THINKING AND WRITING IN PSYCHOLOGY
Psychology 204

East-West University/Fall 2022

Control and experimental groups

- *Control group*: Does not receives the treatment
- *Experimental* group: Does receive the treatment
- Subjects placed in control or experimental group by *random assignment*
- These groups are the same except for the treatment
  - *Confounding variable(s)*
    - *Environmental differences*
    - *Expectation effects*

Control and experimental groups

- Blind and double-blind conditions
  - Blind: Subjects do not know what group they're in
  - Double blind: Neither the subject nor the experimenter knows which group the subject is in
- Placebo: A thing or procedure that has no effect

Music and grades: Experimental method step by step

- Develop the hypothesis
- Create operational definitions for IV and DV
- Randomly select a group of subjects from the population
- Randomly assign the subject to experimental or control group
- Expose the experimental group to the IV
- If necessary, introduce the control group to placebo

Music and Studying

- Hypothesis: Student who listens to music during "study hall" will have higher grades at the end of the term than student who don't
- IV: Listening or not to music
- DV: Higher or lower grades
- Control group Does not listen to music
- Experimental group: Does listen to music
- Random assignment: Sample selected from all students who attend study hall
- Confounding variables?

Data analysis

- Analysis of the numbers in the experiment through using statistical methods to find out if the hypothesis is correct
  - Is there is difference in grades between the two groups?
  - How large is the difference?
  - How similar are the differences within groups?
  - How many participants are in each group?

Replication

- Repeating an experiment to see if the results can be reliably reproduced
- The more replication there is, the more valid the result

Research ethics

- IRB
- First do no harm
- Informed Consent
- Protection from harm
- Deception
- Coercion
- Debriefing
- Confidentiality and anonymity

Informed consent

- Procedure occurs before research begins
- Knowledge of what will happen
- Voluntary participation
- Right to withdraw from research at any point
- Purpose of the research/logistics
- Risks involved
- Agree/disagree to do it/be involved/be treated
- Informed consent document

Protection from harm

- Minimize risk of harm
  - Physical
  - Psychological
- Risk-benefit analysis

Deception

- Misleading
- “Hide the truth”
- May be acceptable
  - Milgram study
- Confederates
- Risk-benefit analysis

Coercion

- *Coerce:* Force or pressure someone to do something against their will
- Accomplished through threats

Debriefing

- Occurs after the study concludes
- Purpose of study
- Procedure of study
- Reveal deception
- Questions/concerns

Confidentiality/Anonymity

- Right to privacy
- All identifying information kept in a secure environment

Research ethics

- Animal research
  - Some psychologists are interested in animal behavior
  - Biological and behavioral similarities between humans and animals
  - Short life span allows collecting information throughout the animal's life
  - Possible to exercise more control over experiment (e.g., using certain food)
  - Procedures that are unethical on humans ***may*** be ethical when used with animals