

Introduction to the Psychology of Women

Biases in Research

Psychology Definition

- Psychology is the scientific study of human behavior and mental processes.

Scientific Method

Orderly systematic procedures researchers follow as they:

- Identify a research problem
- Design a study
- Collect and analyze data
- Draw conclusions
- Communicate findings

The Goals of Psychology

Psychologists seek to accomplish one or more of the following goals:

1. Describe
2. Explain
3. Prediction
4. Control

Description

Goal 1

To describe the behavior or mental processes accurately and completely.

Explanation

Goal 2

- To explain why a particular behavior or mental process occurred.

Predication

Goal 3

- To specify the conditions under which a behavior or event is likely to occur.

Control

Goal 4

- To apply a principle or change a condition to prevent unwanted occurrences or to bring about desired outcomes.

Two Types of Research

1. Applied research

- To solve practical problems and improve the quality of life.

2. Basic research

- to seek new knowledge and explore and advance scientific knowledge.

Aspects of Critical Thinking

Researchers need to think critically.

- ❑ Independent thinking
- ❑ Suspension of judgment
- ❑ Willingness to modify or abandon prior judgments

Hypothesis

- ❑ Educated guess about some phenomenon
- ❑ Must be stated in clear precise language so there is no confusion about its meaning.

Methods of Research

1. Descriptive Research Methods
2. Experimental Research Methods
3. Correlational Method

Descriptive Research Methods

4. Naturalistic observation

5. Laboratory observation

6. Case study

7. Survey

Naturalistic Observation

Descriptive

- A research method in which the researchers observe and record behavior in its natural setting without attempting to influence or control it.

Naturalistic Observation

Descriptive

Advantage

- ❑ Allows study under normal conditions instead of artificial conditions

Limitations

- ❑ Researchers have to wait for events to occur
- ❑ Observer Bias

Laboratory Observation

Descriptive

- ❑ Studying behavior by observation in a laboratory, not in a natural setting. Researchers can exert more control and use more precise equipment to measure responses.

Case Study

Descriptive

- A single individual or a small number of persons are studied in great depth, usually over an extended period of time.

Case Study

Advantage

- ❑ good source for rare or unusual situations

Limitations

- ❑ May not be representative
- ❑ Time consuming
- ❑ Researcher bias

Survey

- A method of study in which researchers use interviews and/or questionnaires to gather information about the attitudes, beliefs, experiences, or behaviors of a group of people.

- Methods of Research Descriptive

Survey

Advantage

- ❑ provide accurate information about large groups
- ❑ Can track changes over time

Limitations

- ❑ Sample may not be representative
- ❑ Responses may be inaccurate
- ❑ Researcher may influence response

Experimental Method

- Only method that can be used to identify cause and effect between two conditions or variables.

Experimental Method

□ Variables

- Independent Variable
- Dependent Variable

Every experiment includes one or more independent variables

□ Groups studied

- Experimental Group
- Control Group

Most experiments use two or more groups of participants.

Independent Variables

- Independent variables
any variable that can be manipulated in order to determine effect on another variable.
- Referred to as the treatment.
- The experimental group is exposed to the independent variable.

Dependent Variable

- Is measured at the end of the experiment .
- It is hypothesized to increase or decrease as a result of the manipulations of the independent variable.

Experimental Groups

- The experimental group is the group that is exposed to the independent variable (the treatment).

Control Groups

- ❑ Are similar to the experimental group
- ❑ The control group is exposed to the same experimental environment as the experimental group but it is not given the treatment.
- ❑ Allows researchers to compare the effects of the independent variable with “natural” behavior.

Correlational Method

- ❑ Determines the correlation, or degree of relationship between two variables (characteristics, events or behaviors).
- ❑ Is used when for ethical reasons the experimental study cannot be used.
- ❑ A group is selected, and the variables of interest are measured for each participant.

Correlation Coefficient

- ❑ A numerical value indicating the degree and direction of the relationship between two variables.
- ❑ Ranges from +1.00 (a perfect positive correlation) to .00 (no relationship) to -1.00 (a perfect negative correlation).
- ❑ The number refers to the strength of the relationship.

Positive & Negative Correlation

- ❑ A positive correlation indicates that the two variables vary in the same direction.
- ❑ A negative correlation means that an increase in the value of one variable is associated with a decrease in the value of the other variable.

Two Approaches to Summarizing Multiple Studies

- 1. Box-score approach (counting) researches review studies on one topic and tally the results.
- 2. Meta-analysis perform statistic analysis that combines the results of all the studies

Meta-analysis

- ❑ Yields a effect number known as d
- ❑ d value less than 0.35 is a small difference
- ❑ d value greater than 0.65 is a large difference

Potential Problems in Experimental Research

1. Selection Bias

2. The Placebo Effect

3. Experimental Bias

Potential Problems in Experimental Research

Selection Bias

- ❑ Occurs when there are systematic differences among groups before the experiment begins.
- ❑ Random assignment maximizes the probability that groups are similar at the beginning of the experiment.

Potential Problems in Experimental Research

The Placebo Effect

- ❑ Occurs when a person's expectations influence the outcome of a treatment or experiment.
- ❑ To control, researchers must make certain that participants do not know which group they belong to.

Potential Problems in Experimental Research

Experimental Bias

- ❑ Occurs when the researcher's expectations affect the outcome of the experiment.
- ❑ It is controlled by using the double-blind technique, neither researcher or participants know which group they are in.

Biases in the Gender Study

- ❑ Most Researchers have strong preexisting emotions, values and opinions about men and women.
- ❑ May adhere to a specific psychological theory

Biases in the Gender Study

- ❑ Expectations can influence results
- ❑ Biased samples can influence results
- ❑ Gender differences do not occur in all situations

Biases in the Gender Study

Interpreting Data

- ❑ Statistical Significance results not likely to occur by chance
- ❑ Practical Significance results have useful implications for the real world.