

SPSS Helps

Lab Four – Single Sample t tests

In this lab we use a single sample t test to analyze data. This means that we know the population mean but not the standard deviation of the population.

The data for this lab is fictitious but is based on actual data from 2001 concerning income/person in Massachusetts compared to income/person within Suffolk County. I made use of data available from the 2001 census for mean income figures. With these and a random sample generator I created samples that approximate data that could be drawn from Suffolk County.

I have generated a relatively small sample (10) as well as a larger sample (25) so we can take a look at both hypothesis testing and the impact of sample size. In terms of hypothesis testing, we will look at how Suffolk County compares to the state as a whole and we will also look at what might change in the analysis as the sample size gets larger.

Beginning the Lab:

You will need to define two variables for these data. One of the variables will be used for the sample of 10 while the second will be used for the sample of 25. These variables are **numeric** and do not have to have any decimal places, although two decimal places would also be fine since we are talking about money. When the variables have been defined enter the income values for the 10 subjects and 25 subjects respectively.

Analyzing the data:

For this lab you will use a new statistical test. Go to the **Analyze** command as usual. Choose the **compare means** option from the pull down menu. From the side menu choose **one sample t test**. This will produce a dialogue box for single sample t tests. Place your variable names (the one for the sample of 10 and the one for the sample of 25) in the “variable box”. Below this box there is a small space labeled “test value”. The default is 0. This is the value that the sample mean will be tested against (i.e., the population mean value) **The mean income/person from the census data for the entire state is \$38,864. This value should be put in the “test value” space.** When the variable names are in place and the test value is set you can click on the **OK** button.

Include the printout of the output along with your lab questions.

LAB DUE: Wed. Oct. 28th

