



Research methods

- Quantitative research
- Qualitative research
- Observation research

- Experimental research vs Non-experimental research
- Ex post facto (after the fact) research
- Evaluation research

Types of quantitative research design

- Random assignment. All participants have equal chance of being assigned to either treatment or control groups.
- Quasi-experimental research. Control and manipulative variables but with no random assignment.

Experimental research. In search for cause-and-effect relationships

- Correlational research. Non-experimental research that examines relationships.
- Correlation means association - more precisely it is a measure of the extent to which two variables are related.

Non-experimental research. Any quantitative research that doesn't look for cause-and-effect relationships

- Examine a phenomenon that has already occurred and attempts to infer cause-and-effect relationships

Ex post facto (after the fact) research

- Measuring the effectiveness of a program usually by determining if program's objectives have been achieved

Evaluation research

- Case study. An in-depth study of one individual, program, community, setting or event
- Phenomenological study. An attempt to understand a small, selected group of people's perceptions, understandings, beliefs
- Ethnographic study. Involves direct engagement of the researcher into participants' environment (e.g. studying homeless people someone could actually live as being homeless)
- Grounded theory study. Discover, develop or generate a theory related to a phenomenon based on data collected

Types of qualitative research design

- Observation (watching what people do) would seem to be an obvious method of carrying out research in psychology. However, there are different types of observational methods and distinctions need to be made between:
 - Controlled observations (usually a structured observation) are likely to be carried out in a psychology laboratory
 - Naturalistic observation (i.e. unstructured observation) involves studying the spontaneous behaviour of participants in natural surroundings
 - Participant observation is a variant of the above (natural observations) but here the researcher joins in and becomes part of the group they are studying to get a deeper insight into their lives

Observation research methods

Other research terms

Basic and applied research

- Basic research. Focuses on fundamental principles and testing theories
- Applied research. Done with a specific question in mind. Applied research is a methodology used to solve a specific, practical problem of an individual or group

Field and lab research

- Field research. Done in the real world, where actually people live (e.g. classroom, community, worksite, playground etc).
- Laboratory research. Conducted in the tightly structured conditions of a lab.

Basic research examples

- Examination of chlorpromazine, a drug used in the treatment of schizophrenia
- Discovery of dark adaptation which helped establish a theory of basic visual processes that led to applications in treating night blindness and reading x-rays
- Psychological studies of decision making that led to important findings in the fields of education, medicine, and economics
- Findings from psychology applied in various contexts within the legal system: evidence evaluation, eyewitness testimony, validity of recovered memories, and so on
- Why people smoke?

- Interventions for specific child behaviors
 - Ways to manage schizophrenia
 - How to cure a specific disorder
 - Ways to market products
 - How can bullying be prevented?
 - What is causing increased poverty?
 - How can the achievement gap of students from various socio-economic backgrounds be bridged in education?
 - Is technology use for children helpful or harmful?
 - How can obesity be prevented?
 - How can anxiety be overcome?
 - Can we help people quit unhealthy habits?

Examples of applied
research

Both applied and basic research are important to the scientific process. It is a mistake to pit them against each other

- Based on previous work and a thorough review of literature.
- Based on theory.
- Apolitical, objective and logical.
- Designed to answer a question or solve a problem.
- Can be replicated and validated.
- Can be generalized to other settings.
- Uses accurate observation and measurement.
- Requires patient, unhurried activity.
- Involves rigorous analysis of data.
- Results are reported for others to utilize and critique.

To conclude... Characteristics of
good research

Different
research
designs,
methods,
one aim...

