What is a variable? Explain the difference between an independent variable and a dependent variable. Provide an example of each.

A variable is anything that has the ability to change or vary in characteristics or properties.

An independent variable is the variable that is altered by the researcher. The independent variable influences the dependant variable. The researcher alters the independent variable to determine how this affects the dependant variable. This research method allows controlled experiments to collect data. A dependant variable, as previously mentioned, is affected by an independent variable. This variable's changes are measured by the researcher to reflect the change in data based on the change in the independent variable (Psychology and Society, n.d.).

Variable Example: A group of children have never had candy prior to the experiment. The researcher wants to determine if allowing children to have candy will affect the children's behavior negatively. The children are divided into two groups. The first group is given candy periodically throughout the day and the second group is not. Both groups of children are given the same daily activities, instructions, and supervision throughout the experiment.

In this situation, eating the candy and not eating the candy is the independent variable. The children's resulting behavior is the dependent variable.

References

Psychology and Society. (n.d.). *Dependent vs. independent variables*. Retrieved April

14, 2011 from http://www.psychologyandsociety.com/variables.html

Response 2

According to Hagan (2010),"variables are concepts that have been operationalized or concepts that can vary or take on different values of a quantitative nature" (p.38).

Variables can be independent or dependant. A dependent variable is variable that a researcher is trying to determine or predict. The independent variable in research is the variable that comes before the dependent variable and is believed to directly affect the outcome of the dependent variable (Hagan, 2010). In other words, the

independent variable is the variable used to make predictions about a specific subject or interest or study (dependent variable). The dependent variable is determined based on the outcome of the independent variable.

Many of us are familiar with Ivan Pavlov's discovery of classical conditioning involving the use of a dog. In his experiment Pavlov changed the independent variable several times. Initially, the independent variable was the presence of food which elicited the response of salvation from the dog (dependent variable). Eventually, by associating the food and the bell, Pavlov was able to use the bell as the independent variable to elicit the dependent variable of salivating.

In the statement "regular exercise promotes a healthy weight", the independent variable is "regular exercise" and the dependent variable is a "healthy weight".

Reference

Hagan, F. E. (2010). Research methods in criminal justice and criminology (8th ed.). Upper Saddle River, NJ: Prentice Hall.