically advantaged income category ( $> 400\%$  FPT) by gender and age group. In order to show the contrast between the lowest and the highest income groups, the middle income categories have been intentionally left out.

In 2000, 51.1% of men age 60-64 were in the highest income category, while only 20.5% of men 90+ had this level of income. In contrast, only 8.2% of men age 60-64 were in the lowest income category, compared to 33.7% of men age 90+. Figure 12 shows that a fairly stable percentage of older men were classified as having incomes at or below 100% of the FPT from ages 60-84, with a sharp increase in the proportion of men in this income category as they approach the 90+ age group. It appears that age 85-89 is a pivotal point for men, where average incomes drop as they near the 90+ age group.

The pattern of income distribution among older women in the State of Ohio is similar to that of older men. One important distinction is that there is a higher proportion of women in the lowest income category ( $\leq 100\%$  FPT), and a lower proportion of women in the highest income category ( $>400\%$  FPT) at all ages, except among the 90+ age group.

**Figure 12**  
**Proportion of Population Age 60+,**  
**by Poverty Threshold Ratio\*, Age Group, and Gender,**  
**Ohio, 2000**

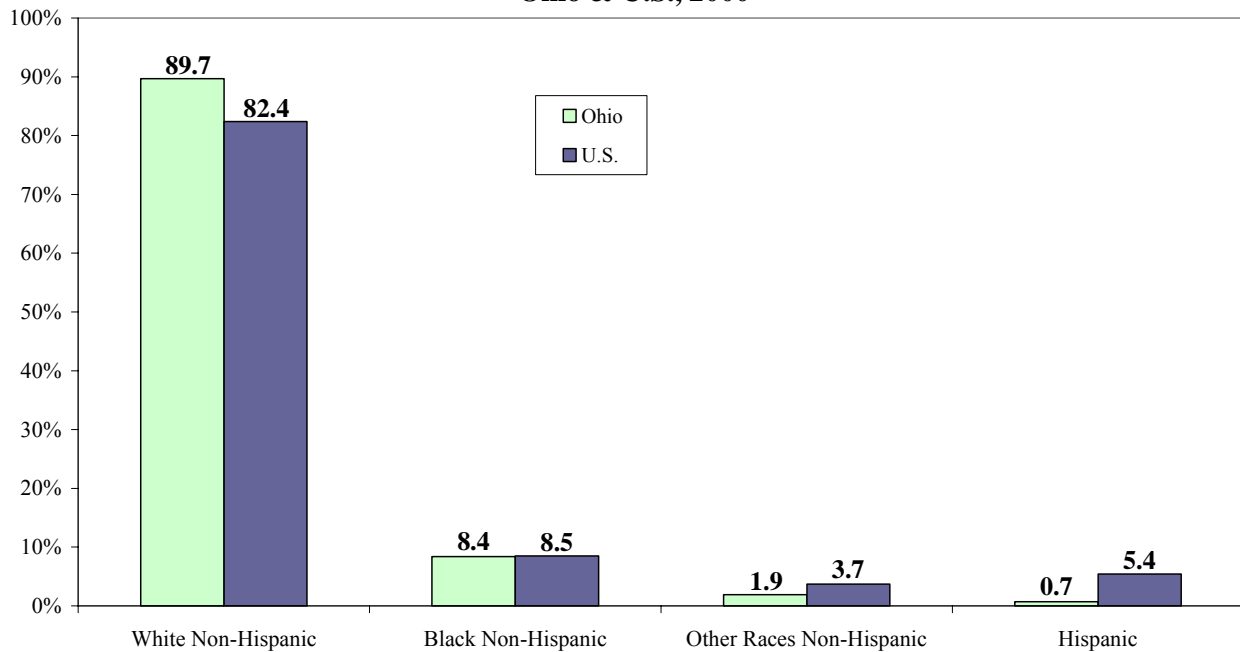


Source: U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.  
 \*Middle income groups have been removed in order to show the contrast between the lowest and highest income groups.

## Race and Ethnicity

The State of Ohio’s older population is less racially and ethnically diverse than the older population in United States as a whole. Figure 13 shows that in 2000, 89.7% of the State population (60+) identified themselves as white non-Hispanic, compared to 82.4% of the United States population. In the same year, the State mirrors the nation in the population self-identified as black non-Hispanic, and has less Hispanic and other non-Hispanic older persons.

