

Lecture 8

Refining Research Ideas and Beginning to Design your Study

Elements of Research Design:

Comparison/Control Groups

- Selecting a comparison group:

Between Groups Designs

- Compare it to another group (that is similar to

research group except with respect to the treatment/construct you are measuring)

Within Group Designs

- Can compare one group to itself over time (i.e., before treatment and after treatment)
- Note: qualitative/descriptive studies do not use

comparison groups – they just describe...really well

Elements of Research Design: Between Groups Design

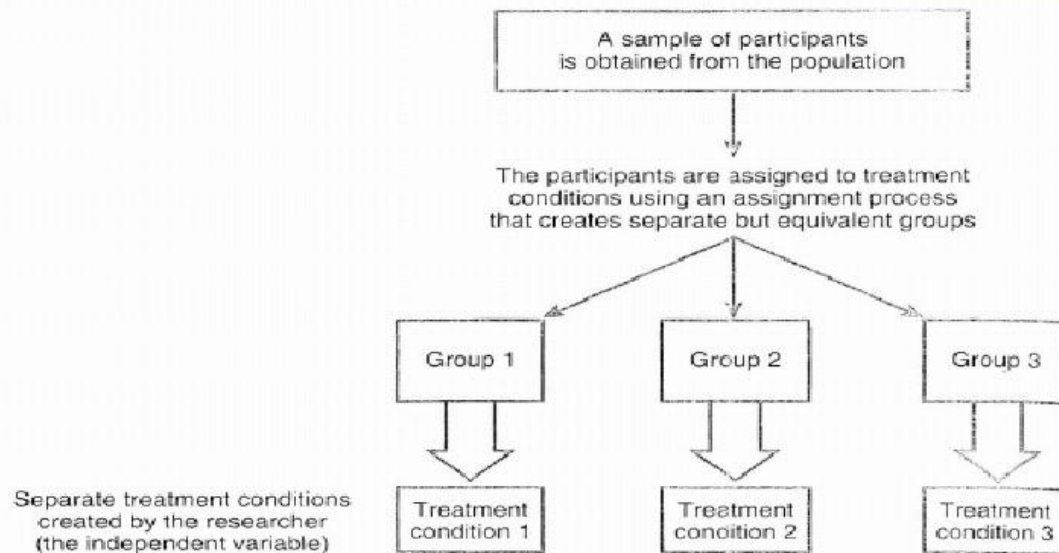


Figure 8.1 The Structure of a Between-Subjects Experiment
The key element is that separate groups of participants are used for the different treatment conditions.

Source: Gravetter, F.J., & Forzano, L. B. (2006). *Research Methods for the Behavioral Sciences* (2nd ed.). United States of America: Thomson Wadsworth.

Elements of Research Design: Within Group Design

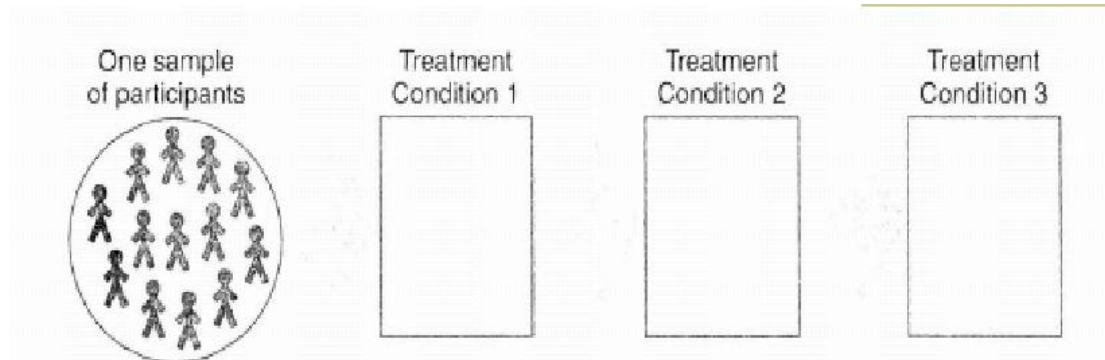


Figure 9.1 The Structure of a Within-Subjects Design

The same sample of individuals participates in all of the treatment conditions. Because each participant is measured in each treatment, this design is sometimes called a repeated-measures design. Note: All participants go through the entire series of treatments but not necessarily in the same order.

