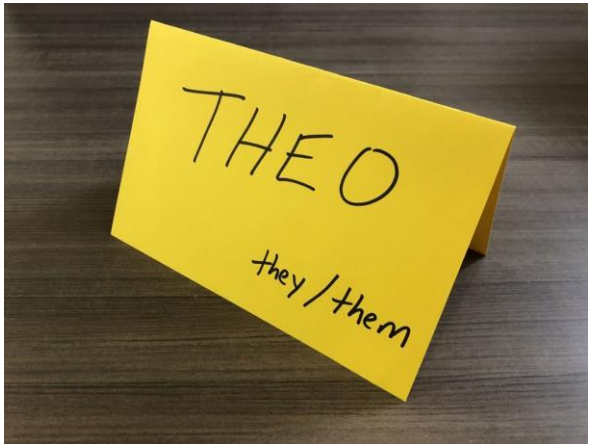
Chapter 1

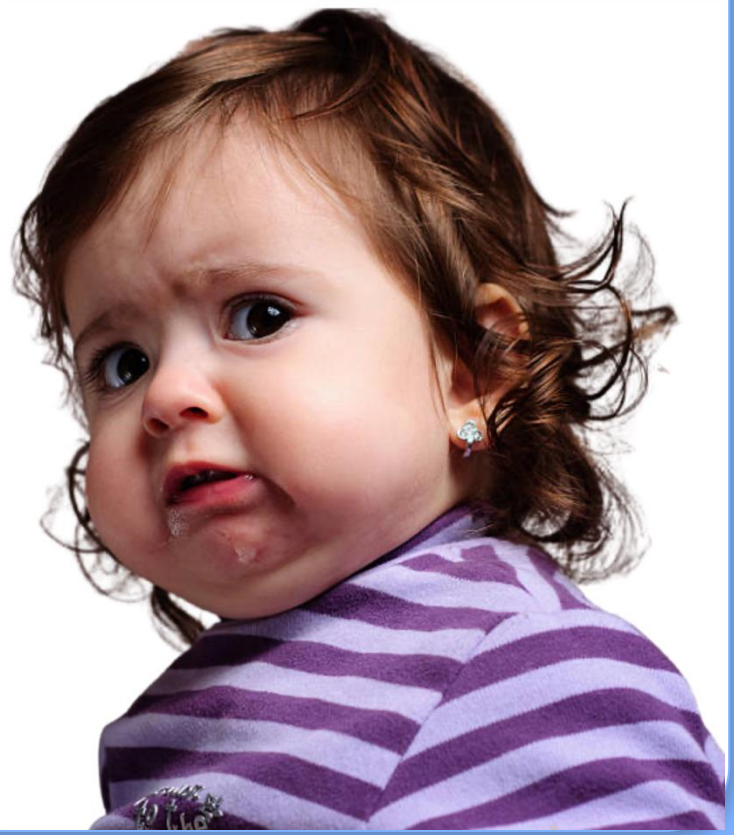
Introduction to Child Development Cont.

Make a name tent with your first name in large letters. Write down the name you wish to be called.

And what Micheal you are today



Question of the Day



Question of the Day

How do we know when a claim about human behavior is actually supported by science—and not just opinion or personal experience?

Which is more important in research: studying behavior realistically (real life) or studying it under control (accuracy)? Why?

Systematically Approaching Science

Why Science Changes

Science = a process of continual questioning

- Uses systematic procedures to gather evidence
- Built to keep skepticism and testing alive
- Goal: Describe, Explain, or Test phenomena

Why do researchers “change their stories”?

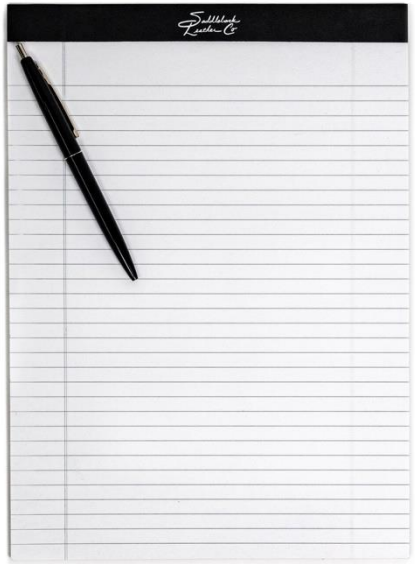
- New evidence lead to better explanations
- Science inherently updates itself over time

THINK-PAIR-SHARE

Why do you think “falsifiable” matters in science? What’s the risk of believing a claim that can’t be proven wrong?