**Figure 13**  
**Race and Ethnic Distribution Among Population Age 60+,**  
**Ohio & U.S., 2000**

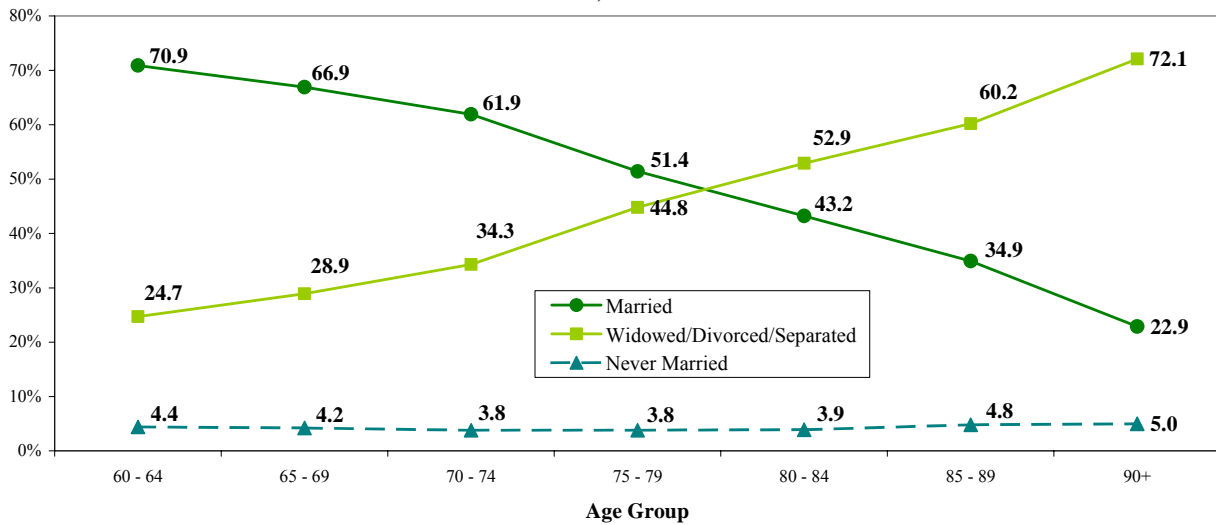


Source: U.S. Census Bureau, 2000 Census of Population: PCT12I, PCT12J, & PCT12H SEX BY AGE.

## Marital Status

According to Census data, the percentage of married older adults decreases steadily after age 60. As illustrated in Figure 14, the majority (70.9%) of 60-64 year olds were married in 2000, while 29.1% were single (defined as widowed, divorced, separated or never married). In contrast to the 60-64 year olds, the marital status of the 90+ population is nearly the inverse. Among this age group, 77.1% were single in 2000, while 22.9% were married.

**Figure 14**  
**Marital Status of Population Age 60+, by Age Group**  
**Ohio, 2000**

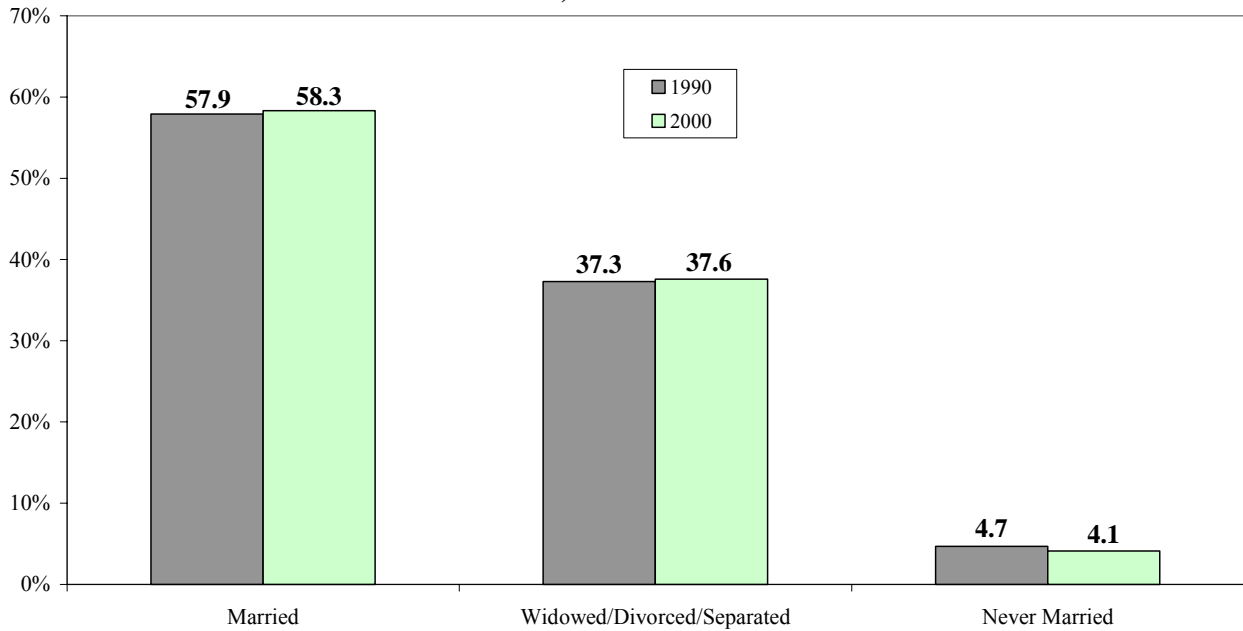


Source: U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.



Between 1990 and 2000, the percentage of married older adults (60+) in the State of Ohio remained fairly stable. In 2000, 58.3% of older persons were married compared to 57.9% in 1990. Similarly, no major changes occurred among the single population (people who were widowed, divorced, separated, or never married). In 2000, 41.7% of the 60+ population was single, compared to 42.0% in 1990.

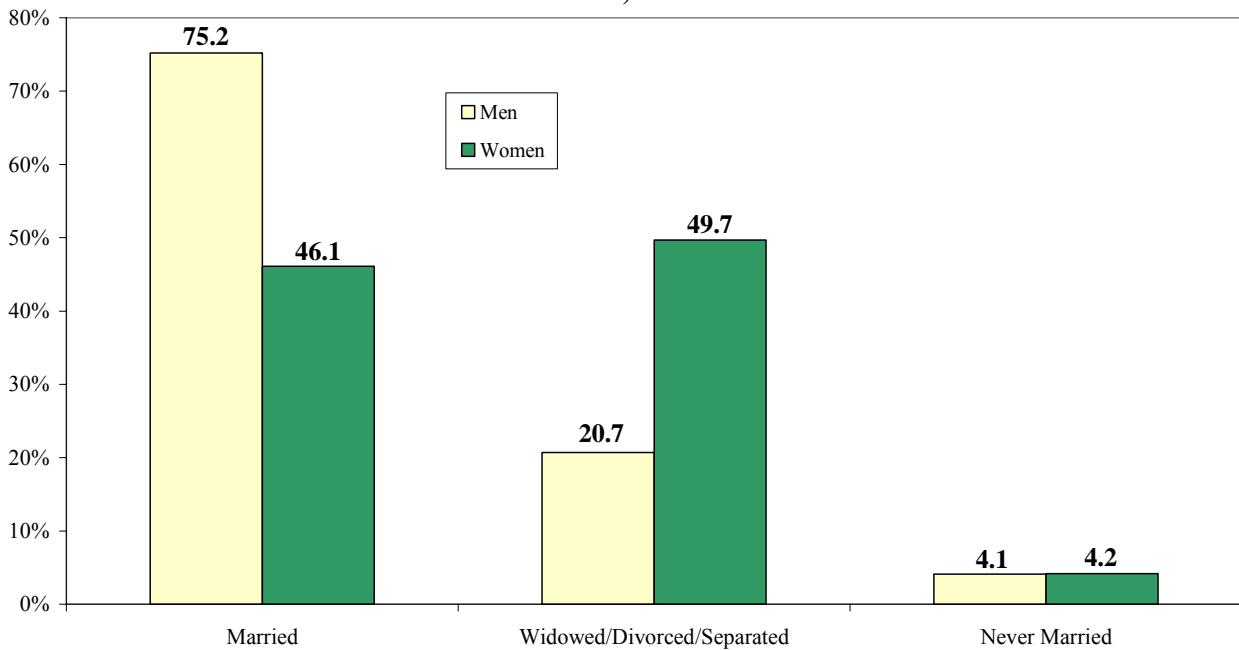
**Figure 15**  
**Marital Status Among Population Age 60+,**  
**Ohio, 1990 & 2000**



