

Psychology & Science: Variables

Variables

A variable is anything which can assume different numerical values, usually in magnitude or strength. Experimental research involves a high degree of control over the variables, and control helps you to establish causal relationships if they exist.

A researcher manipulates the level of the independent variable (IV), and measures the change in the value of the dependent variable. Both the independent and dependent variable must be able to assume two or more values.

Independent Variable

The IV is the variable directly manipulated by the researcher, to determine whether it influences behaviour. The researcher controls, and sets the levels of the independent variable in accordance with aspects of the environment and the individual being studied.

The level of the IV is what makes the experimental and control groups different. For example, an IV may be how intense a shock "feels". The **control group** may be given a lower level or, no shock at all, whereas the **experimental group** may be given a higher intensity shock.

Dependent Variable

The DV is a well defined aspect of behaviour (a response) that is being measured. It is not set by the researcher, but depends on the behaviour of the participant and the environment in which it is being studied.

In other words, the dependent variable, "depends" on the independent variable. If the value of the dependent variable changes in some systematic way as the independent variable is manipulated, there may be a relationship between the two variables. For example, if you are doing a study on the effect a form of therapy (IV) has on depression (DV), the level of depression is dependent on what kind of therapy is given. Different forms of therapy will have different impacts on the level of depression experienced by the person, if there is in fact a difference in effectiveness between the therapies.

