

Exploring the Veteran-Nonveteran Earnings Differential in the 2005 American Community Survey

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This presentation is released to inform interested parties of ongoing research and to encourage discussion. The views expressed on statistical issues are those of the author and not necessarily those of the U.S. Census Bureau.

Background

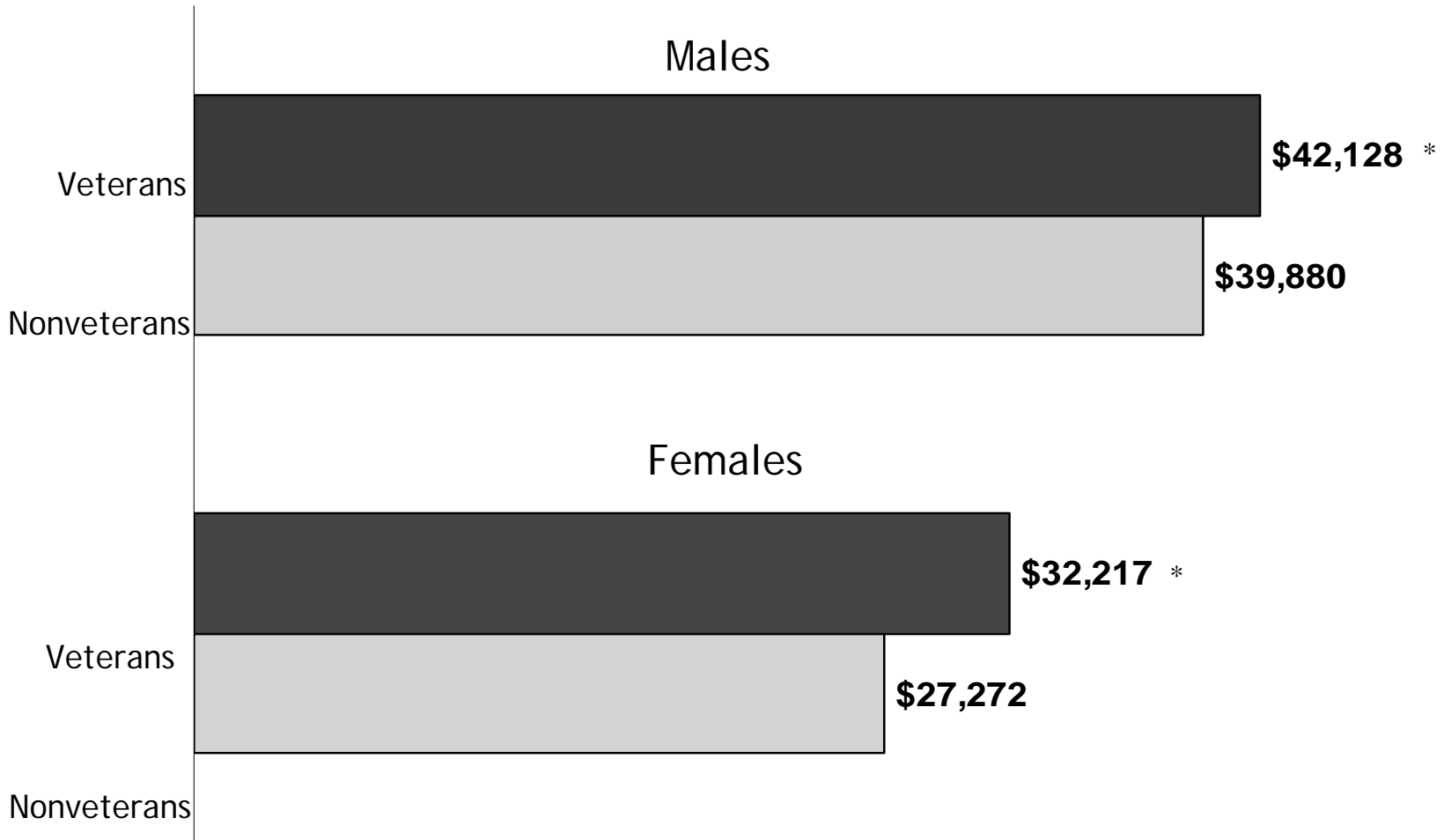
Veterans have **frequently** been found to earn more than nonveterans in the civilian labor force.

Many studies have viewed military service as a “bridging environment” in which, all else equal, veterans should do better economically than their comparably defined nonveteran counterparts because the military provides access to more favorable labor market conditions upon discharge.

Other research suggests military service and training contribute to the human capital of veterans by providing training and experience that would not have been received in the civilian labor market.

Data from the 2005 American Community Survey suggest that veterans have higher median earnings than nonveterans.

2005 Median Earnings by Sex and Veteran Status (Civilian population 25 to 64 years, in the labor force)



Source: 2005 American Community Survey

An asterisk denotes a statistically significant difference between veterans and nonveterans.

Objective

The purpose of this analysis is to investigate whether the **veteran-nonveteran earnings differential** found in the 2005 American Community Survey holds true when other socioeconomic characteristics are held constant.

Focus of Analysis

The vast majority of prior research into post-military economic outcomes has focused on **male** veterans.

Because sex and veteran status are highly correlated and male and female veterans have different characteristics, this analysis examines veteran earnings separately for males and females.

Previous literature on veterans has typically found an earnings advantage for veterans. These studies primarily looked at earnings above and below some median—typically weekly earnings.

This analysis uses **logged yearly earnings** because logged earnings provide a more precise picture of earnings than does a simple model with a dichotomous median earnings variable.

Data Source & Universe

2005 American Community Survey (ACS)

The ACS collects detailed person-level data from a national sample of 3 million households a year.

The universe for this analysis is the civilian population 25 to 64 years old who are in the labor force.

“In the labor force” includes employed and unemployed.

This age group accounts for the time necessary to complete a formal education.

This universe consists of weighted estimates representing
11 million veterans and 107 million nonveterans.

This includes 54 million women, of which 876,000 were veterans.

