# Dependent variable

The dependent variable, also known as the response variable or outcome variable, is a key concept in statistical analysis, especially in regression and experimental design. It is the variable that you are trying to understand, predict, or explain based on the values of one or more independent variables.

In the context of regression analysis, the dependent variable is the variable that you want to model or predict using one or more independent variables. For example, if you are studying the relationship between a person's age, education level, and annual income, the dependent variable would be “annual income.” You're interested in how changes in age and education level might influence or explain variations in the dependent variable.

In experimental design, the dependent variable is the one you measure or observe to assess the effect of changes made to the independent variable(s). For example, in a medical study testing the effectiveness of a new drug, the dependent variable might be the improvement in patients' symptoms after receiving the treatment.

In summary, the dependent variable is the central focus of your analysis or experiment, and it's the variable whose changes you are trying to understand, predict, or explain based on the changes in other variables. It's important to define the dependent variable clearly and choose appropriate measurement methods to ensure accurate and meaningful results in your analysis or experiment.