1. Write down your answer
2. Turn to a nearby classmate and share what you wrote
3. Get ready to share: you can share what you wrote or what a classmate shared with you

What Makes Science “Science”



Our Assumptions shape our perception

- We often “see” what we already believe

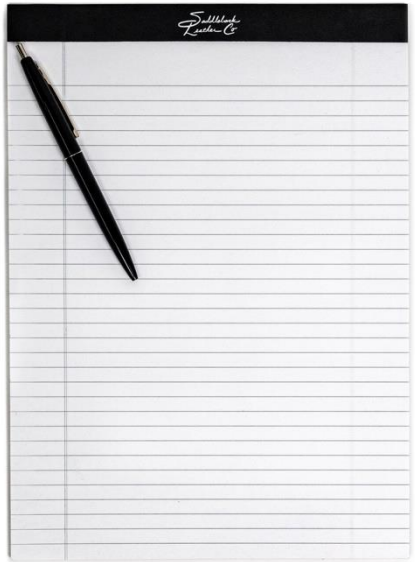
Confirmation Bias

- We look for evidence that we’re right
- We ignore or downplay evidence that contradicts us

Science must be Falsifiable

- A science claim must be testable in a way that could be proven wrong
- If it can’t be falsified, it’s not scientific

What Makes Science “Science”



Our Assumptions shape our perception

- We often “see” what we already believe

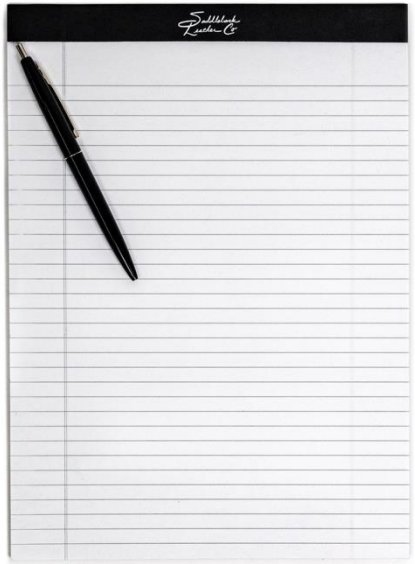
Confirmation Bias

- We look for evidence that we’re right
- We ignore or downplay evidence that contradicts us

Science must be Falsifiable

- A science claim must be testable in a way that could be proven wrong
- If it can’t be falsified, it’s not scientific

What Makes Science “Science”



Our Assumptions shape our perception

- We often “see” what we already believe

Confirmation Bias

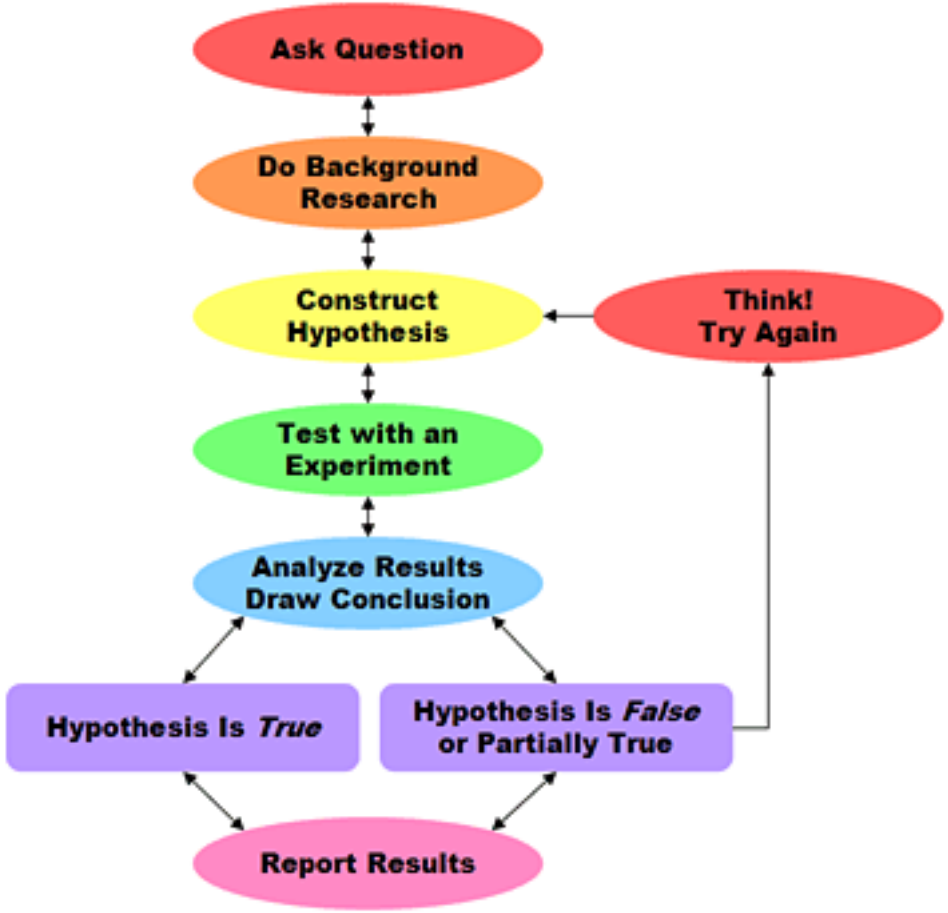
- We look for evidence that we’re right
- We ignore or downplay evidence that contradicts us