Source: U.S. Census Bureau, 1990 and 2000: Public Use Microdata Sample: 5-Percent.

Women above the age of 60 are more likely to be widowed, divorced, or separated than men. Figure 16 shows that 75.2% of men age 60+ in the State of Ohio were married in 2000, compared to only 46.1% of women. Because single older adults are more likely than married couples to need outside help or institutional care, the population in the State of Ohio that is potentially in need of such assistance is largely female.

**Figure 16**  
**Marital Status Among Population Age 60+, by Gender**  
**Ohio, 2000**



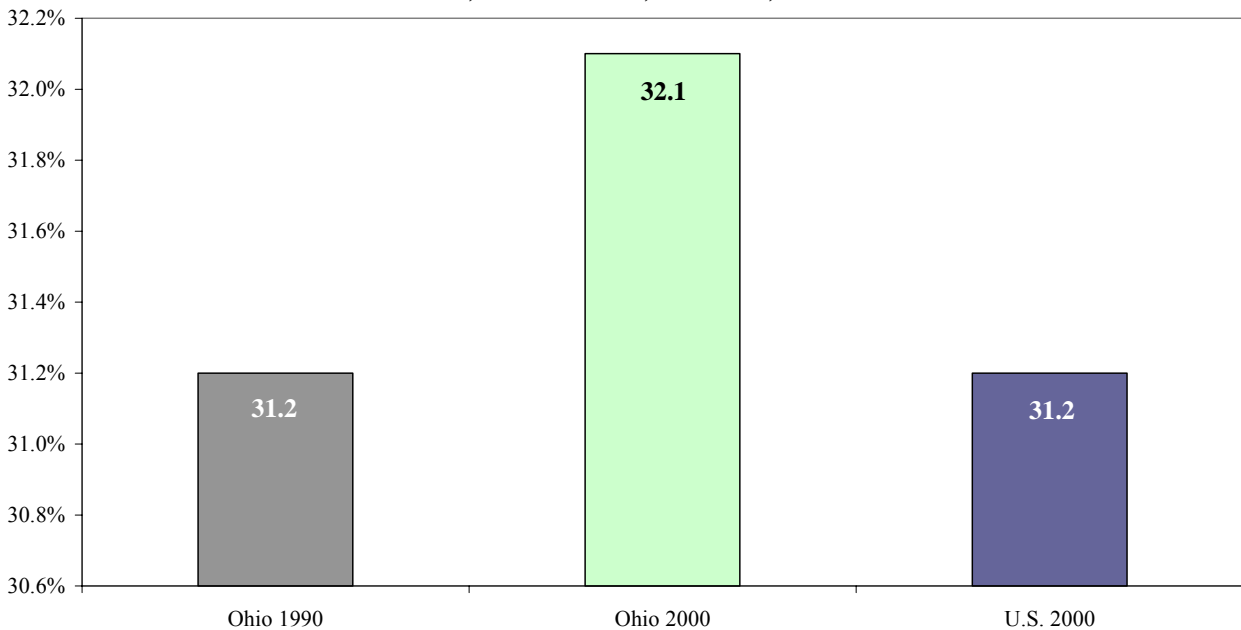
Source: U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.

## Living Alone

Figure 17 compares the proportion of the State of Ohio and United States residents age 60+ who were living alone in 2000, and illustrates the changes that occurred in the State population (60+) living alone between 1990 and 2000.

In 2000, 32.1% of the State of Ohio residents age 60+ were living alone, compared to 31.2% of the U.S. population age 60+. The percentage of older adults living alone in the State of Ohio has increased since 1990, from 31.2% of the 60+ population to 32.1% in 2000.

