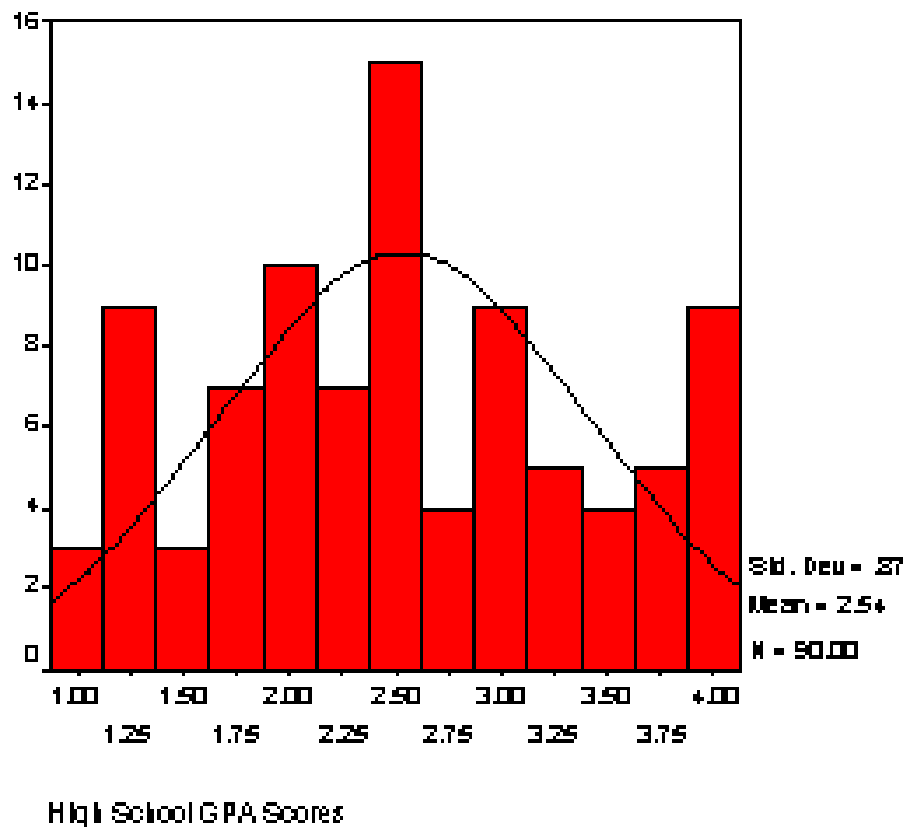


Examples of Distributions and Descriptive Graphs

Frequency Histogram

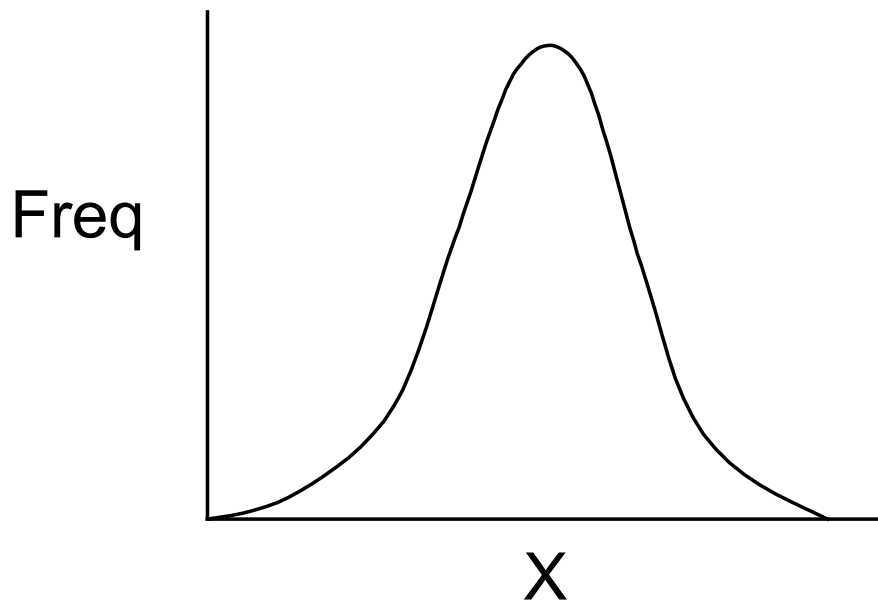
Discrete values of categories are used on the horizontal (x) axis, and the number of scores that fall into that category (i.e., frequency) appears on the vertical (y) axis. A normal curve can be overlaid so that one can easily see how it departs from normal (see next topic). This distribution looks close to normal here, although there is a pretty high peak in the middle and a some high frequencies in the right and left tails. Note that the appearance of the normal curve will sometimes look wider or more narrow than it really should depending on how SPSS chooses the categories for the histogram (this normal curve one looks a little too flat to me).