Science must be Falsifiable

- A science claim must be testable in a way that could be proven wrong
- If it can’t be falsified, it’s not scientific

Research Methods

Scientific Method



Qualitative research often begins broadly

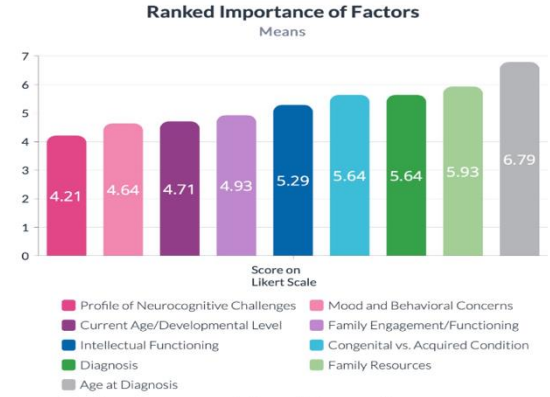
1. Start with a broad area of interest
2. Gain access to a group/setting
3. Collect field notes (setting, people, activities, structure)
4. Ask open-ended (“grand tour”) questions
5. Refine questions over time
6. Identify patterns / themes
7. Follow new directions that emerge as important to participants
8. Report findings

Qualitative Approaches

Descriptive Research

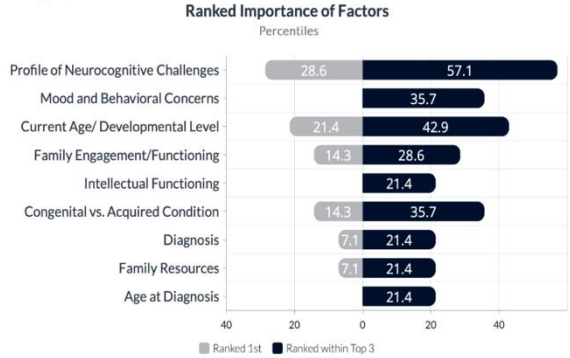
Quantitative Results

Figure 1:



*Lower mean score indicates higher rated importance

Figure 2:

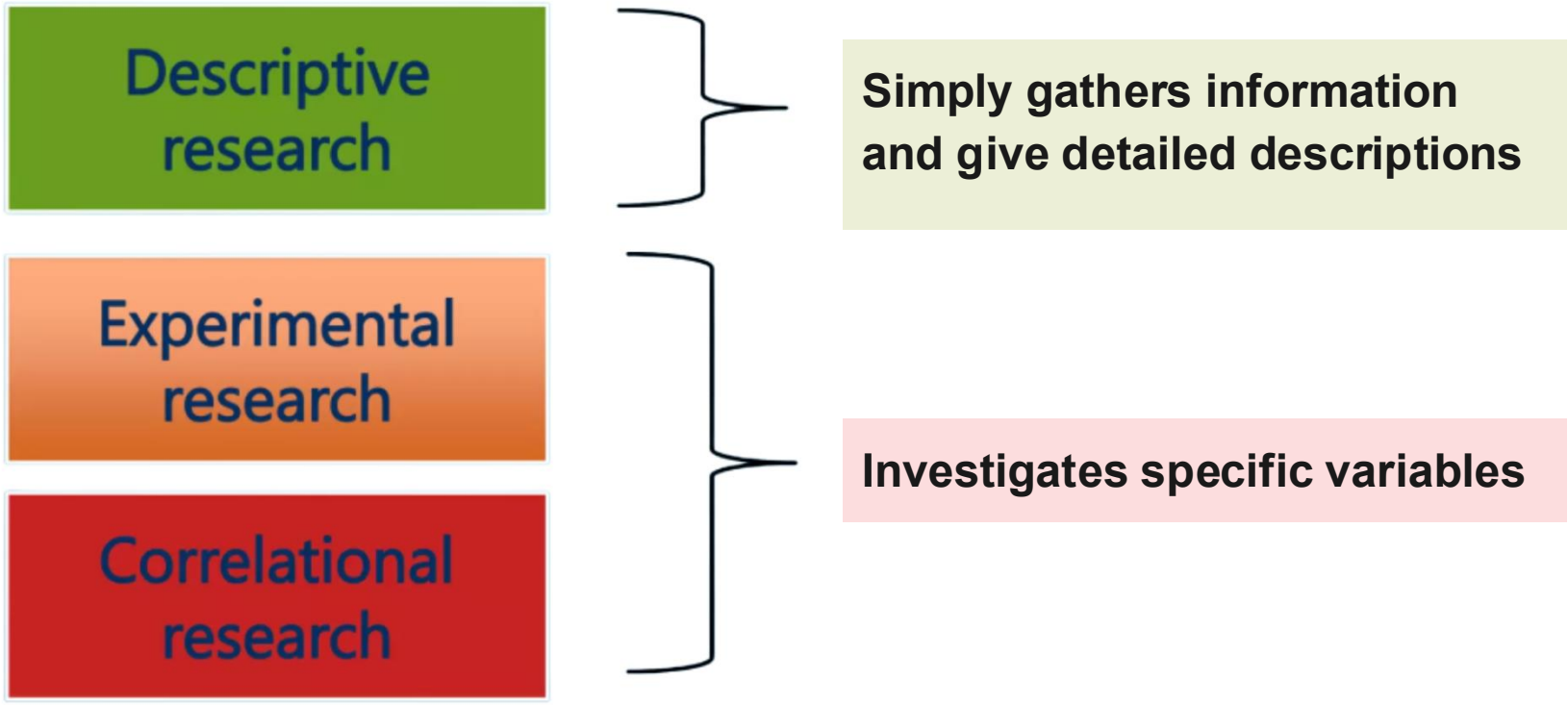


THINK-PAIR-SHARE

Which do you think is more accurate for understanding human behavior: observing what people do, or asking people to report what they do? Why?

1. Write down your answer
2. Turn to a nearby classmate and share what you wrote
3. Get ready to share: you can share what you wrote or what a classmate shared with you

Research Methods in Psychology



Descriptive Research

Descriptive research describes situations. This type describes data and characteristics of a particular phenomenon being studied.

1. The data description is factual, accurate and systematic but the research cannot describe what caused a situation.
2. The description is used for frequencies, averages and other statistical calculations.
3. The goal is to portray what already exists in a group.

Ex. An opinion poll to find which political candidate people plan to vote for in an upcoming election.

3 Types of Descriptive Methods

1. Observational Methods
2. Case Study Method
3. Survey Methods

Observational Studies

Observational studies = watching and recoding behavior

Laboratory Observation

- In laboratory setting
- Playing close attention to participants reaction
- Allows more control but limits reality

Naturalistic Observation

- Researchers take care to avoid interfering with the behaviors they are observing
- Uses real setting to observe behavior in natural state

Observational Studies

How data is Recorded

- **Structured**: checklist + frequency/duration counts
- **Unstructured**: detailed notes describing what happens

Strength

- Captures real behavior (not just self-report)

Limitations

- Cannot determine cause-and-effect
- People may change behavior if watched (Hawthorne effect)

Case Studies

Case studies are in-depth study of ONE case

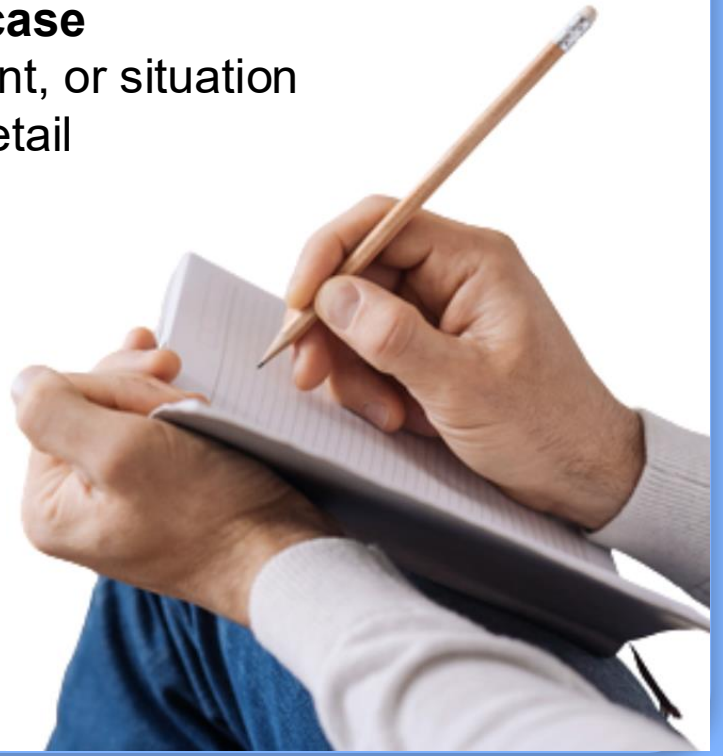
- Focus on a single person, group, event, or situation
- Goal: understand the case in great detail

Data sources can include

- Observation
- Interviews
- Psychological testing
- Records / reports / history

Used when you want

- A deep, “full picture” understanding
- Rich context and detail



Case Studies

Strengths

- Useful for unusual or rare cases
- Helpful when little is known about a topic
- Provides rich detail and generates new ideas
- Common in clinical practice

Limitations

- Findings can not be generalized
- Cases are not randomly selected
- No control group for comparison
- Hard to determine cause-and-effect

THINK-PAIR-SHARE

What makes a survey question “good” or “bad”? What kinds of questions might lead people to answer inaccurately—even if they’re trying to be honest?