Methods

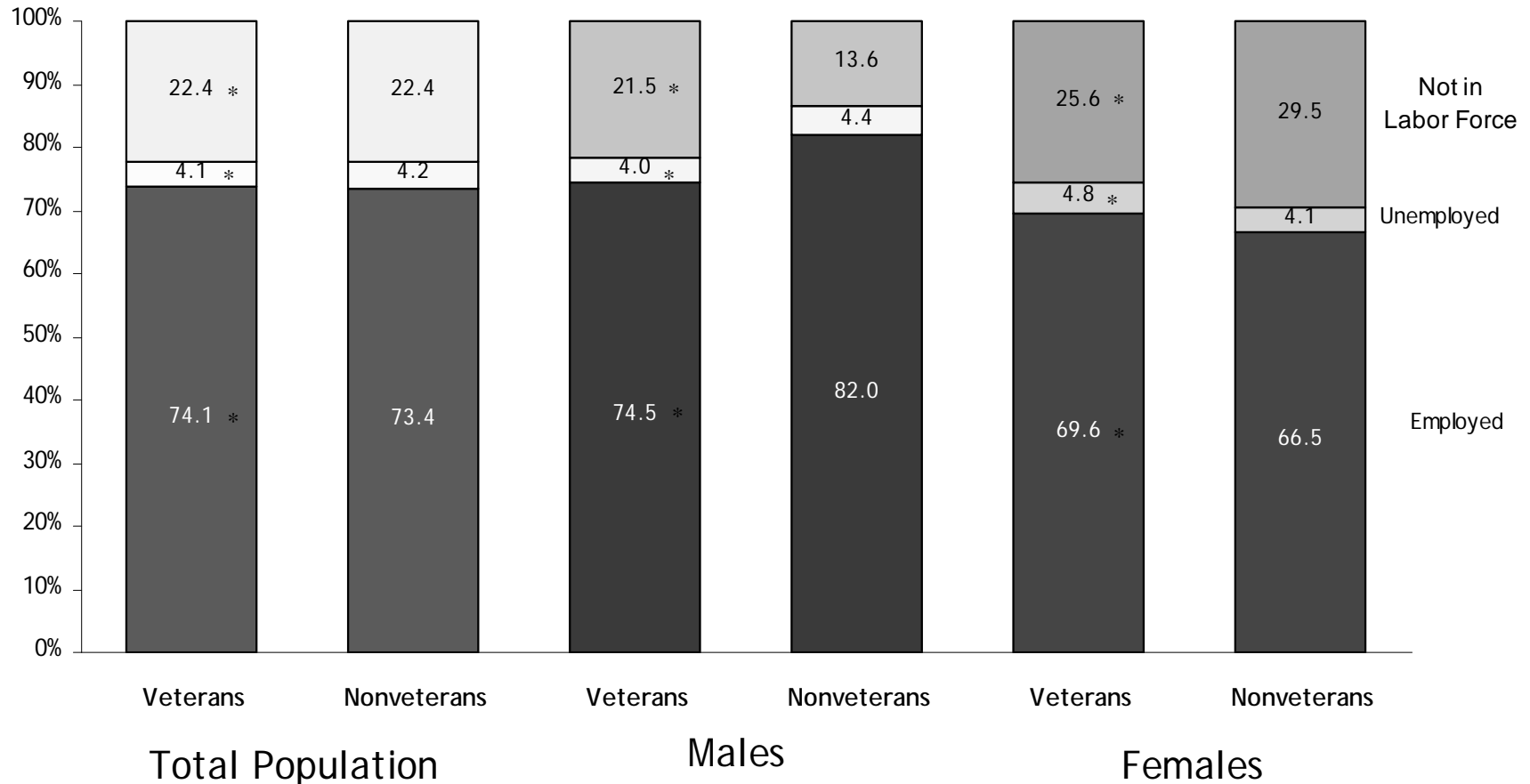
Descriptive and multivariate statistics were used in this analysis.

The relationship between earnings and veteran status was explored using logistic regression and Ordinary Least Squares models.

All comparative figures and statements have undergone statistical testing and are significant at the 90-percent confidence level.

Employment Status of the Population 25 to 64 Years by Veteran Status

While there is some difference in the proportion of the population who were not in the labor force, this analysis is restricted to those individuals who are employed and unemployed and had earnings in the past 12 months.



Source: 2005 American Community Survey

An asterisk denotes a statistically significant difference between veterans and nonveterans.

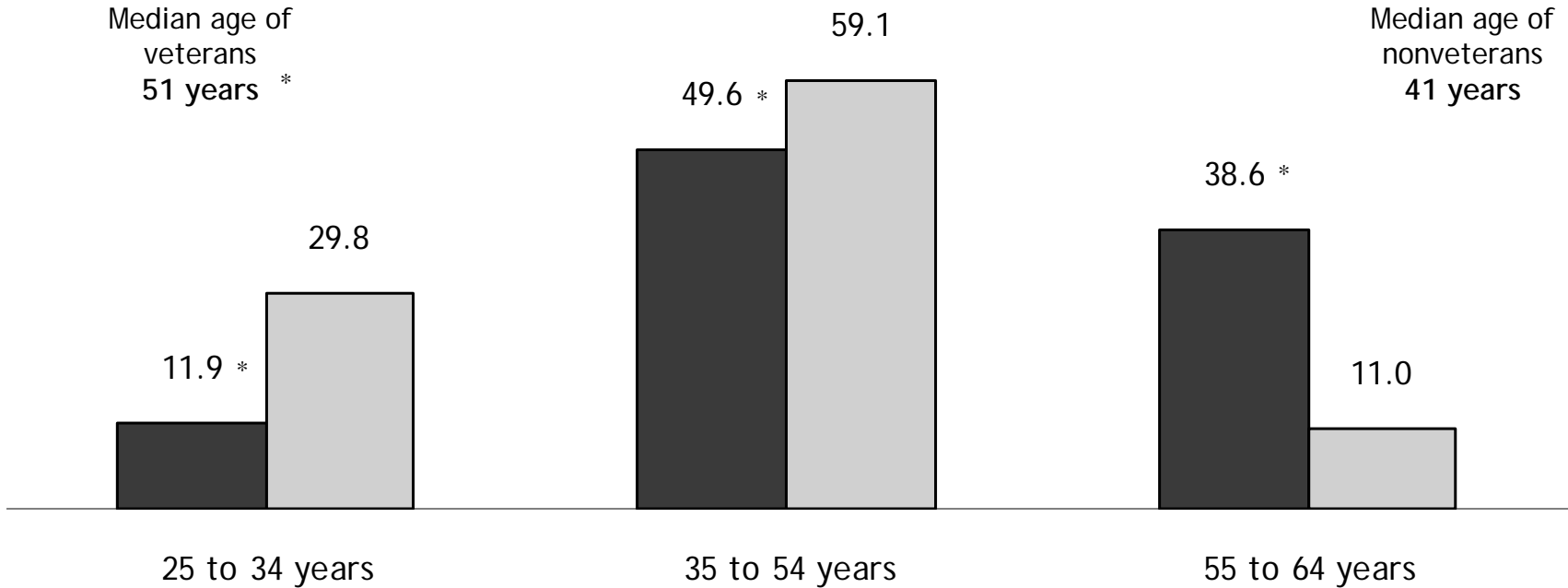
Males: Percent Distributions of Veterans and Nonveterans by Age

