

## Activity 4.1: One-Sample T-Test for the Mean

The recommended daily dietary allowance for calcium among pregnant women is 1200 mg/day. An article in a popular scientific journal reports data on daily calcium intake for a sample of pregnant women from a certain region in Mexico at different stages in their pregnancy. This data is found in the Excel file **Dataset\_4.1.csv** that accompanies Activity 4.1.

Does this data indicate that average daily calcium intake in this population of pregnant women is below the recommended allowance?

### Instructions

- Import the comma delimited file **Dataset\_4.1.csv** into SPSS as shown in Module 1, Lesson 1.
- Make sure the variable, **CalciumDaily**, is defined correctly by examining it in **Variable View** and making any needed corrections.
- Get descriptive statistics on this variable along with a **histogram overlaid with a normal curve** to show the normality assumption has been satisfied.
- Use as the hypotheses:
  - o  $H_0: \mu = 1200$  (the true mean for the population of pregnant women in this region is equal to 1200 mg/day)
  - o  $H_1: \mu \neq 1200$  (the true population mean is not equal to 1200 mg/day)
 Alpha = 0.05
- Go to **Analyze** → **Compare Means** → **One-sample t-test**
- In the one-sample t-test box that will appear, drag the variable **CalciumDaily** into the box labeled **Test Variable(s)**, and change the **Test Value** to 1200. Click OK.
- Once you click **OK**, the results of the one sample t-test will be displayed.
- Interpret and report the results of the test.

★ Please create a copy of the Excel file and use the duplicate to complete the activity. Ensure no changes are made to the shared file