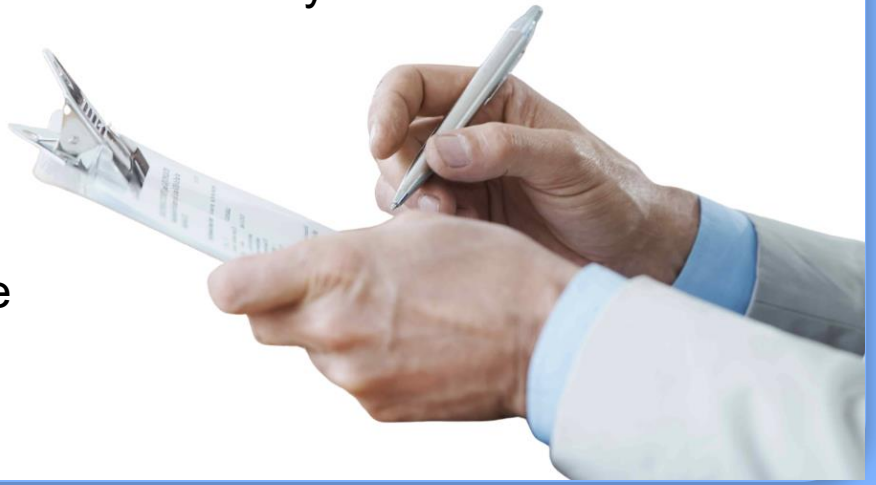
1. Write down your answer
2. Turn to a nearby classmate and share what you wrote
3. Get ready to share: you can share what you wrote or what a classmate shared with you

Survey Methods

Survey: a research tool that uses interviews and/or questionnaires to gather information about attitudes, beliefs, experiences or behaviors of a large group.

- factual information about individuals
- might aim to collect the “opinions” of the survey takers.

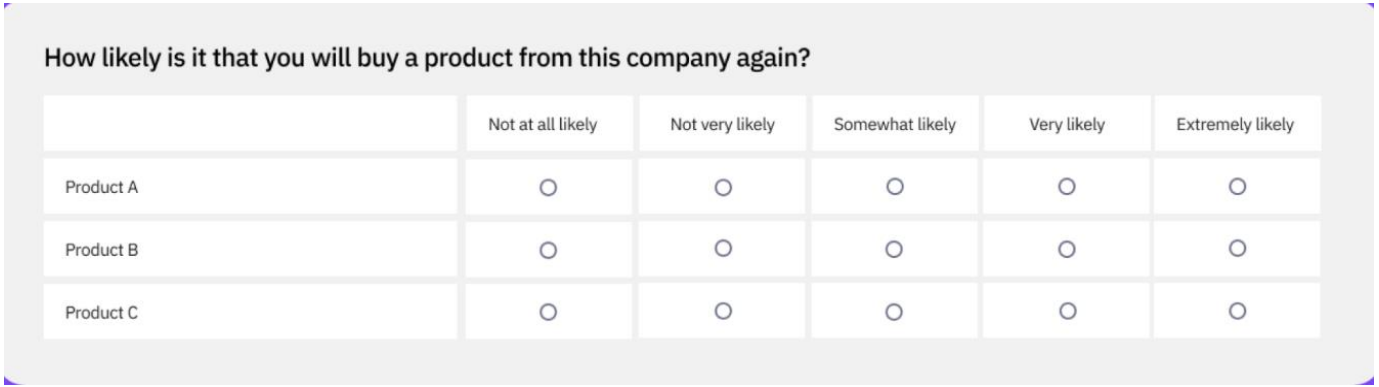
In order for the survey to be both reliable and valid it is important that the questions are constructed properly. Questions should be written so they are clear and easy to comprehend.



Survey Methods

Highly structured surveys

- Forced-choice response options
  - Using a Likert scale: *Strongly disagree → Strongly agree*



How likely is it that you will buy a product from this company again?