Civilian population 25 to 64 years in the labor force

■ Veterans □ Nonveterans

Median age of
veterans
51 years *

Median age of
nonveterans
41 years

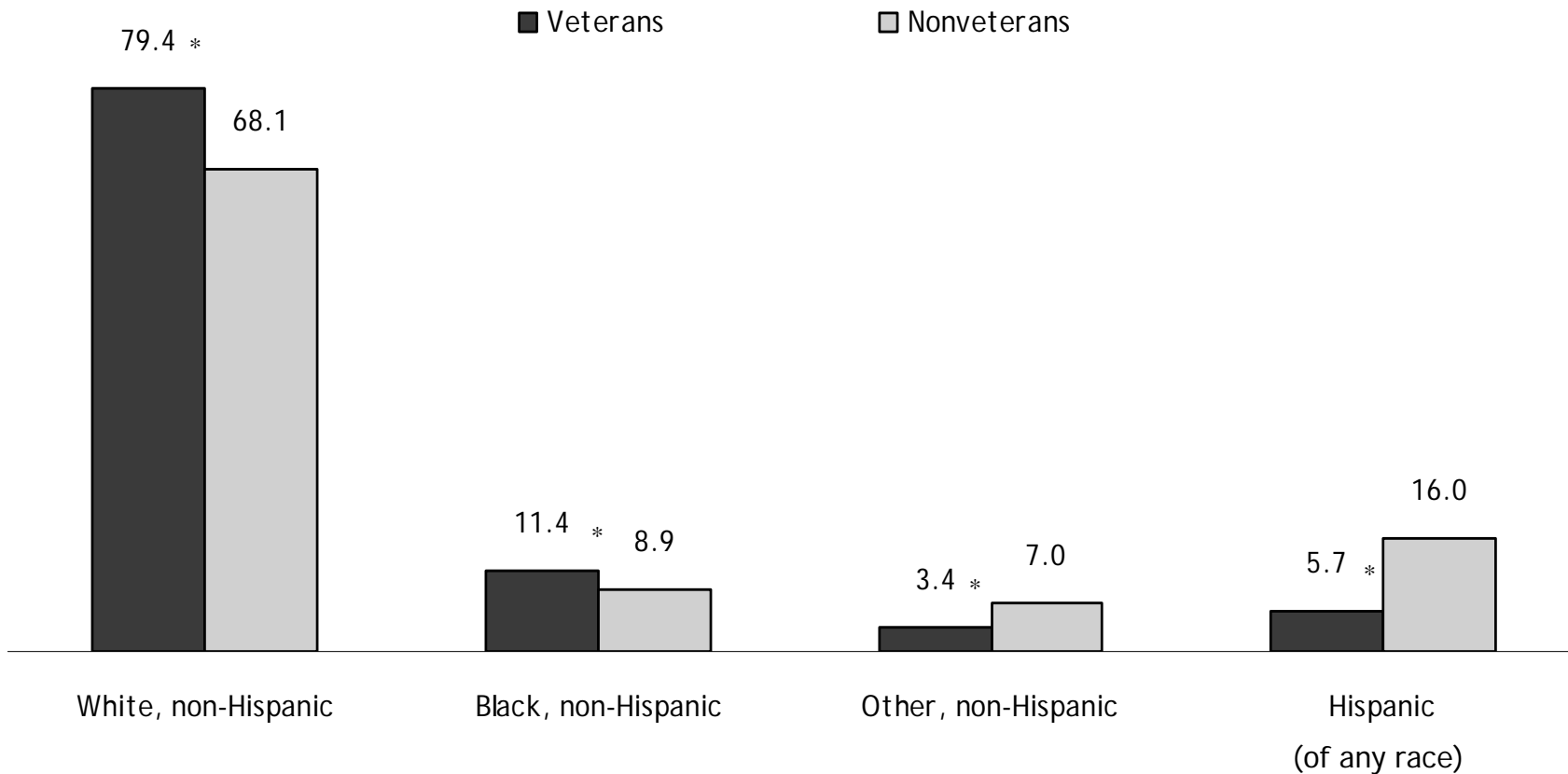


Source: 2005 American Community Survey

An asterisk denotes a statistically significant difference between veterans and nonveterans.

Males: Percent Distributions of Veterans and Nonveterans by Race and Hispanic Origin

Civilian population 25 to 64 years in the labor force



Source: 2005 American Community Survey

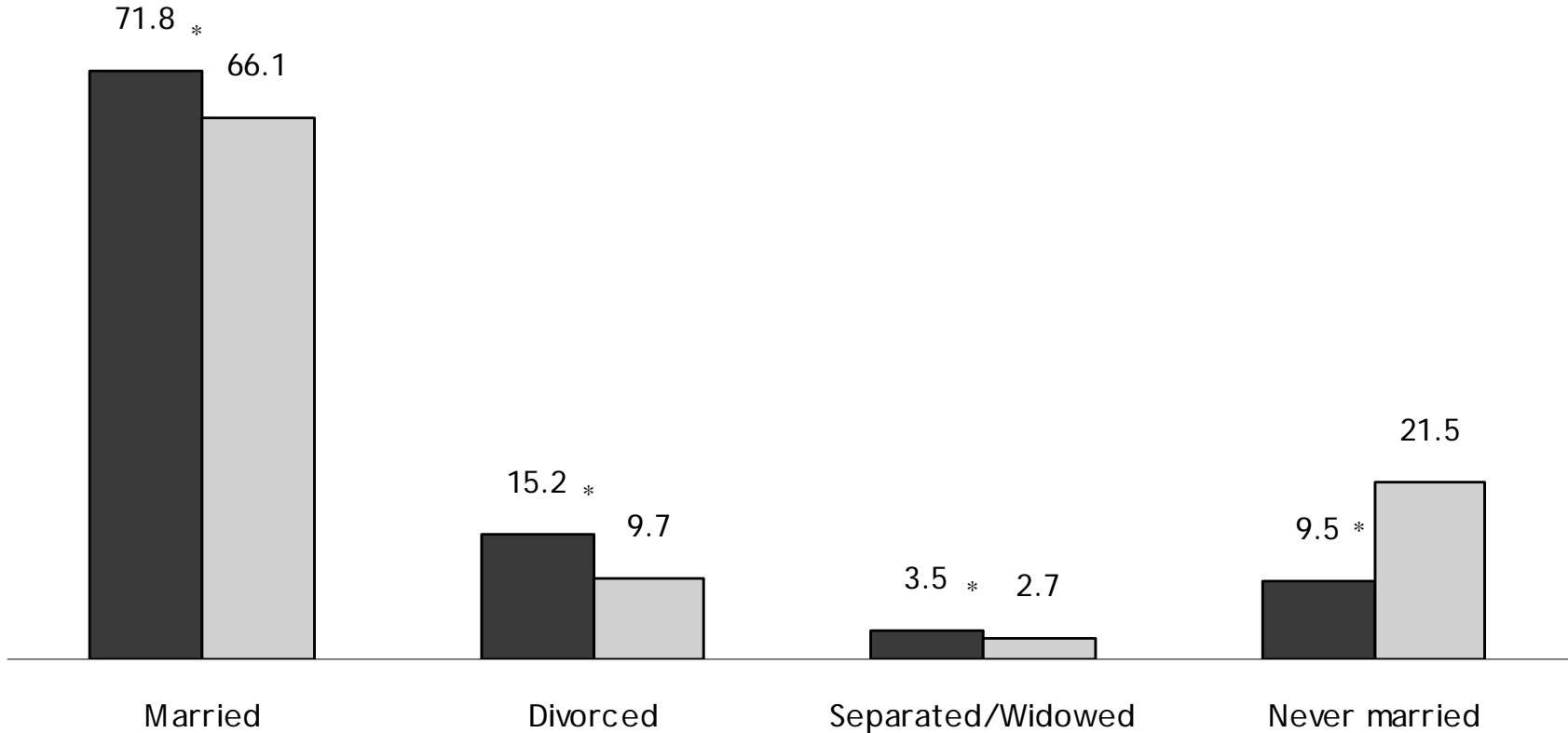
An asterisk denotes a statistically significant difference between veterans and nonveterans.

