Week 13 lecture notes - PSYC 3435

April 17-21, 2017

This week we will finish talking about nonexperimental designs with two new types of designs: *developmental designs* and *small N designs*

Developmental designs

Used to study changes in behavior that occur as a function of *changes in age*

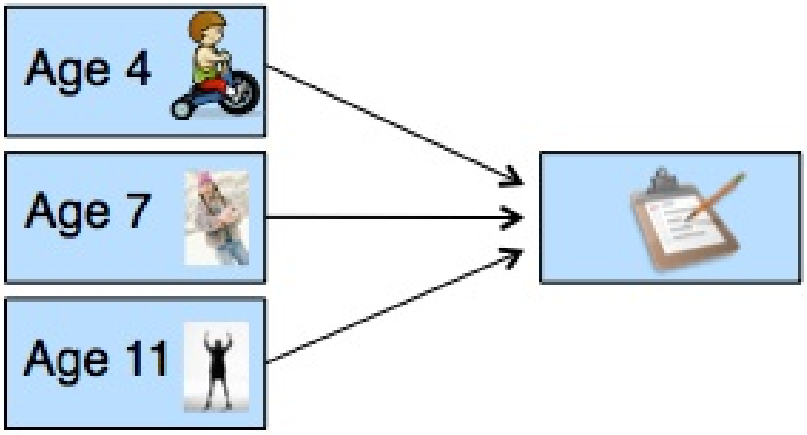
- age = quasi-independent variable

Three major types:

- cross-sectional
- longitudinal
- cohort-sequential

Cross-sectional design

- study groups of individuals of different ages at the same time
- age is treated as a *between-subjects* variable



Advantages:

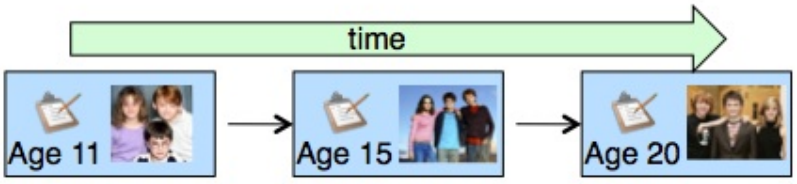
- much faster – can gather data about different groups (ages) at the same time

Disadvantages:

- individuals not followed over time (does not reveal *development* of individuals)
- cohort effects: individuals of different ages may be inherently different due to factors in the environment

Longitudinal design

- study same invididuals/groups over time
- age is treated as a *within-subjects* variable



Advantages:

- can see developmental changes

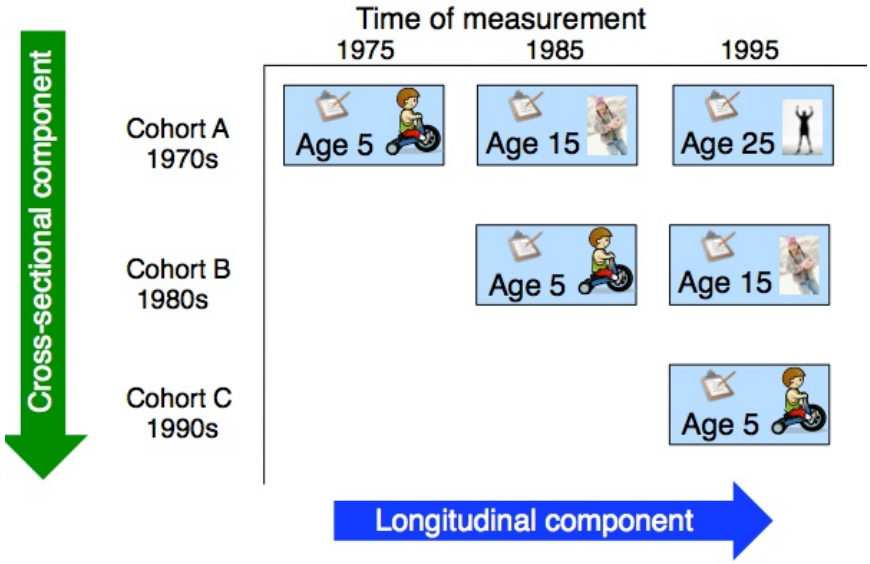
- avoid cohort effects

Disadvantages:

- time consuming
- attrition and practice effects

Cohort-sequential design

- measure groups of participants as they age
- combines best parts of cross-sectional and longitudinal designs



Small N designs

Used to study behavior is a small number of participants.

Two main types:

- Discrete trials design
  - large number of trials completed by small number of participants
  - used to study basic behavioral processes that are not likely to differ between people (e.g., learning, attention, memory, etc.)
  - ex: Ebbinghaus studies – one participants, MANY trials

- Baseline designs
  - observations begin at *baseline* (absence of a treatment)
  - Basic idea: you want to show that
    - when treatment occurs, you get an effect
    - when you remove the treatment, the effect reverses

Most common example: ABA design