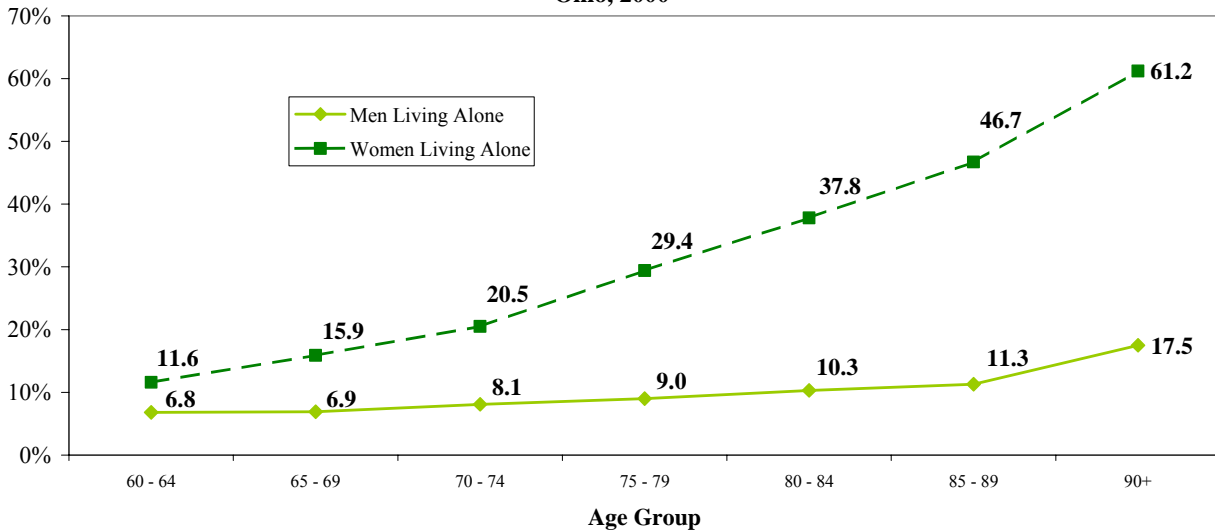
**Figure 17**  
**Proportion of Population Age 60+ Living Alone,**  
**Ohio, 1990 & 2000, and U.S., 2000**



Source: U.S. Census Bureau, 1990 and 2000: Public Use Microdata Sample: 5-Percent.

Older women are more likely than older men to be living alone in the State of Ohio. Figure 18 shows that a higher percentage of women than men are living alone at all ages above 60. While the percentage of men living alone increases only slightly with age, the percent of women living alone increases dramatically with age. Among the 60-64 year age group in 2000, 11.6% of women were living alone, compared to 6.8% of men. Among the oldest age group (90+), 61.2% of women were living alone, compared to only 17.5% of their male counterparts.

**Figure 18**  
**Proportion of Population Age 60+ Living Alone,**  
**by Gender, and Age Group,**  
**Ohio, 2000**

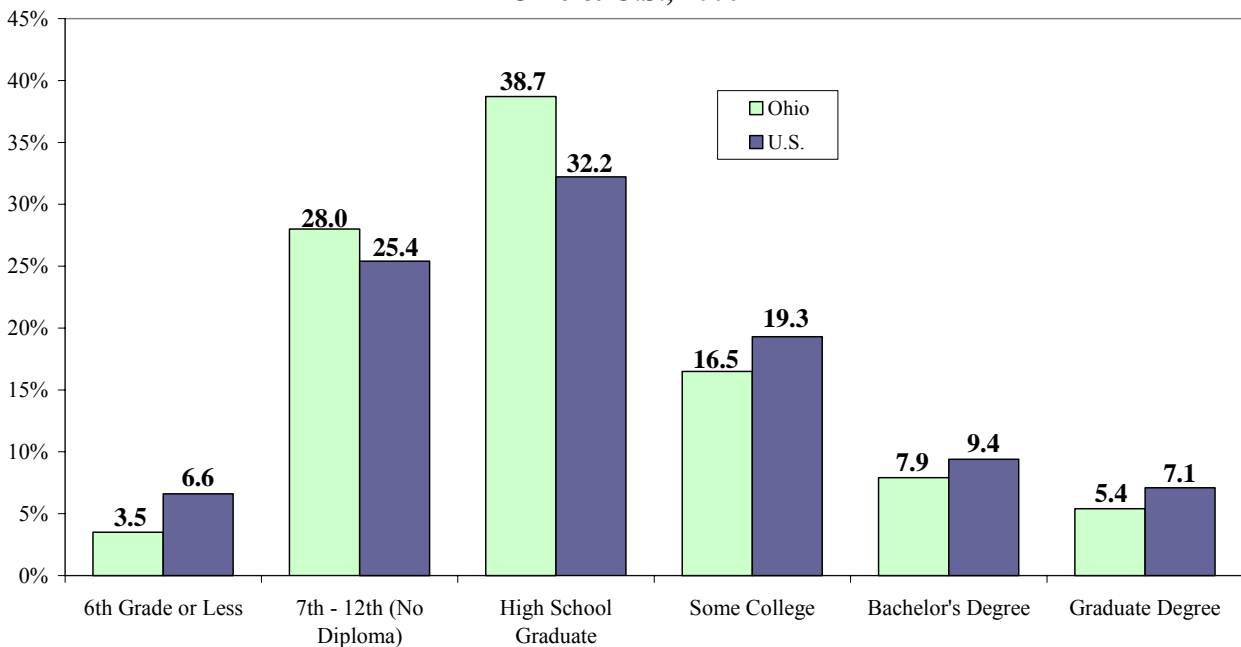


Source: U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.

## Education

Studies suggest that there is a strong relationship between educational attainment and the prevalence of poverty and disability in old age. Figure 19 shows that the majority of older adults (60+) in the State of Ohio have completed 12 or fewer years of school. Over one third (38.7%) of older adults have completed high school, and 31.5% have completed less than 12 years. This suggests that a significant proportion of the older population may be economically vulnerable.