Males: Percent Distributions of Veterans and Nonveterans by Marital Status

Civilian population 25 to 64 years in the labor force

■ Veterans

□ Nonveterans

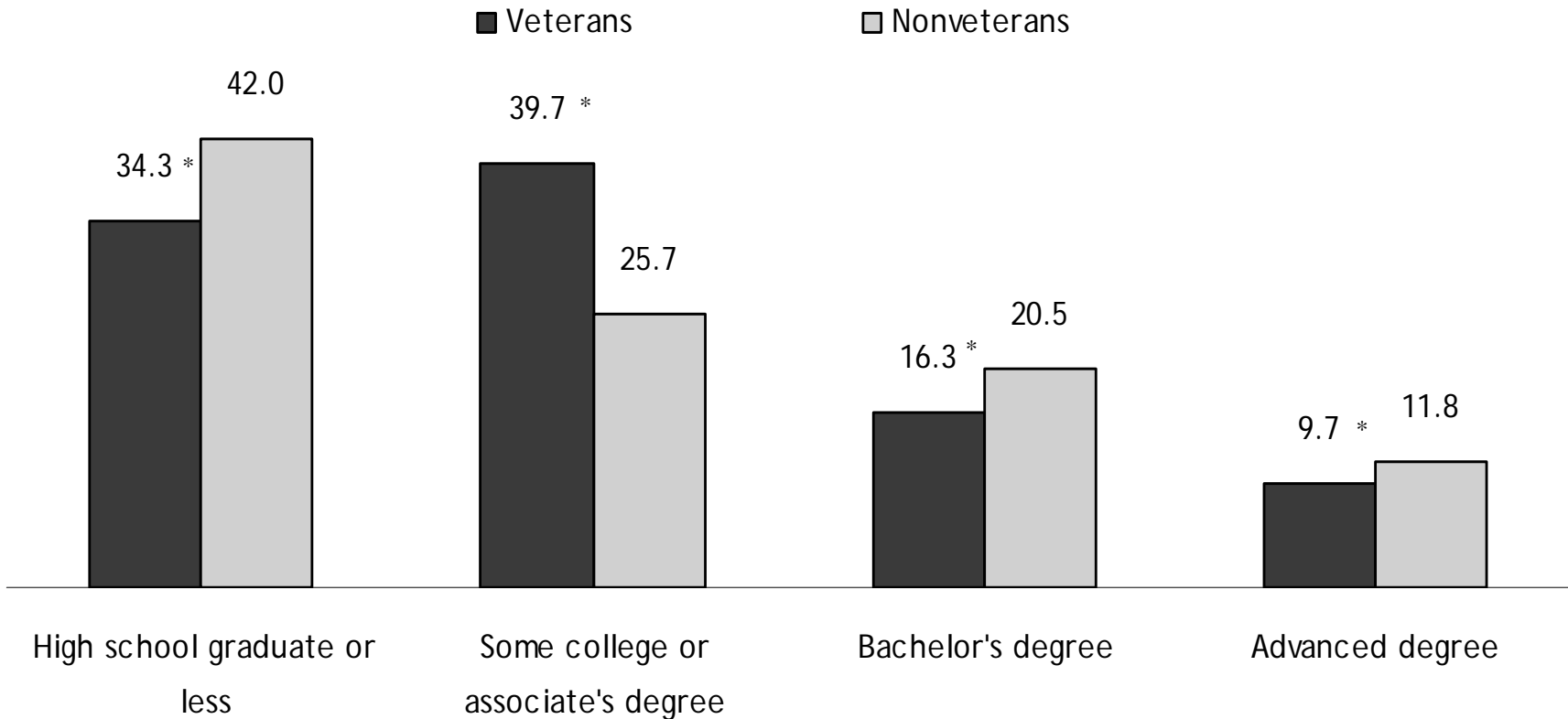


Source: 2005 American Community Survey

An asterisk denotes a statistically significant difference between veterans and nonveterans.

Males: Percent Distributions of Veterans and Nonveterans by Educational Attainment

Civilian population 25 to 64 years in labor force

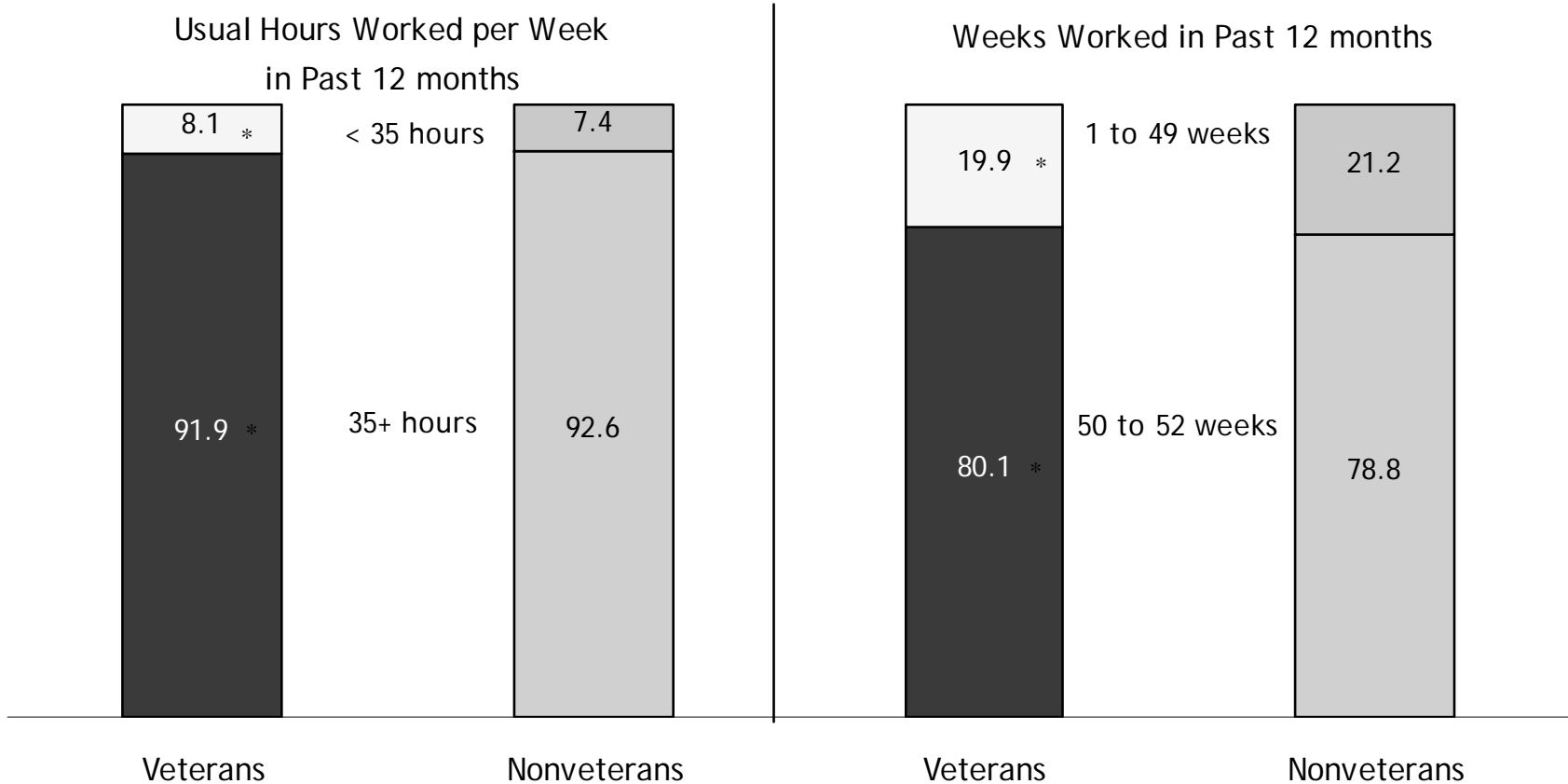


Source: 2005 American Community Survey

An asterisk denotes a statistically significant difference between veterans and nonveterans.

