

GLOSSARY OF STUDY DESIGNS

Please find below a broad definition of each one of the study designs that are included in this survey, sorted in alphabetical order.

Quantitative study designs

Before-and-after study of aggregated data (pre-post or pretest-posttest study)

Before-and-after studies compare the outcome of interest before and after an intervention or treatment change. It aims to minimize the effects of confounding factors that may influence the outcome over time. This study can be done with (controlled before-and-after study) or without (single before-and-after) a control group.

Case reports (case series)

Case reports are detailed accounts of the characteristics of one or more people (e.g., citizens), such as their medical history, existing conditions or problems, treatments or interventions received, and outcomes. Case reports and case series follow a single group of people over time and describe their outcomes (e.g., the natural history of a disease, etc.). They do not have a control group.

Case-control study (case-comparison study)

A case-control study identifies individuals with a particular outcome (cases) and compares them with individuals without that outcome (controls). By comparing the two groups (cases against controls), researchers can look back in time and identify differences in exposure to specific risk factors or interventions that may have contributed to the outcome.

Cohort study of individual-level data (longitudinal or panel study)

A type of observational research design that follows a group of individuals over time to investigate the relationship between an exposure and an outcome variable. Participants are identified based on their exposure status and then followed forward in time to observe the development of outcomes. Cohort studies can be prospective (the researcher will wait until the outcome can be observable) or retrospective (the outcome is already observable and the researcher look back to both the exposure and the outcome).

Cross-sectional study (survey, point-in-time or snapshot study or analysis)

This study design involves collecting data at a single point in time, usually through surveys or interviews. It aims to describe the characteristics of a given population at a point in time.

Delphi study (to get consensus from experts)

Delphi studies are a structured process of gathering opinions and feedback from a panel of experts on a particular topic, usually through a series of questionnaires or rounds of discussion. The goal is to reach a consensus or agreement on a particular issue or decision.

Descriptive (not predicting) time-series analysis (including trend analysis)

Descriptive time series involves the analysis of a series of data points over time, usually in the form of line graphs or charts. It aims to describe the temporal patterns, changes, and trends in a particular indicator, variable or outcome over time.

Discrete choice experiment (stated preferences)

Discrete choice experiments are a type of survey-based research design used to measure people's preferences for different hypothetical scenarios. Participants are asked to choose between different options, each with varying levels of attributes or features, and the goal is to estimate the relative importance of each attribute.

Ecological study (population-based study, including spatial analysis)

Ecological studies are a type of observational research design that explores the relationship between exposures and outcomes at a population level. By using aggregate data, they look for potential correlations between the exposure and outcome variables across different geographical areas.

Instrumental variables study (two-stage least-squares study or regression)

Instrumental variables studies are a research design aiming to estimate causal effects in the presence of confounding variables. Instrumental variables are used to control for endogeneity, which occurs when an exposure variable is correlated with unobserved variables that affect the outcome. The method finds a variable that is correlated with the exposure variable but not directly related to the outcome, using it as an 'instrument' to estimate the causal effect.

Interrupted time-series analysis (including joint-point regression)

Interrupted time-series analyses are a research design to assess the impact of an intervention by examining changes in the outcome variable before and after the intervention at multiple time points. Using statistical methods, this study design estimates the change in the outcome variable associated with the intervention by analyzing changes in the level and trend of the time series before and after the intervention was implemented.

Randomized-controlled study (randomized experiment or randomized trial)

Randomized-controlled studies randomly assign participants to either an intervention group or a control group to ensure that the two groups are similar in all aspects except for the intervention.

Regression discontinuity study (regression kink study or analysis)

Regression discontinuity is a research design to estimate causal effects by exploiting natural experiments that arise from policies or interventions with a threshold or cutoff point. Regression discontinuity designs involve comparing individuals on either side of the threshold, where one side receives the intervention and the other side does not.

Social network analysis (mapping network analysis)

Social network analyses are a study design that examines the relationships between individuals or groups in a social network to understand the structure of social networks, identify key actors, and explore the impact of network characteristics on behaviours or outcomes.

Qualitative study designs

Qualitative research aims to understand and describe in-depth complex phenomena. Unlike quantitative research, which focuses on numerical data and statistical analysis, qualitative research involves collecting and analyzing non-numerical data, such as interviews, observations, and documents.

There are different approaches to conducting qualitative research, each with its strengths and weaknesses. While the definition of "study design" might be a bit more difficult in qualitative research, compared to quantitative research, we distinguish four common types of qualitative research designs depending on their epistemological and paradigms.

Qualitative inductive methods start with the data and allow themes and concepts to emerge naturally. These methods are often used to create theories or models from the data, such as grounded theory.

Qualitative deductive methods start with a theoretical framework or hypothesis and test it against the data. These methods are often used to describe a phenomenon in-depth, such as through qualitative description or narrative approaches.

Qualitative methods can also describe and/or interpret and critically analyze the data for underlying meanings and interpretations.

Overall, the choice of qualitative research design depends on the research question and the goals of the study. For this survey, we have created four categories of qualitative methods: qualitative deductive to describe, qualitative inductive to describe, qualitative inductive to describe and qualitative inductive to interpret.

Evidence syntheses

Evidence syntheses are research methods that aim to systematically collect, analyze, and interpret existing literature to address a research question. There are several types of evidence syntheses, but we only focus here on evidence syntheses that do not aim to summarize data from the existing literature. Rather, we include evidence syntheses that collect data from the literature for a different purpose.

Jurisdictional scan (comparative analysis)

The jurisdictional scan examines the literature or reports from different regions or jurisdictions to identify similarities and differences in policy and practice.

Review to build a new framework (critical interpretive synthesis)

A critical interpretive synthesis is a literature review that builds a new conceptual framework from themes that emerge from the existing literature.

Review to find what has been used by other studies (e.g., scoping review)

Scoping reviews examine the literature to identify the range and extent of research in a particular area. This type of review is useful when the aim is to identify gaps in knowledge and inform future research.

Review to identify existing frameworks (conceptual analysis)

This review identifies existing frameworks (as opposed to creating one as the critical interpretive synthesis) to critically analyze how much they explain a particular phenomenon.

Technology assessment/cost-effectiveness analysis

Economic evaluations (cost-effectiveness, cost-utility, cost-benefit analyses)

Economic evaluations are a type of study design that assesses the costs and benefits of different interventions at the same time.

There are several types of economic evaluations, including cost-effectiveness analysis (CEA), cost-utility analysis (CUA), and cost-benefit analysis (CBA). They differ in the way in which they measure the outcomes of the effects of an intervention.

CEA compares the costs and effects of different interventions in terms of a single outcome measure (natural units), such as life years saved. CUA, on the other hand, measures the outcomes of interventions in terms of a utility measure, such as the quality-adjusted life years (QALYs). Finally, CBA compares the costs and benefits of interventions in monetary terms.

Multi-criteria (objective) decision analysis

Multi-criteria decision analysis (MCDA) is a decision-making tool that takes into account multiple criteria or objectives to be considered, to evaluate and rank different options.

MCDA involves identifying the criteria that are relevant to the decision, assigning weights to each criterion to reflect their relative importance, and scoring each option against each criterion. The scores are then combined to produce an overall ranking of the options.

Modelling

Modelling is a process of creating a simplified representation of a complex system or phenomenon, to better understand it or make predictions about its future behaviour. They can be used to predict different future scenarios, estimate indicators that are unfeasible to be observed, and compare different measurements, among other purposes.