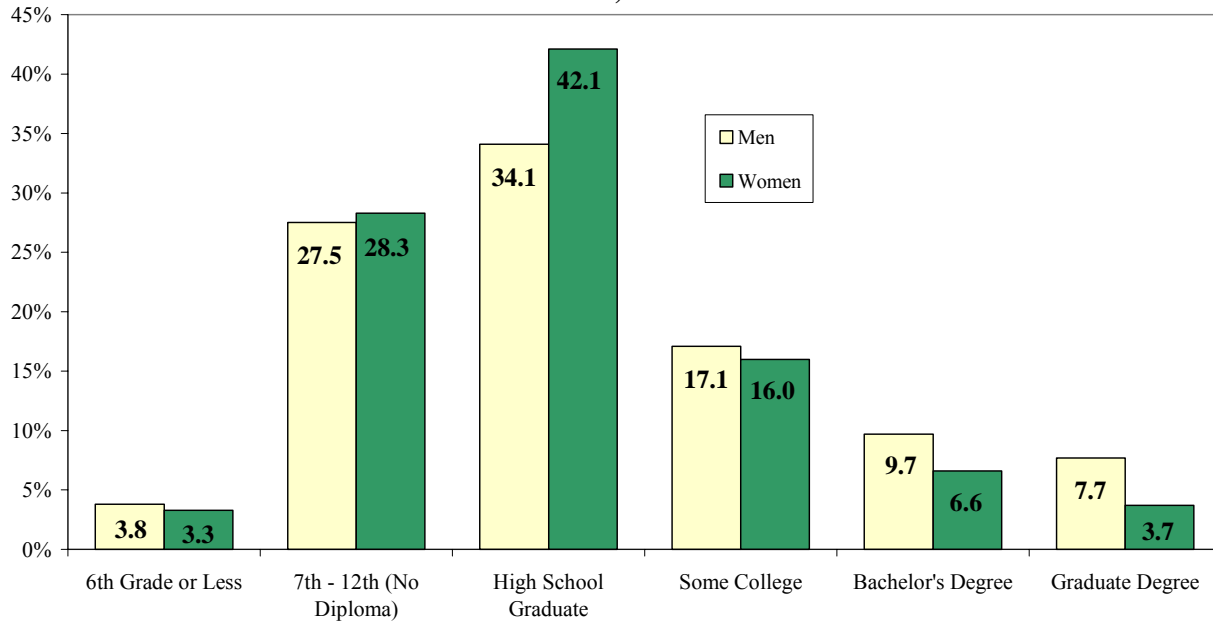
**Figure 19**  
**Highest Level of Educational Attainment**  
**Among Population Age 60+**  
**Ohio & U.S., 2000**



Source: U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.

Figure 20 contrasts the educational attainment of older adults in the State of Ohio by gender. Older women in the State of Ohio are more likely to have only completed high school, while older men are more likely to have pursued further education. As a whole, the older female population in the State of Ohio is less educated than the older male population.

**Figure 20**  
**Highest Level of Educational Attainment**  
**Among Population Age 60+, by Gender**  
**Ohio, 2000**



Source: U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.

## Summary

This analysis of population trends and projections in the State of Ohio reveals several important issues with regard to the prevalence of poverty and disability among the older population. Primarily, it is evident that the Ohio's population is aging, and the population age 60+ will continue to grow over the next twenty years. More specifically, the so-called "oldest old" (85+) are the fastest growing age group in the State (as well as the nation). The unprecedented growth in the older population will present the State (and the nation) with a number of challenges in the coming years. Among the older population in the State of Ohio, levels of disability and poverty increase with age, with the oldest old experiencing the highest rates of both. Also of concern is the preponderance of older women among the oldest age groups, who comprise a majority of the impoverished, disabled and single populations. These women, who are highly economically vulnerable, and are potentially in need of significant personal care assistance, are frequently living alone; a trend that is expected to become increasingly common over the next several decades.

## Methodology

Projections of the disabled older population in the State of Ohio were calculated in three steps. We developed projections of the State's older population by gender and age groups from 2005 to 2020 (by combining county projected populations). We also made estimates of disability rates for the older population by gender and age groups. And, we applied these disability rates to the projected population to project the number of persons with a disability in the State of Ohio.

**Projection Method** - We developed population projections using the "cohort component method" (Shryock & Siegel, 1996). This method involves beginning with actual population counts in gender and age groups, and applying specific rates of change (births, deaths, and migration) to estimate the future population. We projected the population in cycles of 5-year periods through the year 2020. We applied projected survival rates to the beginning population in order to calculate the surviving population for a 5-year period (see following section for an explanation of survival rates). Next, we applied gender and age group specific migration rates to calculate the number of survivors leaving and joining the county population during the five years. The final projected population equals the survived population plus the difference between the number of migrants leaving and joining the county. The projected population at the end of each 5-year period becomes the beginning population for the next 5-year period, and the procedure is repeated over the desired time horizon. We used 5-year age groupings of men and women to make the projections. In order to project the population that will be 60+ in 2020, we began with the population that was 40+ in 2000 (these cohorts, of course, age as they are projected forward).

**Survival Rates** - To calculate survival rates for the older population in Ohio, we combined projected national mortality rates from the Census with actual mortality rates for the state to develop a trended set of survival rates for 2005-2020. All calculations were done for each gender in 5-year age groups. Using Census projected life tables for 2000, 2005, 2010, 2015, and 2020, we developed 5-year survival rates for the nation (for life tables, see <http://www.census.gov/population/www/projections/natdet.html>). Using Ohio counts of death and counts of population for 2000, we developed survival rates for Ohio for 2000. We then projected the County's survival rates to pattern the expected change for the Nation while maintaining the difference between the County and the Nation that occurred in 2000.