	Not at all likely	Not very likely	Somewhat likely	Very likely	Extremely likely
Product A	○	○	○	○	○
Product B	○	○	○	○	○
Product C	○	○	○	○	○

- Semi-structured questions (short written responses)
- Combination of multiple choice + open-ended items

Experiments

Experiments

Experiments test hypotheses in controlled settings

- Goal: explain how/why factors produce outcomes
- Focus on relationships between variables

Variable = anything that can change

- Researchers must define variables clearly

Operationalization

- Turning a concept into something measurable
  - *Example:* "stress" is defined as score on a stress scale or cortisol level

Two main variables

- **Independent Variable (IV):** manipulated by researcher
- **Dependent Variable (DV):** outcome that is measured

Conditions for Cause-and-Effect

To claim **causation**, three conditions must be met:

1. IV and DV are related

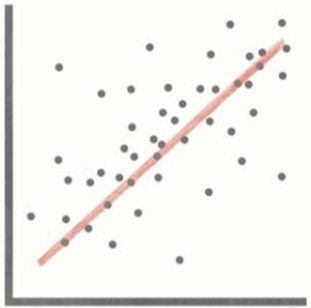
- When IV changes → DV changes

2. Cause comes before effect

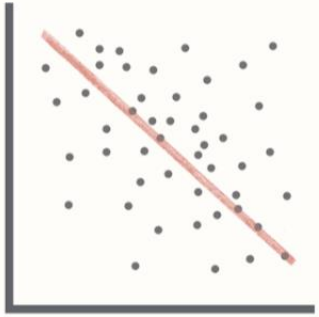
- Measure DV **before and after** IV
- Establish a **baseline**

3. Cause must be isolated

- Rule out other explanations
- Control outside variables (confounds)



Positive Correlation



Negative Correlation

Basic Experimental Design

Basic experiment structure

- Start with a **sample** (subset of a population)
- **Random assignment** to:
  - **Experimental group:** gets the IV
  - **Control group:** does NOT get the IV (comparison group)

Process

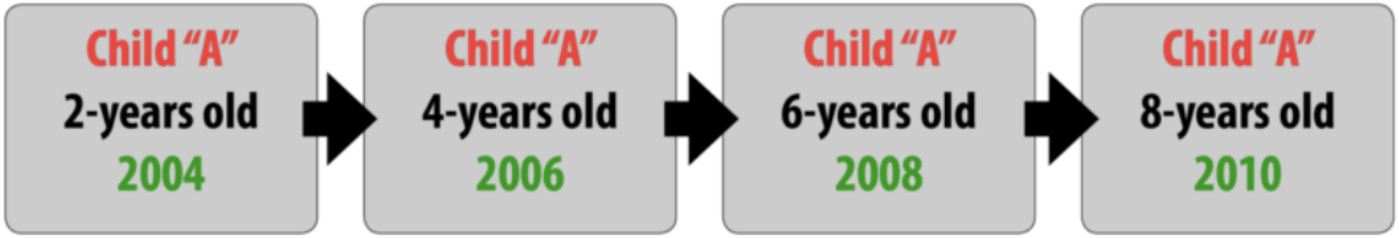
1. Measure DV (baseline)
2. Apply IV to experimental group
3. Measure DV again
4. Compare groups

THINK-PAIR-SHARE

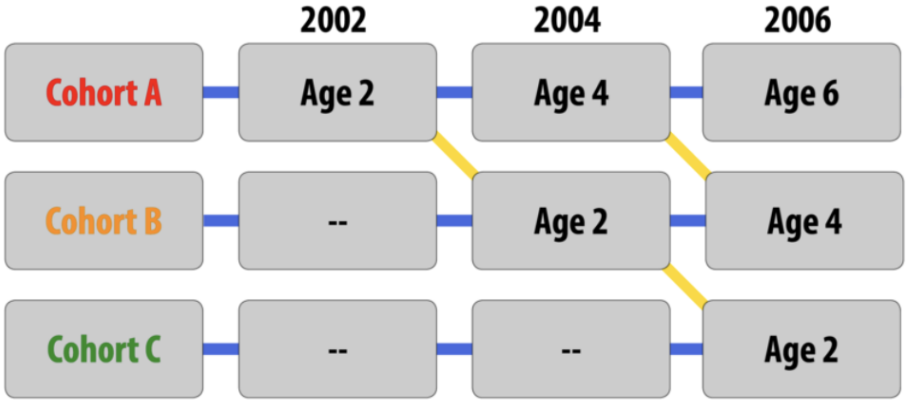
Imagine we want to test: *"Listening to music improves memory."*
What would be the independent variable and the dependent variable?
Decide how you would operationalize both variables (how you'd measure them).

