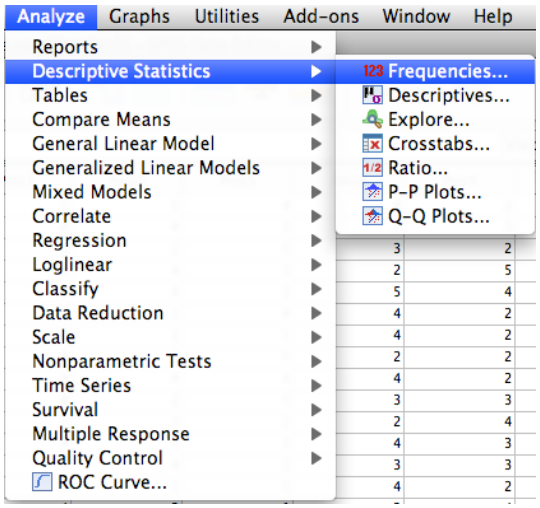
Psyc 250: Statistics & Experimental Design

Graphs & Plotting in SPSS

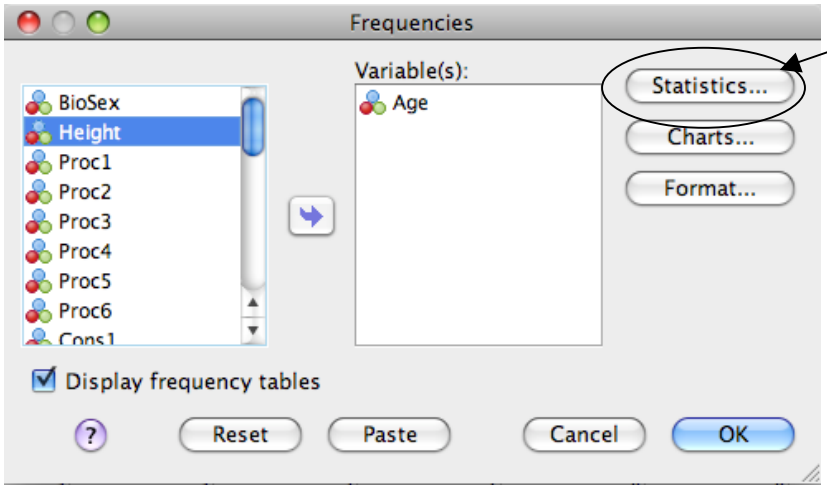
Being able to create frequency distributions, graphs, and various plots is a very important skill. Remember, however, that SPSS will do what you tell it to do --- it won't make sense of the data (that's your job!).

**FREQUENCIES** in SPSS

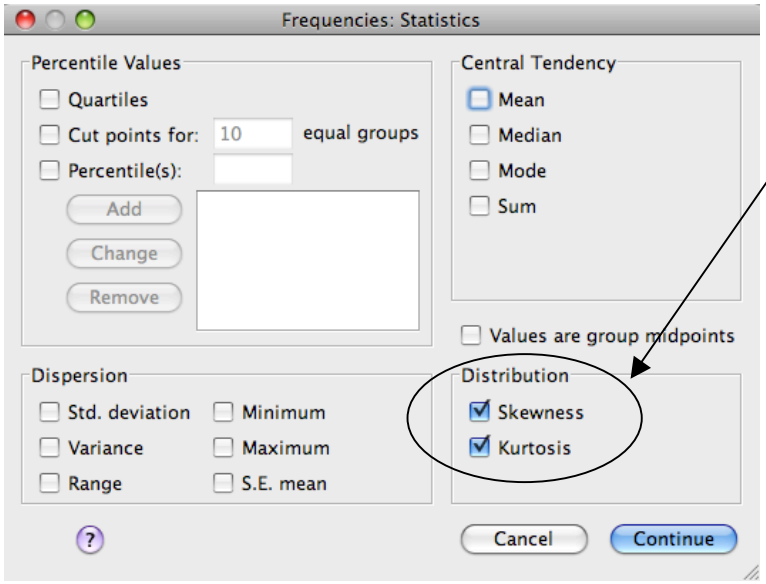
To create a Frequency Distribution:
[Analyze] → [Descriptives] → [Frequencies]




*A new window will open. Select the variables for which you would like a Frequency Table. Then click on "OK"




In addition to a Frequency Table, you can have SPSS create a table of a variety of **Statistics** (see screenshot on next page).