Males: Percent Distributions of Veterans and Nonveterans by Hours and Weeks Worked

Civilian population 25 to 64 years in labor force

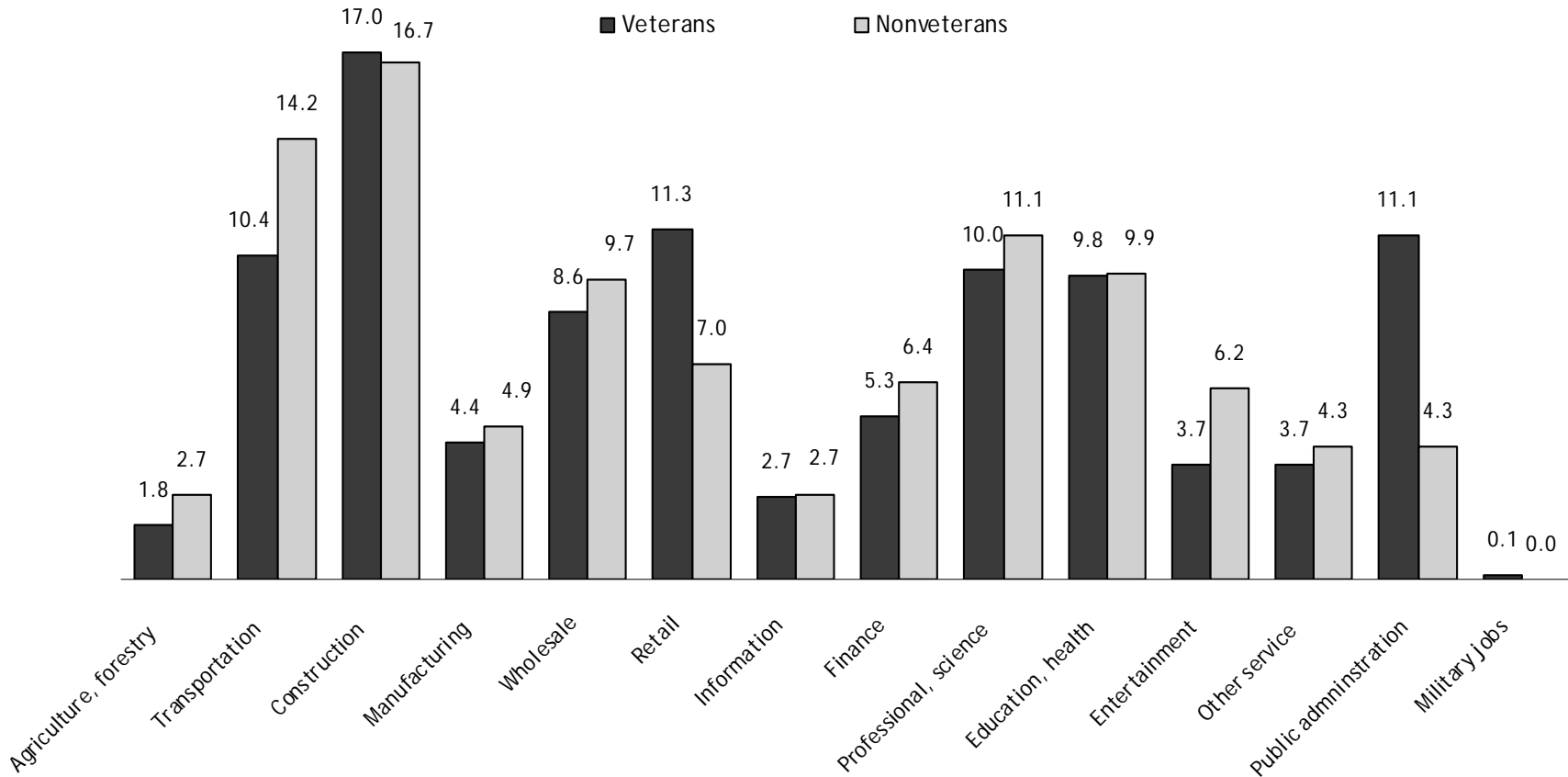


Source: 2005 American Community Survey

An asterisk denotes a statistically significant difference between veterans and nonveterans.

Males: Percent Distributions of Veterans and Nonveterans by Industry

Civilian population 25 to 64 years in the labor force



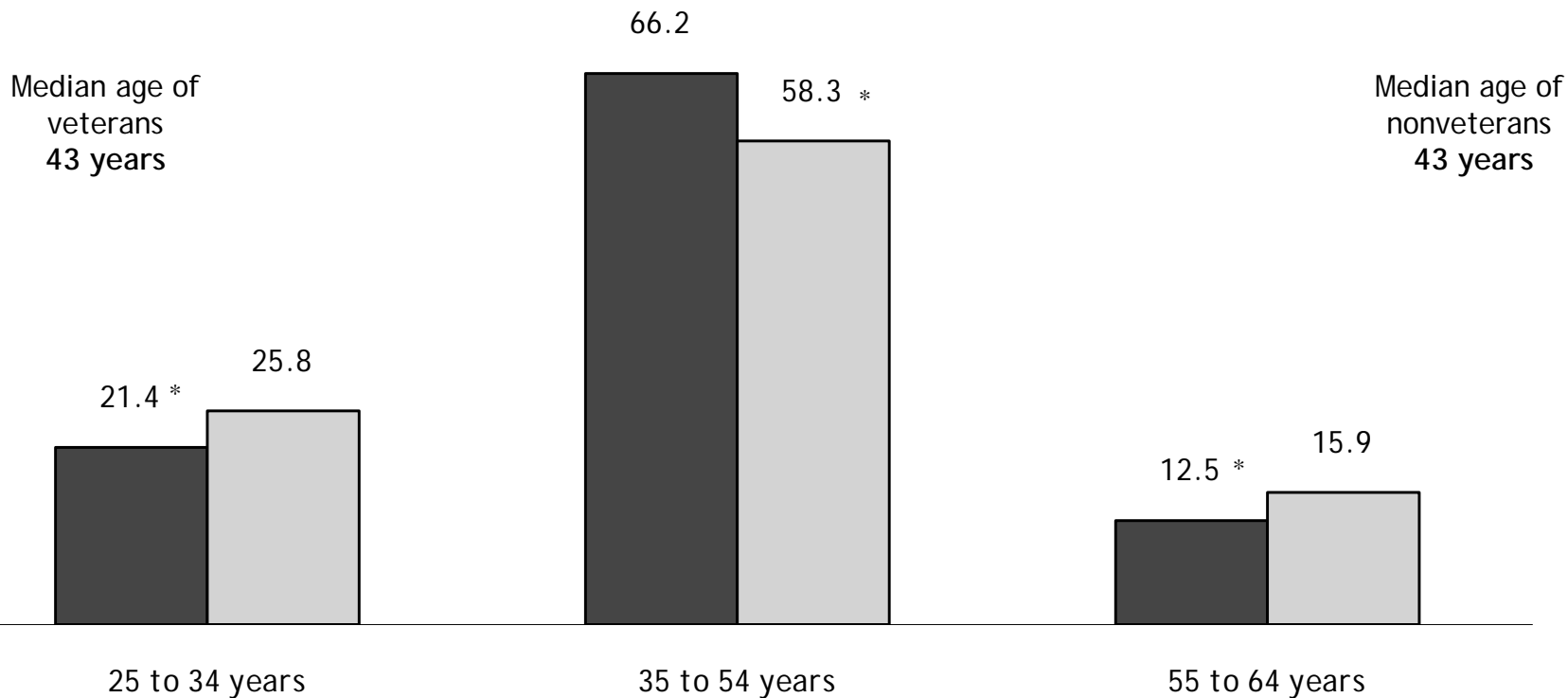
Source: 2005 American Community Survey

With the exception of "Information" and "Education, health," the differences between veteran and nonveteran are significant.

