

The Science of Psychology



Module 2
Psychology's Scientific Method

Types of Psychological Research



Experimental Research
Descriptive Methods
Correlational Research

Descriptive Research describes



This type of research can reveal important information about people's behaviors and attitudes.

This research method is used to observe and record behavior without

Naturalistic Observation



☞ A systematic observation what many people



Case Study



☞ _____

☞ Case studies provide dramatic, detailed information about a person's life, but their generalizability is limited.

Case Study Example Phineas Gage




On September 13, 1848 an accidental explosion blew a tamping iron through his head. The tamping iron was 3 ½ feet long and weighed 13 pounds. The tamping iron went in under his left cheek bone and completely out through the top of his head, landing about 25 to 30 yards behind him.

Phineas Gage (1848)... Yes he LIVED!





After the accident he experienced serious personality changes and his friends reported that he was "no longer Phineas."





Ask questions...


☞ _____

☞ _____

- A survey presents a standard set of questions, or items, to obtain people's self-reported attitudes or beliefs about a topic.

☞ Although these can be a great way of collecting data, they must be properly constructed.

Limitations



☞ People tend to answer the questions to make them look good, rather than provide how they really feel about the topic.

☞ Or they simply lie...

Correlational Studies

☞ Research that examines the _____

- The purpose is to examine whether and how two variables _____

☞ Correlation indicates the strength and direction of a relationship.

- It allows for prediction of one variable based on the other variable

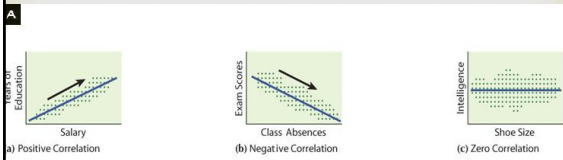
The strength of the relationship is measured by a correlation coefficient which ranges from +1 to -1



- +1: _____ (perfect relationship)
- 0: _____ (no relationship)
- 1: _____ (perfect relationship)

Three Types of Correlations

- Ψ In a positive correlation, the two factors move (or vary) in the _____
- Ψ In a negative correlation, the two factors vary in opposite _____
- Ψ Sometimes there is no relationship between two variables – a zero correlation.



The more time a person spends on a treadmill the less they weigh

The amount of time a college student studies and their height in inches

As a child's age increases so does her height

"Correlation is not Causation!"



☞ Just because there is a correlation between two variables

☞ The relationship could be the result of another variable that was not studied (third-variable problem)

Experimental Research



This is the ONLY research design that can examine a single factor's effect on a particular behavior

Experimental Method



☞ A study in which the investigator _____

- _____

- between variables and should involve *random assignment* of participants.

Experimental Design



☞ Variables are a condition or characteristic that is subject to change.

☞ There are two types of variables in every study:

- _____
- Factor that is manipulated
- Dependent variable:
- Behavior/variable that _____

Identify the Variable Independent and Dependent?



Developmental psychologists want to know if exposing children to differing amounts of public television improves their reading skills.

Name the Variables!



A clinical psychologist is interested in how heart rate is affected by viewing a violent film as opposed to a nonviolent film

Try another one



Cognitive psychologists are interested in what types of diagrams are easiest for people to remember

OK, Last One...



☞ An industrial/organizational psychologist tests to see if wearing name tags makes employees happier with their work

Who will you study?



☞ Participants in a study are individuals in an experiment whose behaviors are observed.

- The sample

- _____

Participants are randomly assigned to one of two groups:



☞ _____
(Comparison group)

- This group does not receive the _____ variable
- It does not receive the treatment

☞ The _____ Group

- Receives new treatment
- This group "receives" the independent variable