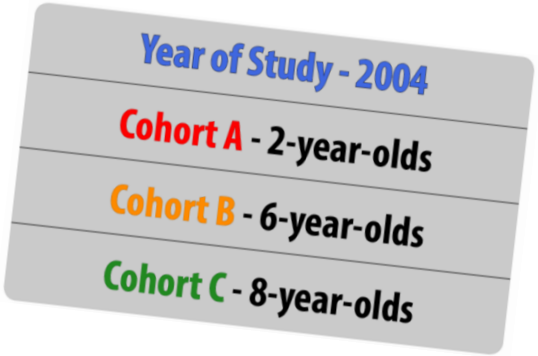
- What counts as "music"?
- What counts as "memory"?

1. Write down your answer
2. Turn to a nearby classmate and share what you wrote
3. Get ready to share: you can share what you wrote or what a classmate shared with you



Developmental Design

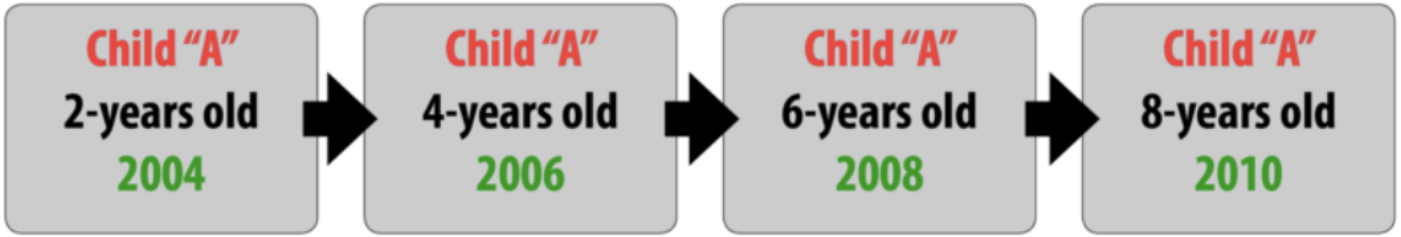




Longitudinal Design

Longitudinal research = same people studied over time

- Start with a group (often similar in age/background)
- Measure the same participants repeatedly
- Follow them for months, years, or decades



Longitudinal Design

Strengths

- Tracks developmental change over time
- Can compare people to their younger selves

Challenges

- Expensive and time-intensive
- Participant dropout over time (attrition)

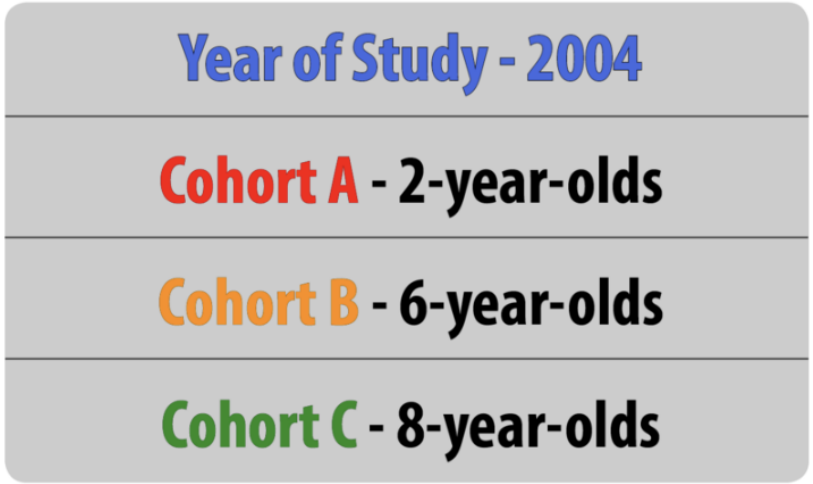
Cross-Sectional Design

Cross-sectional research = compare different groups at one time

- Sample represents a cross-section of the population
- Participants vary in: Age, Gender, Ethnicity, social class

How it works

- Measure each participant **once**
- Compare groups (ex: younger vs older, men vs women)



Cross-Sectional Design

Strengths

- Faster + less expensive than longitudinal research
- Useful for identifying group differences