Females: Percent Distributions of Veterans and Nonveterans by Age

Civilian population 25 to 64 years in the labor force

■ Veterans □ Nonveterans

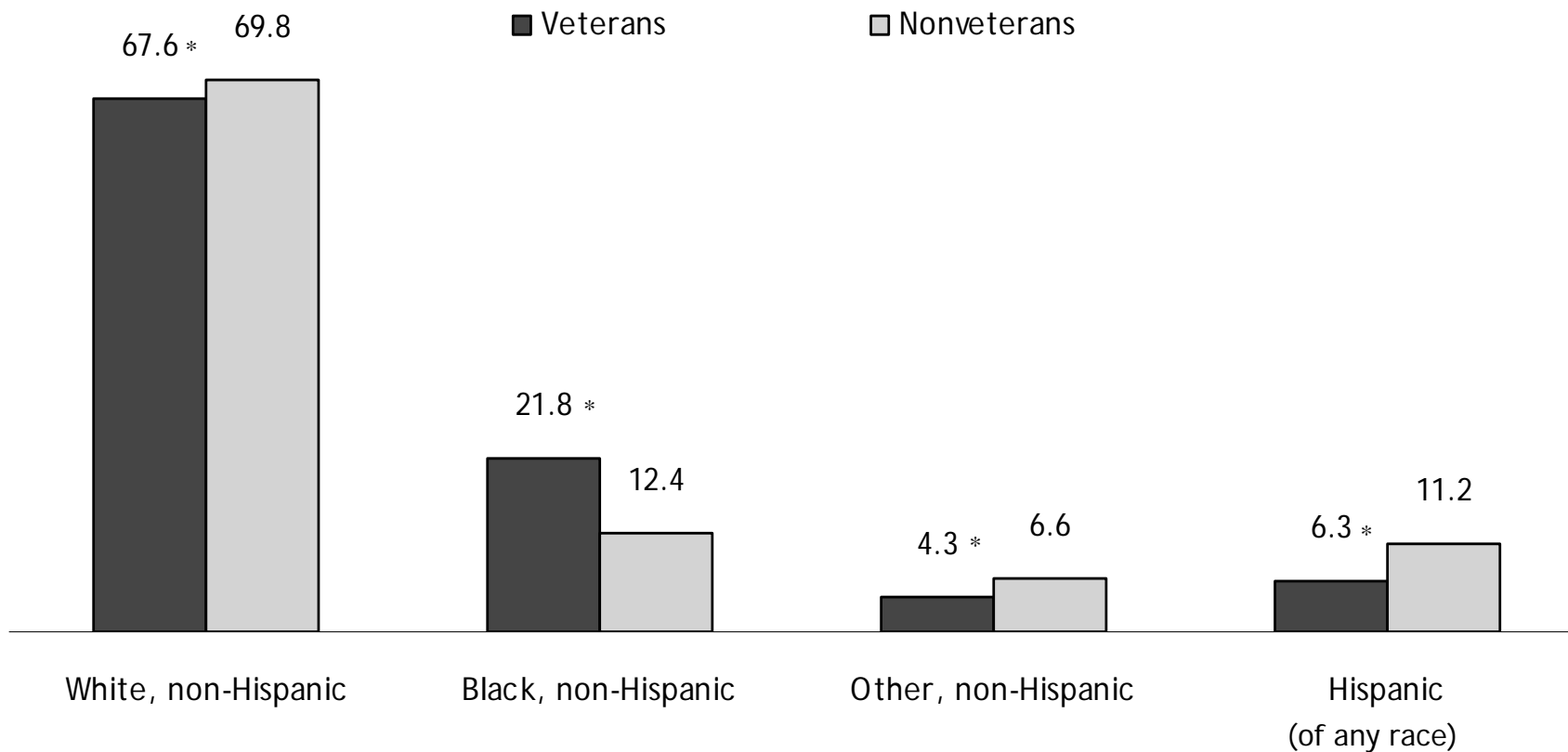


Source: 2005 American Community Survey

An asterisk denotes a statistically significant difference between veterans and nonveterans.

Females: Percent Distributions of Veterans and Nonveterans by Race and Hispanic Origin

Civilian population 25 to 64 years in the labor force

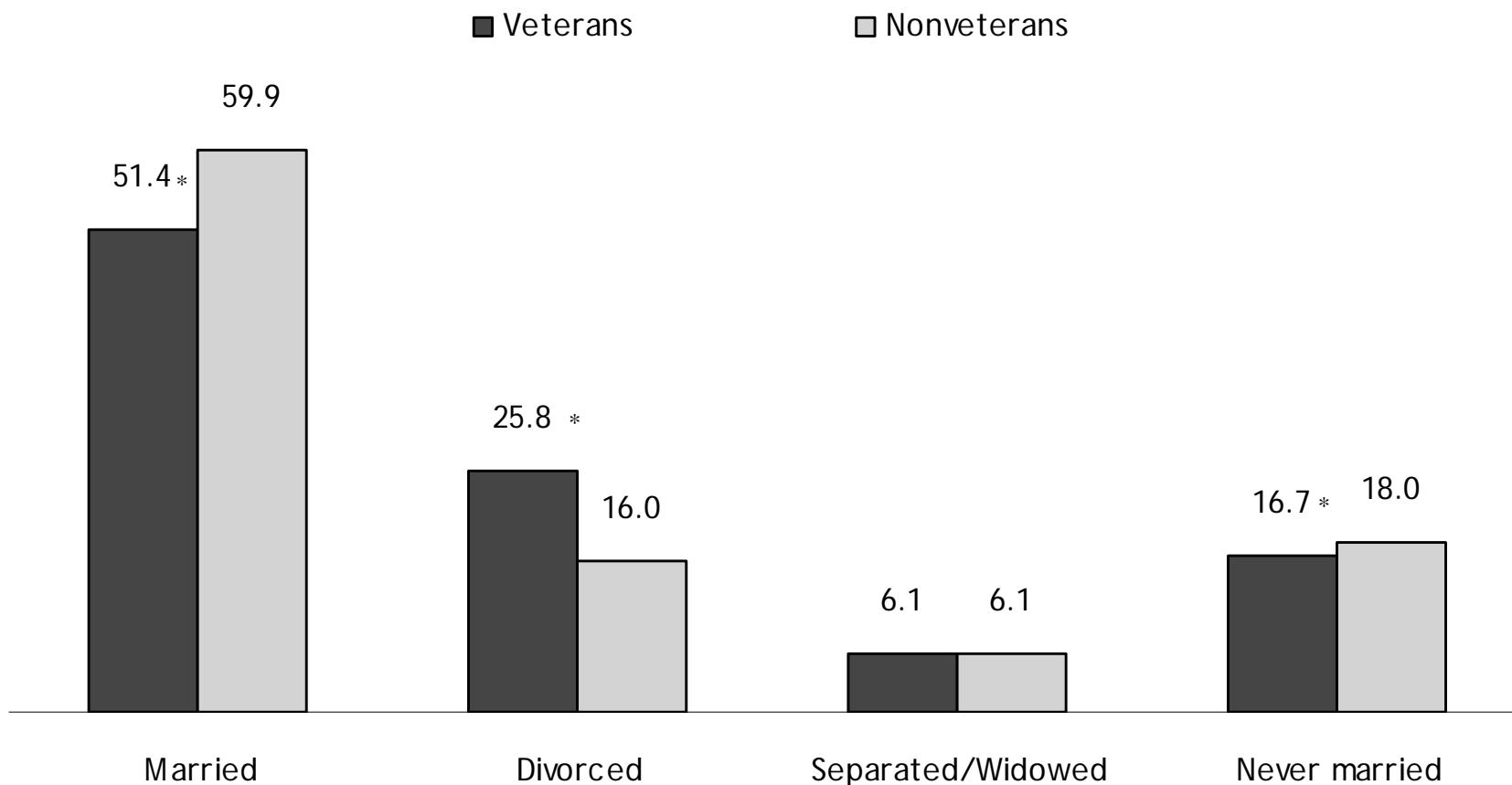


Source: 2005 American Community Survey

An asterisk denotes a statistically significant difference between veterans and nonveterans.

