

experimental methods - terms

aim	what the researcher intends to find out
hypothesis	what the researcher predicts will be the outcome of the experiment
procedure	steps in order to carry out research
findings	the principle outcomes of a research project - what the project has suggested revealed or indicated
conclusion	what the findings tell us about people in general rather than about specific participants - conclusions are used to construct theories
demand characteristics	a cue in the environment that makes the participant aware of the aim of the study
internal validity	when the researcher is able to measure what they intended to measure
reliability	when the study can be carried out again and collect the same results
mundane realism	when the tasks in the study are reflective of real life tasks

strengths and weaknesses of experimental designs

strengths

weaknesses

hypotheses

hypothesis An accurate and testable statement predicting the outcomes of the research project

There are two types of hypotheses....

1. Null hypothesis	2. Alternative hypothesis
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a null hypothesis is used to predict that there will be no difference or relationship in the results	an alternative hypothesis is used to predict a difference or relationship in the results
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There are two types of alternative hypothesis...

1. Directional hypothesis (one tailed)	2. Non directional hypothesis (two tailed)
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a directional hypothesis states which direction the results are predicted to go. Eg. there will be an increase in...	a directional hypothesis states that there will be a difference but not which direction the results are predicted to go. Eg. there will be a difference between...
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extraneous variable

extraneous variable an extraneous variable is a variable that can affect the results if not controlled. eg. age of pts, temperature, or researchers body language

there are three different types of extraneous variable...

1. Participant variables	2. Situational variables	3. Experimenter variables
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extraneous variable (cont)

participant variables are differences in the participants between conditions that can affect the results. Eg. age, experience, ethnicity	situational variables are differences in the situation between conditions that can affect the results. Eg. temperature, noise level, time day	experimenter variables are differences in the experimenters body language or tone of voice between conditions that can affect the results.
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these extraneous variables can be controlled in different ways...

participant variables can be completely removed by using a repeated measures design. matched pairs design may help to control participant variables	situational variables may be controlled by using standardised procedures where as many of the variables in the conditions remain the same	experimenter variables can be overcome by writing down any instructions for the participants so they dont have to interact with the experimenter.
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experiments

experiment an experiment is a research method used to find an cause and effect relationship between the independent variable and the dependant variable

there four types of experimental methods...

1. **laboratory experiment** a laboratory experiment is used to investigate the causal relationship between the independent and dependant variable in controlled conditions

experiments (cont)

2. **field experiment** a field experiment is used to investigate the causal relationship between the independent and dependant variable in more natural conditions

3. **natural experiment** a natural experiment is used to investigate the relationship between the independent and dependant variable when the independent variable cannot be manipulated because it is something the participant has experienced

4. **quasi experiment** a quasi experiment is used to investigate the relationship between the independent and dependant variable when the independent variable cannot be manipulated because it is a characteristic of the participant