The shape of a distribution, sometimes illustrated with a connected dots or smooth curve line (“frequency polygon”), can be described in terms of how it relates to the normal curve.

Normal Curve

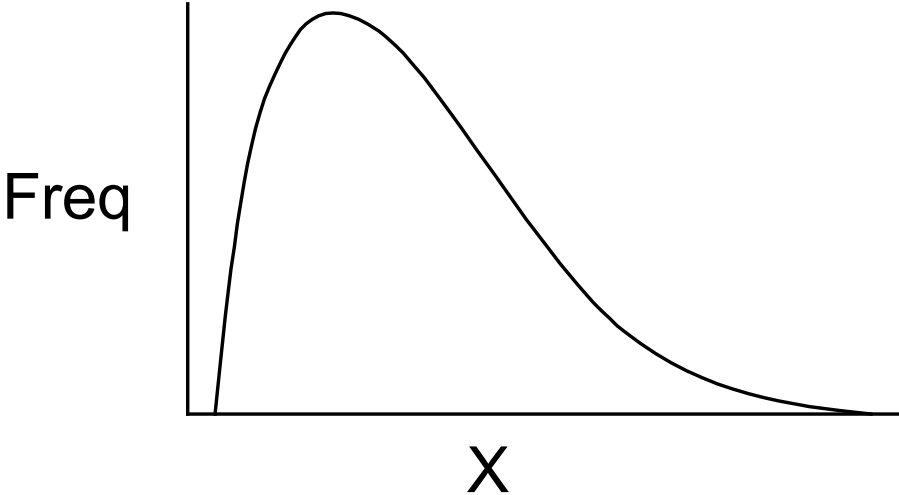
The standard normal curve is a particular shape of frequency distribution commonly found in nature. The “normal” is a kind of statistical ideal that can be described precisely mathematically and looks something like the shape below.



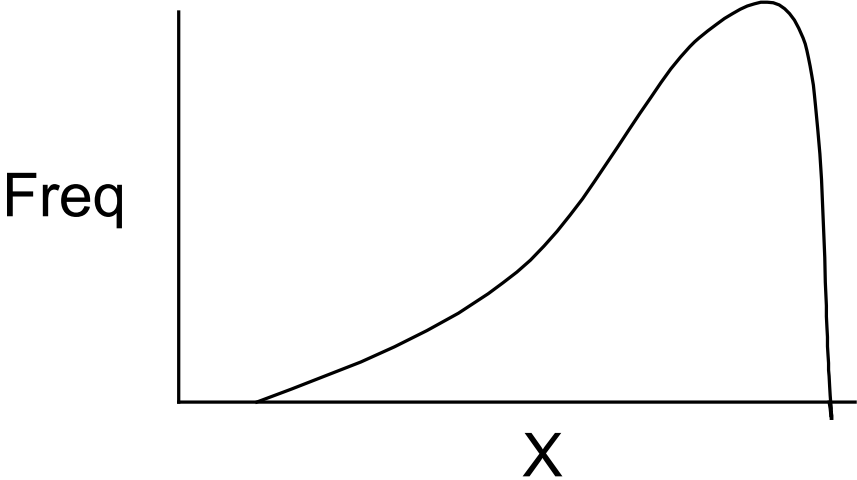
Skewness

Skewness refers to how asymmetric the shape of the distribution is. That is, are there more extreme values out to the right or left.

Right (Positive) Skew



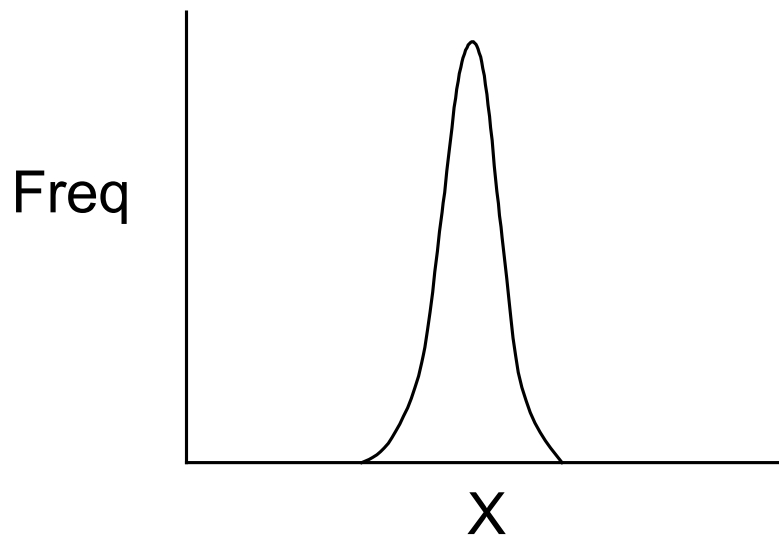
Left (Negative) Skew



Kurtosis

A frequency distribution can also be described in terms of how flat to narrow it is.

Leptokurtic



Platykurtic