Females: Percent Distributions of Veterans and Nonveterans by Marital Status

Civilian population 25 to 64 years in the labor force



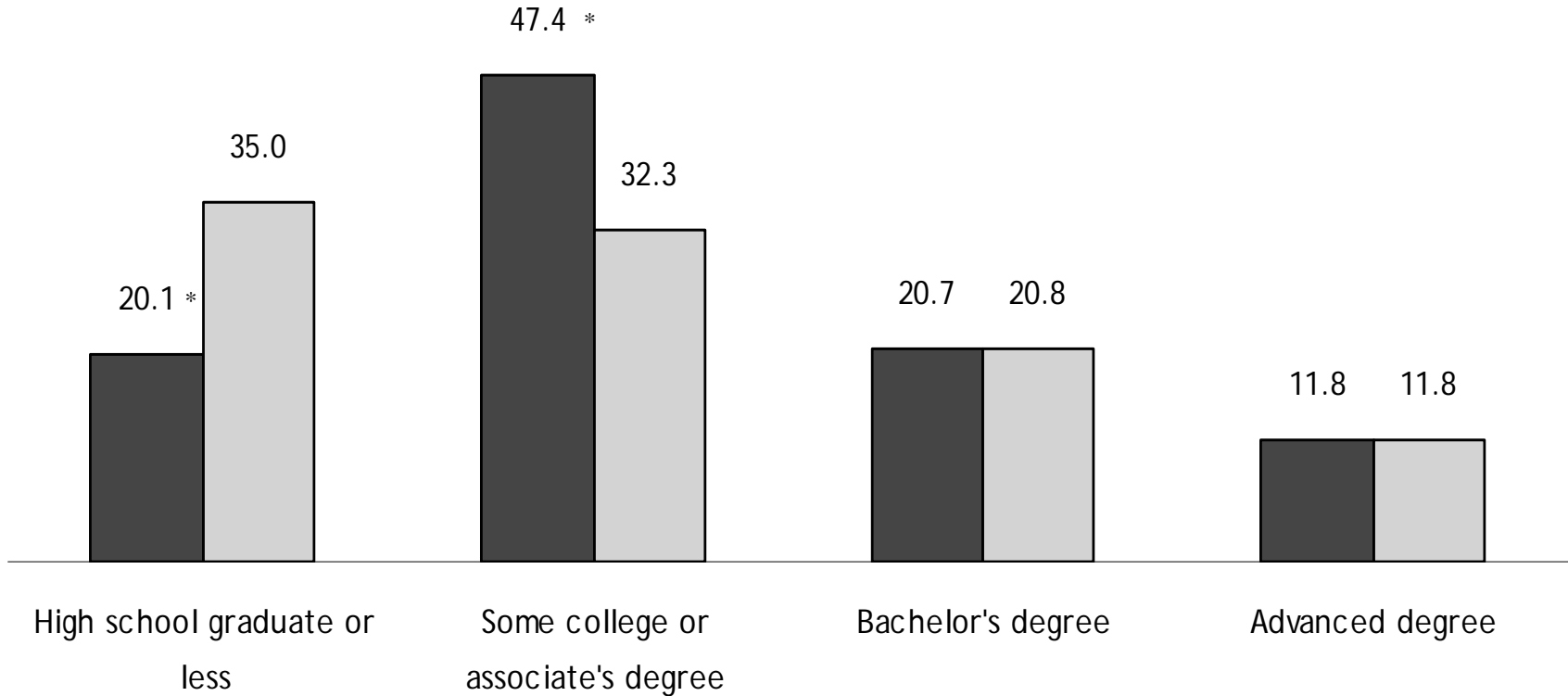
Source: 2005 American Community Survey

An asterisk denotes a statistically significant difference between veterans and nonveterans.

Females: Percent Distributions of Veterans and Nonveterans by Educational Attainment

Civilian population 25 to 64 years in labor force

■ Veterans □ Nonveterans



Source: 2005 American Community Survey

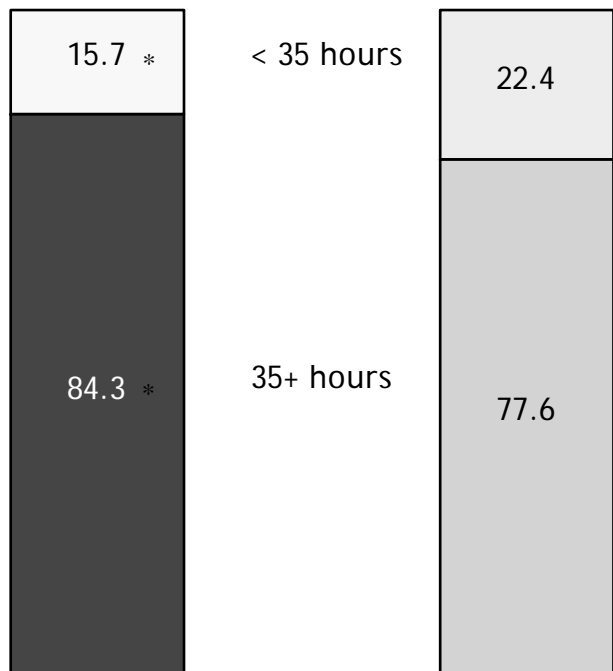
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Females: Percent Distributions of Veterans and Nonveterans by Hours and Weeks Worked

