

Assignment 2

Name

Course

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Q1. Independent v Dependent Variable

Variables are measurable factors in an experiment. They are of two types – independent and dependent. An independent variable is one that can be manipulated to permit the experimenter the observation of the impact on a dependent variable (Field, 2013).

A dependent variable can best be explained using the following example. A criminologist might want to investigate the reasons behind increasing crime rate in a city. The reasons could be two: (1) unemployment rate is going up or (2) parents time little time to understand and teach their children about civil obedience. The criminologist might choose a group of 200 criminals with the view of interrogating them on why they chose to become criminals.

In this case, the dependent variable is the rate of crime and the independent variables are unemployment rate (%) and time (hours). This is clear that crime rate is affected by unemployment and indiscipline (Field, 2013).

Association of Variables

When the value of one variable relates to the values of the other, the two variables are said to be associated. Association mostly involves two variables only. Association is measured by correlation for two continuous variables and by cross tabulation and a Chi-square test for two categorical variables (Field, 2013).

Q2. A Simple Scatterplot

A simple scatterplot can be utilized to (1) tell whether a relationship is linear, (2) discover outliers and (3) represent a relationship graphically. For example, a saleslady for a reputable smartphone brand might want to determine whether there is a relationship between a person's

earnings and the price they pay for the smartphone. Here, the independent variable is income and the dependent variable is price. Then using the linear regression option in SPSS Statistical, the salesperson can determine if there is linearity between income and price. In short a simple scatterplot is what every business individual needs when making decisions (Dalgaard, 2008; Peck et al., 2011).

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References

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