

Longitudinal Studies

Meaning of Longitudinal Studies

A longitudinal study is an observational research method in which data is gathered for the same subjects repeatedly over a period of time. Longitudinal research projects can extend over years or even decades.

Features of Longitudinal Studies

- ❖ Longitudinal study subjects are **followed over time with continuous or repeated monitoring of risk factors** or health outcomes, or both.
- ❖ Such investigations vary **enormously in their size and complexity**. At one extreme a large population may be studied over decades. For example, the longitudinal study of the Office of Population Censuses and Surveys.
- ❖ At the other extreme, **some longitudinal studies follow up relatively small groups for a few days or weeks**.
- ❖ Longitudinal study **collects data that is either qualitative or quantitative in nature**.
- ❖ In longitudinal study a **survey creator is not interfering with survey respondents**.
- ❖ Longitudinal study is **not just restricted to the field of science or medicine; it has a tremendous impact in the field of business as well**.
- ❖ With longitudinal study, **one can measure and compare various business and branding aspects by deploying surveys like Market Trends and Brand Awareness, Customer Satisfaction, Product Feedback etc.**

How to conduct Longitudinal Study – with Examples

Longitudinal study is useful not only in the field of science and medicine but many other fields. There are many reasons why a researcher might want to conduct longitudinal study. One of the important reasons is, Longitudinal Studies Give Unique Insights That Many Other Types of Research Fail.

- ❖ Example is, a researcher has been hired to study if there is a link between violence and video games usage.
- ❖ A sample for the study is collected and to reduce to amount of interference a large group of participants is collected from a population who play video games.
- ❖ Here the age group is restricted to teenagers (13-19 years).
- ❖ The next step is to record how violent participants in the sample currently are.
- ❖ This creates a baseline for later comparisons. Now the researcher will give a log to each participant to keep a track of how much video games they are playing.
- ❖ This study can go on for months or even years. During this time researcher can draw comparisons between the before and after behavioural aspects of the participants.
- ❖ Thus, helping maintain a record to understand if there is a link between violence and video games.

Types of Longitudinal Study

There are three major types of longitudinal studies:

- ❖ **Panel study:** Panel study is a particular type of longitudinal study in which there is a sample of people from a bigger population and study is conducted at specified intervals for a longer period of time. One of the most important features of panel study is that data is repeatedly collected from the same sample at a different point in time. Most panel studies are designed for quantitative analysis; however, they can also be used with ease for qualitative data collection and analysis.
- ❖ **Cohort Study:** Cohort study is a form of longitudinal study that samples a cohort (a group of people who typically experienced a common event at a given point in time). A cohort study is essentially used in the field of medicine. Some might argue and call clinical trials a form of cohort studies, however, in cohort studies, there is a mere observation of the sample or participants involved in the study, unlike clinical trial.

- ❖ **Retrospective study:** Retrospective study makes use of already existing data that exists because similar kind of research was conducted previously. While conducting a retrospective study, researcher uses an administrative database that already exists, pre-existing medical records or one-to-one interview.

Advantages of Longitudinal Study

- ❖ Longitudinal study is used exceptionally because of their ability to identify and relate to events. By conducting this type of study the chronicity of events is identified especially in the field of medicine.
- ❖ Since longitudinal study is carried out over a long period of time, it helps to identify and establish a particular sequence of events.
- ❖ Longitudinal study help provide meaningful insights that might not be possible with other forms of study like cross-sectional and similar studies.
- ❖ Longitudinal study allows researchers to trace development over a longer period of time instead of simply jumping to conclusions.

Disadvantages of Longitudinal Study

- ❖ One of the disadvantages of longitudinal studies is that it is not cost-effective. Since this study can run over a period of time, amount of money that needs to be pumped into conducting this study is fairly high.
- ❖ An extended time period may mean dropouts in the number of respondents. People get bored and chances are they won't participate until the end of research.
- ❖ Its human psychology, people may start to act differently because they know they are being observed. This is a drawback in terms of the data collected. It won't remain unbiased.
- ❖ Continuity over years may be little difficult. For example, if the lead researcher of the study retires, the person replacing him/her may or may not have the same rapport. So the outcome of the study would be ambiguous.