Civilian population 25 to 64 years in labor force

Usual Hours Worked per Week

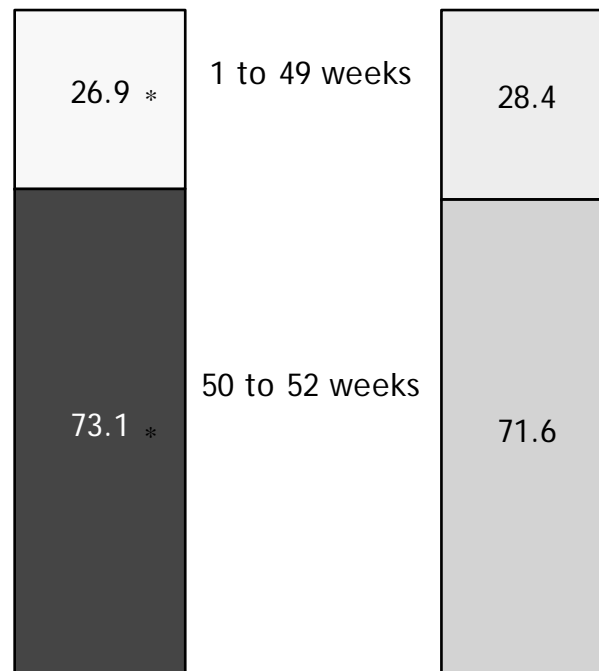
in Past 12 months



Veterans

Nonveterans

Weeks Worked in Past 12 months



Veterans

Nonveterans

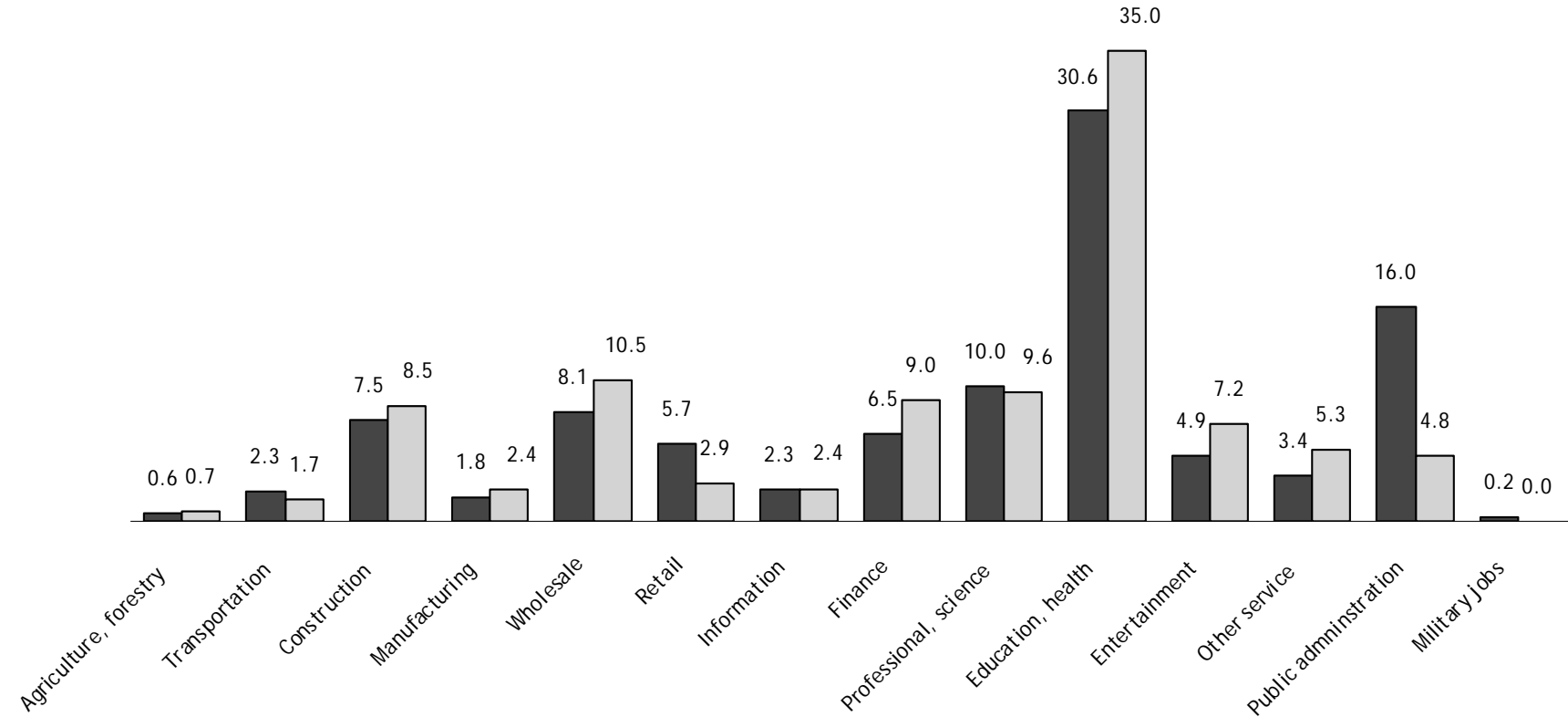
Source: 2005 American Community Survey

An asterisk denotes a statistically significant difference between veterans and nonveterans.

Females: Percent Distributions of Veterans and Nonveterans by Industry

Civilian population 25 to 64 years in the labor force

■ Veterans □ Nonveterans



With the exception of "Agriculture," "Information" and "Professional, science," the differences between veteran and nonveteran are significant.

Source: 2005 American Community Survey

Ordinary Least Squares models

Dependent Variable = *Logged Yearly Earnings*

Earnings is defined as the sum of wages or salary income and net income from self employment.

Represents the amount of income received regularly before deductions.

Logistic regression models

Dependent Variable = *Worked full time*

Full-time work is defined as usually working 35 hours or more per week worked in the past 12 months.

Dependent Variable = *Worked year round*

Year-round work is defined as working 50 to 52 weeks in the past 12 months.

Independent Variables for OLS & Logistic Regression Models

Basic Model:

Veteran status

Age

Race/Hispanic origin

Marital Status

Educational Attainment

*Expanded Model
(OLS models only):*

Veteran status

Age

Race/Hispanic origin

Marital Status

Educational Attainment

Weeks worked

Hours worked

Reference groups:

Basic: nonveteran, 25 to 34 yrs, White non-Hispanic, married, high school or less

Expanded: nonveteran, 25 to 34 yrs, White non-Hispanic, married, high school or less, part year, part time

Note: No interaction terms were included in any models.

Males

Basic OLS Model: Controlling only for basic demographic characteristics, there is no significant difference in earnings between veterans and nonveterans.

Expanded OLS Model: After controlling for basic demographic information *and* work status, veterans actually earn less than nonveterans.

Logistic Regression Model: Male veterans were

1.1 times more likely

to work full time and about as likely to work year round compared to their nonveteran counterparts.

Males

The results of the expanded OLS model for males suggest there may be some interactions between veteran status and their demographic characteristics which make it difficult to fully explain the effects of veteran status in this model.

The descriptive statistics for males show that veterans are older and less educated overall than nonveterans. There are also differences in the types of industries male veterans work in compared to nonveterans that may explain some of the earnings differences.

Male veterans *on average* have higher earnings than male nonveterans. However, after controlling for demographic characteristics and work status, veterans actually have slightly lower earnings.

- ❖ Veterans may have less job experience, and thus lower earnings, than similar nonveterans for their age because they enter the civilian labor force later.

Females

Basic OLS Model: Controlling only for basic demographic characteristics, female veterans earn significantly more than their nonveteran counterparts.

Expanded OLS Model: Once work status is added to the model, the effect of veteran status disappears. This suggests women veterans earn more because they usually work more during the year.

Logistic Regression Models: Women veterans were
1.4 times more likely
to work full time and about as likely to work year round compared to their nonveteran counterparts.

Females

Veteran status seems to offer an earnings advantage, however female veterans are also *more likely* to work full-time hours than their nonveteran counterparts.

Because women cannot hold combat-related jobs, they are less likely than male veterans to receive skills in the military that are difficult to transfer into civilian jobs.

Military education and work experience may translate into higher paying civilian jobs than women with only a high school degree would normally expect.

Further Research

Include industry and occupation variables in the models.

Re-evaluate models for males to disentangle veteran status and demographic characteristics, if possible.

Focus on differences in veteran earnings by race and Hispanic origin.