

STAT 110

Chapter 5 Definitions

An experiment deliberately imposes some treatment on individuals in order to observe their responses. The purpose of an experiment is to study whether the treatment causes a change in response.

subjects – individuals studied in an experiment

treatment – any specific experimental condition applied to the subjects

response variable – a variable that measures an outcome or result of a study

explanatory variable – a variable that we think explains or causes changes in the response variables

lurking variable – a variable that has an important effect on the relationship among the variables in a study but is not one of the explanatory variables studied

confounding – two variables are confounded when their effects on a response variable cannot be distinguished from each other

→ confounded variables can be either explanatory or lurking

placebo – a dummy treatment with no active ingredients that is used to control for psychological effects, especially in medical experiments

placebo effect – the response of patients to a placebo

statistical significance – an observed effect so large that it would rarely occur by chance