**Migration Rates** - We computed net migration estimates (i.e., the difference in the number of migrants joining and leaving the county) for the County for each gender in 5-year age groups (beginning with ages 40-44 years old, through 95+). We calculated migration estimates using Census data for 1990 and 2000 and counts of County death from Ohio public use mortality files (Ohio Department of Health, 1990-2000). We "survived" the 1990 County population of each gender and age group by subtracting the deaths from those residing in the county from April 1, 1990 through March 31, 2000. In calculating the deaths occurring to an age group, we adjusted for the group's getting older, or aging, during the decade. We calculated net migration by subtracting this survived population from the 2000 count of the age population (the age group that was 10 years older in 2000 than in 1990). Thus, net migration equals the actual 2000 count minus the survived population (or minus the number of people that would have been in the county had no migration taken place during the decade). The aforementioned set of assumptions, which guided our projection methodology, garnered specific results. If these assumptions were

changed, it would yield different results. In 2003, the Ohio Department of Development produced a series of population projections for each of Ohio's 88 counties. As their research was based on a different set of assumptions, their numbers differ from ours slightly (<http://www.odod.state.oh.us/research/>).

**Estimation of Age and Sex Specific Disability Rates for Gender and Age Groups -** Disability in this study is defined as a measure of impairment in activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL). Three levels were assigned to this measure: Severe Disability, Moderate Disability, and Little or No Disability. Disability rates for the institutionalized and community based older population were calculated separately, weighted by their respective proportions in the population, and then combined.

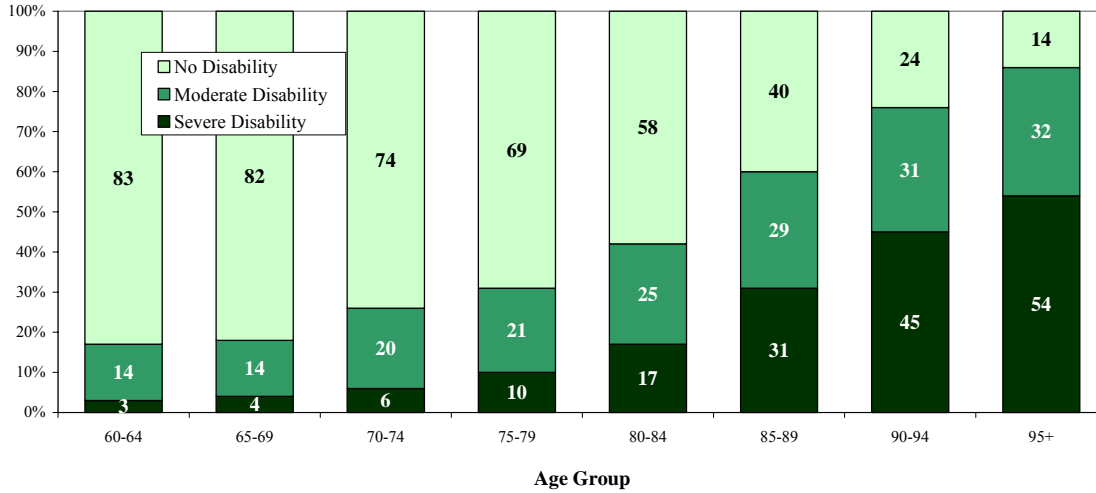
The community disability rates were calculated using the community portion of the 1994 National Long Term Care Survey (NLTC). Institutional disability rates were calculated using the 1995 National Nursing Home Survey (NNHS). These surveys provided information to calculate the disability rate for the 65+ population. As we defined disability, we relied on individual ADL-IADL item scores. Sample participants were identified as either dependent in performing Activities of Daily Living or independent in order to assign disability status to each individual. Two criteria were used in selecting individual ADL or IADL items to include in the disability scale: 1) items must have similar wording, content, and time span in both surveys; and 2) the scale, and the items used in creating the scale, must be as similar as possible to the items used in calculating the disability measure that we created in our earlier studies of projecting disabled older population of Ohio.

We used 2000 Census data on self-care disabilities and the National Health Interview Survey on Disability, 1995: Phase II Adult Followback as a guide to extend the disability rates established for the 65+ population to the 60-64 age group. We are assuming that the proportion of the population that will become disabled in each gender and age group will remain constant from 1995 (the survey dates) to the year 2020. We acknowledge that there are studies that suggest it could be otherwise.



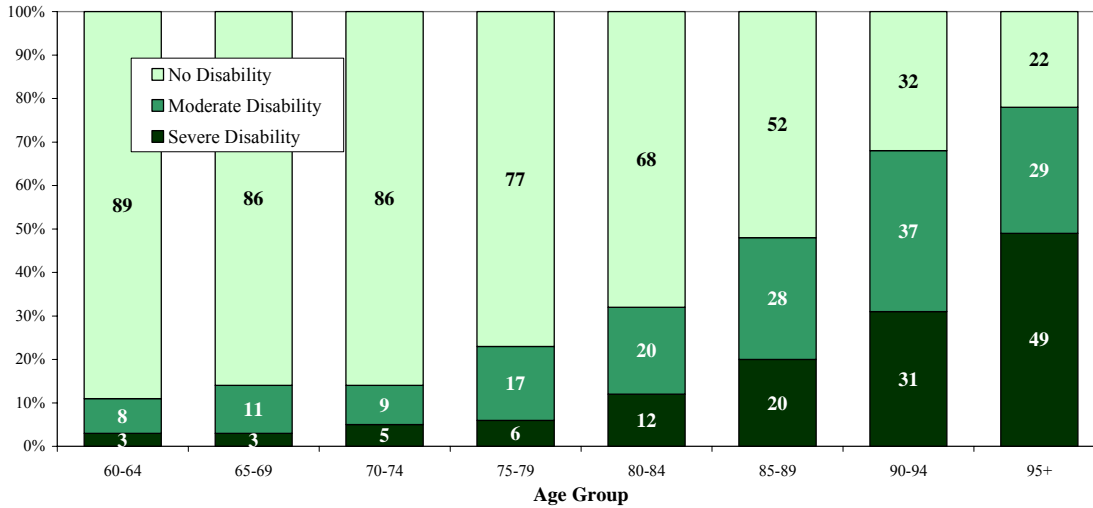
Figures 21 and 22 show the higher rates of severe disability among women of all ages, and the consistent increase in the prevalence of disability with advancing age for both men and women.

