The Chart Builder

Use the Chart Builder to create box plots, scatter plots, bar charts, pie charts, and more.

1. Open your data, and go to **Graphs | Chart Builder**.
2. You will get a warning when you open the Chart Builder. Before beginning, make sure that the correct level of measurement has been defined for your variables (the **Measure** column in Variable View) and that labels have been defined for all categorical/nominal variables (the **Values** column in Variable View).

3. Choose the type of graph that you want to create from the **Gallery** menu at the bottom of the window, and drag it into the blank area of the screen (the chart preview).
4. Drag variables into the X and Y axes.
5. Use the **Element Properties** panel to change axis labels, scales, and the value of the data points in the graph. If you’re making a bar chart, you can also add error bars by checking ‘Display error bars.’ Click **Apply** after making any changes.
6. Click the **Options** button to change whether missing values are displayed in the graph.
7. Click **OK** when you are happy with the graph.
8. The graph will appear in the output window. To change colors, labels, fonts, sizes, and other aesthetic elements, **double-click on the graph** to open the Chart Editor. When you’re done, click the X to close the Chart Editor—your changes will be saved.

To see a video about how to use Chart Builder (including adding groups for a repeated measures design and adding error bars), visit this site: [http://vimeo.com/49231146](http://vimeo.com/49231146)
Normal Q-Q Plots
A normal q-q plot tests whether the distribution of a variable is normal by comparing the data’s distribution to a normal distribution. This is a useful graph to look at before you begin analyzing the data.

1. Go to Analyze | Descriptive Statistics | Q-Q Plots
2. Choose your variable(s). Separate graphs will be created for each variable.
3. Keep the defaults and click OK. Focus on the first graph (ignore the detrended graph).

Histograms, bar charts, and pie charts
In addition to using the Chart Builder, these types of can also be created by clicking the Charts button in the Frequencies tool (under Analyze | Descriptive Statistics). Histograms and box plots can be created by clicking on the Charts button in the Explore tool, too.

Tip: Different graphs are useful to visualizing different aspects of your data:
- Histograms – show the distribution of your data.
- Box plots – reveal unusual values and the distribution of the data (including range, median, and quartiles)
- Scatter plots – helpful for finding groups, identifying outliers, and examining whether two continuous variables are related