Source: Gravetter, F.J., & Forzano, L. B. (2006). *Research Methods for the Behavioral Sciences* (2nd ed.). United States of America: Thomson Wadsworth.

Elements of Research Design: One time vs. over time research

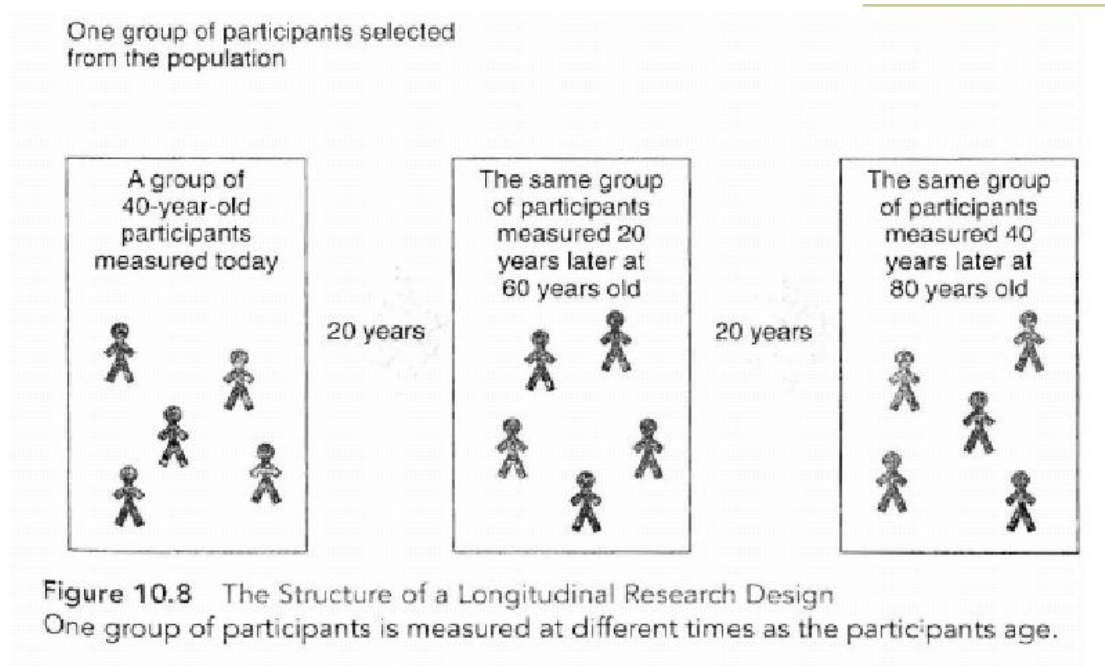
■ Cross-sectional method

§ Same group of people are observed at one point in time

■ Longitudinal method

Same group of people are observed at different points in time as they grow older

Elements of Research Design: Longitudinal Method



Source: Gravetter, F.J., & Forzano, L. B. (2006). *Research Methods for the Behavioral Sciences* (2nd ed.). United States of America: Thomson Wadsworth.

Lecture 9

Elements of Research Design: Defining

your terms

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■ **Independent variable** – variable that is manipulated by the researcher (or the variable that is thought to affect the outcome/dependent variable)

■ **Dependent variable** – variable that is measured

to assess the effects of the independent variable

■ **“Operational definition”** – procedure for measuring and defining a construct (i.e., what measures will you be using)

Turning your research question into a

Research Hypothesis

■ It is the test of your idea or theory

■ A hypothesis is a statement that describes or

explains a relationship among variables

■ It is a prediction that is derived from your research question

e.g. “Shared Journey staff education will improve patient satisfaction as compared to units whose staff did not receive SJ training”

e.g. “internalized stigma is related to increased depression”

RH & RQ

<http://privatewww.essex.ac.uk/~scholp/Hypotheses05.htm>

Summary

- Start thinking about who you want to participate in your study, how you will recruit them, how you will collect the data etc.

- Decide if you want a single or multiple groups

of participants and if you want to collect data at one time or over time

- Start thinking about how you can minimize/eliminate confounds and bias

- Formulate a research hypothesis