These terms should be familiar to you. Instead of 'eyeballing' a distribution to determine if it is *normal*, you can have SPSS generate a numerical value for each. A true normal distribution has a value of '0' for Skew and Kurtosis. In reality, some level of skew and kurtosis is expected. General rules of thumb for a distribution that is 'sufficiently normally distributed' are as follows:

**Skew: between -2 and 2**

**Kurtosis: between -7 and 7**

Source: Kline (2007)

OUTPUT:

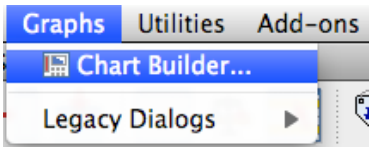
**Statistics**

| | | Age | Height |
|---|---|---|---|
| N | Valid | 25 | 25 |
| | Missing | 0 | 0 |
| | Mean | 3.60 | 7.48 |
| | Skewness | 2.121 | .614 |
| | Std. Error of Skewness | .464 | .464 |
| | Kurtosis | 4.469 | -.067 |
| | Std. Error of Kurtosis | .902 | .902 |

What do these values say about the distributional properties of Age and Height?

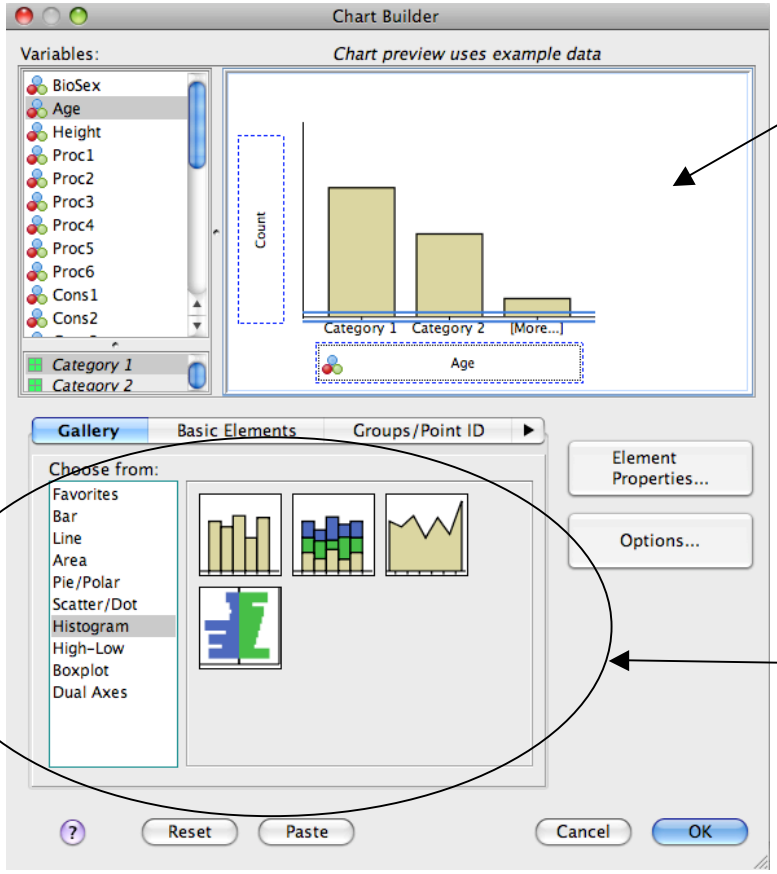
***The Frequency Tables will look exactly as you would expect: Value, Frequency, Percent, and Cumulative Percent

## Histogram




[Graphs] → [Chart Builder]

*A new window will open.




This display area will NOT display your actual data. Rather, it gives a basic view of what the end result may look like (though not specific to your data). Notice that there is no "toggle" switch like other windows have in SPSS. This particular window function as a "drag – and – drop". You drag what you want into this window.

As you can see, there are a lot of possibilities for graphs/plots. For now, select histogram and choose the first histogram option (top left of the figures displayed). Click on this icon and drag it to the window above.

Then, drag and drop the variable of interest.