The Difference Among Bar, Line and Pie Charts
AND
When to Use Them

Bar Charts -- a graph that is drawn by using rectangular bars to show how large each value is. The bars can be horizontal or vertical. The data housed within bar charts is discrete. Bar charts are used when time or the progression of time is NOT important. Although many software programs can make bar chart in 3D, 3D charts are more difficult to analyze than 2D charts. Thus, always present bar chart in 2D. As an example, this bar chart (Marson, Pittman-Munke & Stanton, 2016) illustrates data from a Likert scale.

![Bar Chart Example](image)

Notice that the bars are not linked to each other by time and it is in 2D not 3D.

Line Chart (also called a Line Graph) -- is a type of chart which displays information as a series of data points called 'markers' connected by straight line segments. It is a basic type of chart common in many fields. Unlike the bar chart, the central focus of a line chart is to emphasize change over time. When you need to stress change over time, use a line chart not a bar chart. As an example, the line chart seen below (Marson, Wei & Wasserman, 2009) illustrates the changes a client made after each of 7 therapy sessions.

![Line Chart Example](image)

Notice that the line chart labeled Figure 1 focuses on changes within a client over time after the therapy sessions.
**Pie Charts** – is a graph in which a circle is divided into sectors that each represents a proportion of the whole. Pie charts are used to emphasize, illustrate and compare the proportions among the parts. Pie charts are rarely seen in sociology, social work, criminal justice, political science and nursing. However, in economics and business administration, pie charts are the commonly used to present budgets. The rule of thumb is, if you are illustrating money, use a pie chart. If you are not illustrating money, do not use a pie chart. As an example, this pie chart (Marson, 1999) illustrates a comparison of summer salaries.

![Pie Chart Example](Image)

Outside of economics and business administration, do not use a pie chart. Some programs like Survey Monkey use pie charts as a default. Change the default before downloading the data for your paper.

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**References**


http://www.uncp.edu/home/marson/salary.html
