External Validity

•"External validity refers to the extent to which we can generalise the results of a research study to people, settings, times, measures, and characteristics other than those used in that study."

•Generalisation:

- From a sample to a population
- From a research study to a real-world situation
- From one research study to another research study

Threats to External Validity:

•Participants

- Characteristics of a specific group of participants in a study may limit generalizability:

  1) Selection Bias/Sampling Bias (Samples of Convenience: eg. using 1st year students in SONA; Volunteer Bias: volunteers are in general more educated and sociable)

  2) Participant Characteristics

  3) Cross-species generalisations

- Solution: Random selection

•Features of the Study

- Characteristics of specific procedures used in a study may limit generalizability:

  1) Novelty effect

  2) Multiple treatment interference (Fatigue, Practice effects)

  3) Experimenter characteristics

- Solution: Counter-balancing

•Measurements

- Characteristics of specific measures or measurement procedures used in a study may limit generalizability:

  1) Assessment sensitization

  2) Time of measurement

  3) Response bias (in self-report measures)

- Solution: Alternative measures, Covert observation

Internal Validity

•"A research study has internal validity if it produces a single, unambiguous explanation for the relationship between two variables."

Threats to Internal Validity

•Extraneous variables

- Any variable other than the specific variables being studied

•Confounding variables

- A specific type of extraneous variable

- An extraneous variable that provides an alternative explanation for the relationship between the variables being studied

•Environmental variables

- Conducted in the morning / evening?

•Individual differences

•Time-related variables

- Measure stress levels during exam period?

•Solution: Random assignment, Experimental control