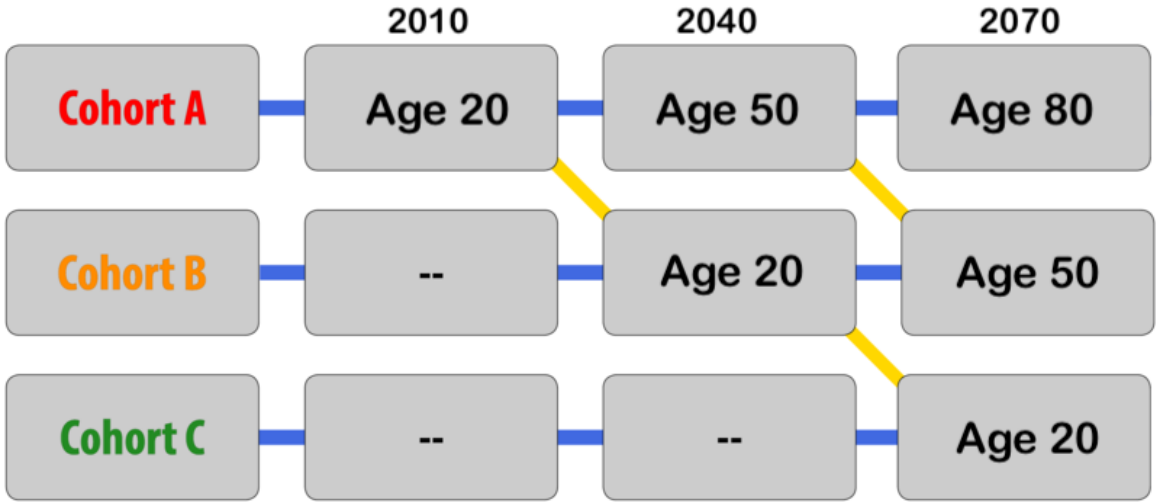
Limitations

- Cannot separate age effects from cohort effects
  - differences may reflect life experiences, not aging

Sequential Design

Sequential research = cross-sectional + longitudinal

- Start with multiple age groups
- Measure those groups repeatedly over time

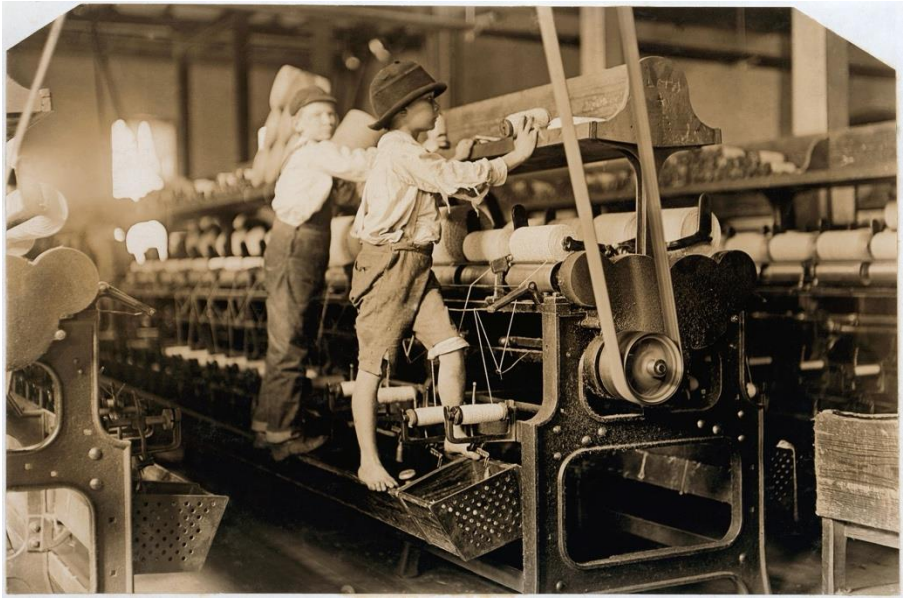


Sequential Design

- Tracks change over time (like longitudinal)
- Compares different ages (like cross-sectional)
- Helps separate:
- age effects vs cohort effects
- Strong for studying differences across: Gender, social class, ethnicity

- Expensive and time-intensive
- Risk of attrition (dropout over time)
- Complex to manage/analyze
- more groups + more time points

Correlation Does Not Equal Causation



Throughout History

Children as Small Adults

Time period (approx.): 1200s–1600s (Europe)

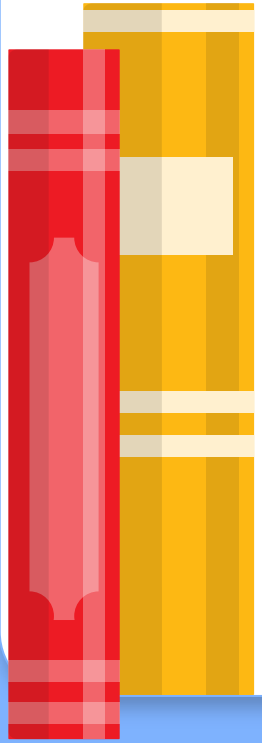
Common view

- Childhood often not treated as a highly protected "special stage"
- Children expected to **join adult responsibilities early**

What life looked like

- Helping with family labor (farming, household work)
- Apprenticeships in trades (as kids/teens)
- Adult-like clothing/roles in many contexts

What is Coming Up?



Homework 1

And Annotating the textbook for extra credit as we go along