

Longitudinal research studies



**ASSIGN
BUSTER**

A basic type of research method in which subjects are tested one or more times after initial testing. Typically, subjects are assigned randomly to an experimental group (e. g. a group that performs a specific type of training) and a control group after the initial testing. Both the experimental and the control groups are tested again simultaneously one or more times during the period of the study. In this way, the effects of an experimental procedure can be measured over a period of time A longitudinal study is a correlational research study that involves repeated observations of the same items over long periods of time — often many decades.

It is a type of observational study. Longitudinal studies are often used in psychology to study developmental trends across the life span, and in sociology to study life events throughout lifetimes or generations. The reason for this is that unlike cross-sectional studies, longitudinal studies track the same people, and therefore the differences observed in those people are less likely to be the result of cultural differences across generations. Because of this benefit, longitudinal studies make observing changes more accurate and they are applied in various other fields.

In medicine, the design is used to uncover predictors of certain diseases. In advertising, the Communicus System, the design is used to identify the changes that advertising has produced in the attitudes and behaviors of those within the target audience who have seen the advertising campaign. Because longitudinal studies are observational, in the sense that they observe the state of the world without manipulating it, it has been argued that they may have less power to detect causal relationships than do experiments.

But because of the repeated observation at the individual level, they have more power than cross-sectional observational studies, by virtue of being able to exclude time-invariant unobserved individual differences, and by virtue of observing the temporal order of events. Longitudinal studies allow social scientists to distinguish short from long-term phenomena, such as poverty. If the poverty rate is 10% at a point in time, this may mean that 10% of the population are always poor, or that the whole population experiences poverty for 10% of the time.

It is not possible to conclude which of these possibilities is the case using one-off cross-sectional studies. Types of longitudinal studies include cohort studies and panel studies. Cohort studies sample a cohort, defined as a group experiencing some event (typically birth) in a selected time period, and studying them at intervals through time. Panel studies sample a cross-section, and survey it at (usually regular) intervals.

A retrospective study is a longitudinal study that looks back in time. For instance a researcher may look up the medical records of previous years to look for a trend. Cross-Sectional Research Studies Cross-sectional studies (also known as Cross-sectional analysis) form a class of research methods that involve observation of some subset of a population of items all at the same time, in which, groups can be compared at different ages with respect of independent variables, such as IQ and memory.

The fundamental difference between cross-sectional and longitudinal studies is that cross-sectional studies take place at a single point in time and that a longitudinal study involves a series of measurements taken over a period of

time. Both are a type of observational study. Cross-sectional studies are used in most branches of science, in the social sciences and in other fields as well.

Cross-sectional research takes a 'slice' of its target group and bases its overall finding on the views or behaviours of those targeted, assuming them to be typical of the whole group. A basic type of research method in which a large cross-section of the population is studied at one specific time and the differences between individual groups within the population compared. It is commonly used by sports scientists to evaluate and compare a given physiological variable or fitness component in individuals already belonging to different groups