

# Research Methods

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# Research Methods

- \* When studying social science, we look at two kinds of evidence
- \* Quantitative: gives us #'s, uses statistics
- \* Qualitative: understands through direct observation



# Research Methods

- \* When looking at quantitative research:
  - \* Is it possible to poll the entire population?
  - \* In social science, we use the idea of samples
- \* Sample: Use a subset of the population to draw inferences from
- \* Example of qualitative research: Surveys



# Research Methods

- \* When looking at quantitative research
  - \* Offers detailed evidence, but typically cannot be generalized
  - \* Examples: Case studies and participant observation



# Bias

- \* i) Selection Bias

- \* sample does not represent population

- \* ii) Measurement Bias:

- \* errors in collecting data; expectation bias, attention bias,

- \* iii) Intervention Bias

- \* Typically occurs when comparing groups



# Bias

- \* **Observer bias** happens when the researcher unconsciously influences the participants responses (tone of voice changes, etc)
- \* **Hawthorne Effect** is the tendency for participants to alter their true behaviour merely because they know they're being observed





# Clever Hans



# Bias

- \* Purposive sampling intentionally selects participants based on a criteria**



# Limiting Bias

- \* In a single blind procedure, participants have no idea which group they're in (eg- drug trial, either given the drug or a placebo). Eliminates the Hawthorne effect.



# Limiting Bias

- \* In a double blind procedure neither the participants or the experimenter know which group subjects are in. Eliminates observer bias.**



# Experimental Methods

- \* In a Repeated Measures Designs (RMD) each participant is tested in both conditions of the experiment (drug and placebo)



# Experimental Methods

- \* In a Independent Groups Design (IGD) different participants are used in each of the conditions so each group is independent of each other (need to be randomly assigned)**



# Research Methods

- \* **Validity:** extent to which a test measures what it says it's going to measure
- \* **Reliability:** consistency of a measure.



# Ethics

- \* informed consent: subjects must be informed of risks and procedures**
- \* risk of harm: both psychological and physical**
- \* confidentiality: identifying information not released to anyone outside study**