

Research Methods of Psychology

"The important thing is never to stop questioning."
 - Albert Einstein

Research Methods

- Case Study
 - Researchers study an individual in great depth
 - Advantages?
 - Disadvantages?
- Survey
 - Advantages?
 - Looks at many cases in less depth
 - Disadvantages?
 - Bias
 - Need random sample

Research Methods

- Naturalistic Observation



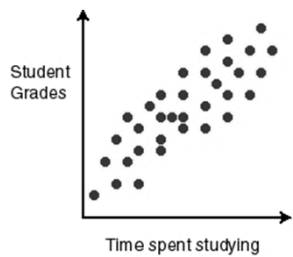
"Day 57. The tigers appear to be adjusting to my presence."

Research Methods

- Correlations
 - Tells you that things are *related*
 - Participants belong to groups that exist already
 - **Correlation does not mean causation**
 - Example: Can't say eating raw food causes better health
 - Can be positive, negative, or zero

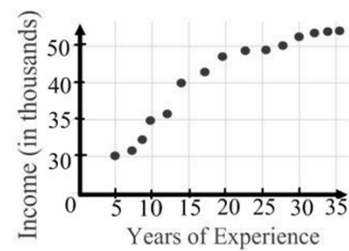


Types of Correlation

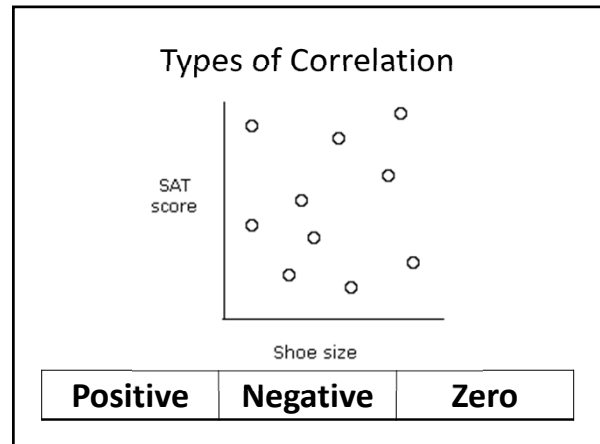
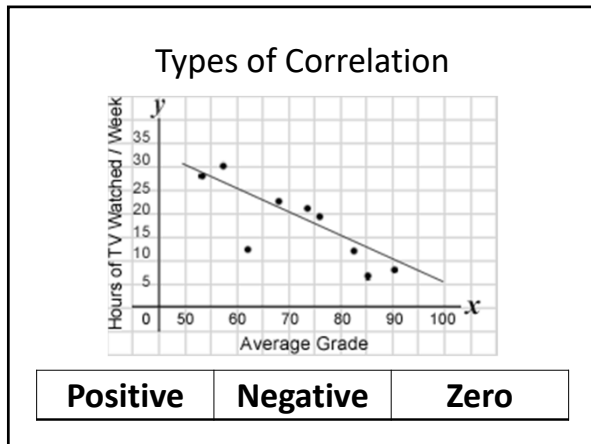


Positive	Negative	Zero
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Types of Correlation



Positive	Negative	Zero
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Other Correlations

- Increase number of tattoos predicts likelihood of a motorcycle accident (*US Army*)
- Fast-food breakfast may inflame blood vessels (*Reuters Health 2004-05-12*)
- Fewer ear infections for babies who sleep on backs (*cnn.com 5-3-2003*)

Study?

Cram?

Causal Direction

- Could we conclude that studying regularly **caused** people to do better?
 - **NO**
 - A correlation, by itself, doesn't tell you the **direction** of causation
 - Changes in one variable could cause changes in another, or vice versa
- Possible causes we didn't account for:
 - Studying regularly causes better exam scores
 - Getting a good exam score could cause regular study
 - Maybe high scorers like the class more?

Third Variables

- It could be that neither variable you measured directly affects the other
 - In the study example, what about time management skills?

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"I'd like to schedule a time-management seminar on my calendar...as soon as I can find time to buy a calendar!"