**Figure 21**  
**Estimated Percentage Distribution of Women**  
**by Disability Status and Age, 1995**



Source: Mehdizadeh, S.A., Kunkel, S.R., Ritchey, P.N. (2001). *Projections of Ohio's Older Disabled Population: 2015 to 2050*. Oxford, OH: Scripps Gerontology Center, Miami University.

**Figure 22**  
**Estimated Percentage Distribution of Men**  
**by Disability Status and Age, 1995**



Source: Mehdizadeh, S.A., Kunkel, S.R., Ritchey, P.N. (2001). *Projections of Ohio's Older Disabled Population: 2015 to 2050*.

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# Appendix

**Table 1a**  
**Projections of Total Older Population by Age and Levels of Disability**  
**Ohio, 2000, 2005, 2010, 2015, 2020**

<b>Year</b>	<b>Age Group</b>	<b>Total Population</b>	<b>No Disability</b>	<b>Moderate Disability</b>	<b>Severe Disability</b>
<b>2000*</b>	<b>60 - 69</b>	858,400	729,383	102,678	26,339
	<b>70 - 79</b>	713,052	541,081	122,731	49,240
	<b>80 - 89</b>	332,594	184,015	83,429	65,150
	<b>90+</b>	59,443	13,997	19,290	26,156
	<b>Total Age 60+</b>	1,963,489	1,468,476	328,128	166,885
<b>2005</b>	<b>60 - 69</b>	926,892	788,155	110,428	28,309
	<b>70 - 79</b>	662,668	502,388	114,313	45,967
	<b>80 - 89</b>	371,182	206,067	92,928	72,187
	<b>90+</b>	67,352	16,022	21,917	29,413
	<b>Total Age 60+</b>	2,028,094	1,512,632	339,586	175,876
<b>2010</b>	<b>60 - 69</b>	1,121,430	954,353	132,987	34,090
	<b>70 - 79</b>	644,574	490,554	110,039	43,981
	<b>80 - 89</b>	385,983	212,395	97,234	76,354
	<b>90+</b>	78,644	18,799	25,681	34,164
	<b>Total Age 60+</b>	2,230,631	1,676,101	365,941	188,589
<b>2015</b>	<b>60 - 69</b>	1,327,541	1,129,368	157,626	40,547
	<b>70 - 79</b>	708,233	540,728	119,840	47,665
	<b>80 - 89</b>	369,690	202,511	93,463	73,716
	<b>90+</b>	94,235	22,588	30,813	40,834
	<b>Total Age 60+</b>	2,499,699	1,895,195	401,742	202,762
<b>2020</b>	<b>60 - 69</b>	1,474,618	1,254,518	175,035	45,065
	<b>70 - 79</b>	870,029	666,529	145,777	57,723
	<b>80 - 89</b>	374,628	207,085	94,105	73,438
	<b>90+</b>	102,592	24,347	33,552	44,693
	<b>Total Age 60+</b>	2,821,867	2,152,479	448,469	220,919

**Source:** U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.

\* Year 2000 data are actual population counts, years 2005-2020 are projections.

**Table 2a**  
**Projections of the 60+ Female Population by Age Group and Levels of Disability**  
**Ohio**

<u>Year</u>	<u>Age Group</u>	<u>Total Population</u>	<u>Population with No Disability</u>	<u>Population with Disability</u>	
				Moderate <sup>a</sup>	Severe <sup>b</sup>
2000	60-64	241,091	200,193	34,242	6,656
	65-69	218,941	180,379	30,581	7,981
	70-74	218,501	162,671	42,716	13,114
	75-79	195,118	132,884	41,867	20,367
	80-84	138,014	79,672	34,373	23,969
	85-89	82,641	33,415	23,971	25,255
	90-94	35,072	8,473	10,901	15,698
	95 +	10,911	1,525	3,511	5,875
	<b>Total</b>	<b>1,140,289</b>	<b>799,212</b>	<b>222,162</b>	<b>118,915</b>
2005	60-64	270,803	224,865	38,462	7,476
	65-69	221,725	182,672	30,970	8,083
	70-74	195,334	145,423	38,187	11,724
	75-79	184,259	125,489	39,537	19,233
	80-84	151,106	87,230	37,633	26,243
	85-89	88,843	35,922	25,770	27,151
	90-94	39,614	9,571	12,312	17,731
	95 +	11,516	1,609	3,706	6,201
	<b>Total</b>	<b>1,163,200</b>	<b>812,781</b>	<b>226,577</b>	<b>123,842</b>
2010	60-64	339,356	281,788	48,199	9,369
	65-69	250,232	206,158	34,952	9,122
	70-74	199,235	148,327	38,950	11,958
	75-79	166,566	113,439	35,740	17,387
	80-84	145,170	83,803	36,155	25,212
	85-89	100,086	40,468	29,031	30,587
	90-94	44,538	10,760	13,843	19,935
	95+	13,490	1,885	4,341	7,264
	<b>Total</b>	<b>1,258,673</b>	<b>886,628</b>	<b>241,211</b>	<b>130,834</b>

**Table 2a Continued**  
**Projections of 60+ Female Population by Age Group and Levels of Disability**  
**Ohio**

<u>Year</u>	<u>Age Group</u>	<u>Total Population</u>	<u>Population with No Disability</u>	<u>Population with Disability</u>	
				Moderate <sup>a</sup>	Severe <sup>b</sup>
<b>2015</b>	<b>60-64</b>	377,361	313,346	53,597	10,418
	<b>65-69</b>	314,875	259,416	43,981	11,478
	<b>70-74</b>	226,336	168,504	44,248	13,584
	<b>75-79</b>	171,631	116,889	36,827	17,915
	<b>80-84</b>	133,412	77,015	33,227	23,170
	<b>85-89</b>	98,744	39,926	28,642	30,176
	<b>90-94</b>	52,288	12,632	16,251	23,405
	<b>95 +</b>	16,000	2,236	5,149	8,615
	<b>Total</b>	<b>1,390,647</b>	<b>989,964</b>	<b>261,922</b>	<b>138,761</b>
<b>2020</b>	<b>60-64</b>	413,829	343,628	58,777	11,424
	<b>65-69</b>	351,382	289,493	49,080	12,809
	<b>70-74</b>	286,444	213,253	55,999	17,192
	<b>75-79</b>	196,793	134,025	42,226	20,542
	<b>80-84</b>	139,555	80,562	34,757	24,236
	<b>85-89</b>	93,133	37,657	27,015	28,461
	<b>90-94</b>	53,608	12,951	16,662	23,995
	<b>95 +</b>	19,608	2,740	6,310	10,558
	<b>Total</b>	<b>1,554,352</b>	<b>1,114,309</b>	<b>290,826</b>	<b>149,217</b>

**Source:** Authors' projections.

<sup>a</sup> Moderate disability is defined as received help in at least one of the following activities of daily living: eating, transferring in or out of bed or chair, getting to the toilet, dressing, bathing, remaining continent; or in at least two of the following instrumental activities of daily living: walking, shopping, meal preparation, housekeeping, or using transportation.

<sup>b</sup> Severe disability is defined as received help in at least two of the following activities of daily living: eating, transferring in or out of bed or chair, getting to the toilet, dressing, remaining continent, or having cognitive impairment.



**Table 3a**  
**Projections of the 60+ Male Population by Age Group and Levels of Disability**  
**Ohio**

<u>Year</u>	<u>Age Group</u>	<u>Total Population</u>	<u>Population with No Disability</u>	<u>Population with Disability</u>	
				Moderate <sup>a</sup>	Severe <sup>b</sup>
2000	60-64	214,641	190,512	17,911	6,218
	65-69	183,727	158,299	19,944	5,484
	70-74	169,083	145,909	15,553	7,621
	75-79	130,350	99,617	22,595	8,138
	80-84	77,227	52,728	15,445	9,054
	85-89	34,712	18,200	9,640	6,872
	90-94	10,903	3,437	4,132	3,334
	95 +	2,557	562	746	1,249
	<b>Total</b>	<b>823,200</b>	<b>669,264</b>	<b>105,966</b>	<b>47,970</b>
2005	60-64	245,162	217,602	20,457	7,103
	65-69	189,202	163,016	20,539	5,647
	70-74	153,385	132,363	14,109	6,913
	75-79	129,690	99,113	22,480	8,097
	80-84	89,039	60,792	17,807	10,440
	85-89	42,194	22,123	11,718	8,353
	90-94	13,377	4,217	5,069	4,091
	95 +	2,845	625	830	1,390
	<b>Total</b>	<b>864,894</b>	<b>699,851</b>	<b>113,009</b>	<b>52,034</b>
2010	60-64	314,534	279,175	26,246	9,113
	65-69	217,308	187,232	23,590	6,486
	70-74	159,463	137,608	14,668	7,187
	75-79	119,310	91,180	20,681	7,449
	80-84	90,494	61,786	18,098	10,610
	85-89	50,233	26,338	13,950	9,945
	90-94	16,996	5,358	6,441	5,197
	95 +	3,620	796	1,056	1,768
	<b>Total</b>	<b>971,958</b>	<b>789,473</b>	<b>124,730</b>	<b>57,755</b>

**Table 3a Continued**  
**Projections of 60+ Male Population by Age Group and Levels of Disability**  
**Ohio**

<u>Year</u>	<u>Age Group</u>	<u>Total Population</u>	<u>Population with No Disability</u>	<u>Population with Disability</u>	
				Moderate <sup>a</sup>	Severe <sup>b</sup>
<b>2015</b>	<b>60-64</b>	355,120	315,199	29,633	10,288
	<b>65-69</b>	280,185	241,407	30,415	8,363
	<b>70-74</b>	184,581	159,283	16,979	8,319
	<b>75-79</b>	125,685	96,052	21,786	7,847
	<b>80-84</b>	84,937	57,992	16,987	9,958
	<b>85-89</b>	52,597	27,578	14,607	10,412
	<b>90-94</b>	21,129	6,661	8,007	6,461
	<b>95 +</b>	4,818	1,059	1,406	2,353
	<b>Total</b>	<b>1,109,052</b>	<b>905,231</b>	<b>139,820</b>	<b>64,001</b>
<b>2020</b>	<b>60-64</b>	391,498	347,487	32,668	11,343
	<b>65-69</b>	317,909	273,910	34,510	9,489
	<b>70-74</b>	239,617	206,776	22,041	10,800
	<b>75-79</b>	147,175	112,475	25,511	9,189
	<b>80-84</b>	91,163	62,243	18,232	10,688
	<b>85-89</b>	50,777	26,623	14,101	10,053
	<b>90-94</b>	23,039	7,263	8,731	7,045
	<b>95 +</b>	6,337	1,393	1,849	3,095
	<b>Total</b>	<b>1,267,515</b>	<b>1,038,170</b>	<b>157,643</b>	<b>71,702</b>

**Source:** Authors' projections.

<sup>a</sup> Moderate disability is defined as received help in at least one of the following activities of daily living: eating, transferring in or out of bed or chair, getting to the toilet, dressing, bathing, remaining continent; or in at least two of the following instrumental activities of daily living: walking, shopping, meal preparation, housekeeping, or using transportation.

<sup>b</sup> Severe disability is defined as received help in at least two of the following activities of daily living: eating, transferring in or out of bed or chair, getting to the toilet, dressing, remaining continent, or having cognitive impairment.