

The Research Hypothesis

- Hypotheses must be testable.
- The concepts used must be operationally defined.
 - Operationally defining a concept means that the way you measure a concept is how you define it.
 - “attractive” is operationally defined as receiving a rating above 7 on a 10 point scale.
 - “independent” is operationally defined as “completing a specified task with no prompts or instructions”.
- How would you operationally define “depression”?

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Variables

- A variable is any event or behavior or characteristic that can change (have more than one value).
 - Examples of variables are amount of exercise, level of attractiveness, level of independence, weight, etc.
- A “relationship” between variables means that as one variable changes the “related” variable also changes.
 - For example “as the amount of aerobic exercise increases, the person’s weight decreases” demonstrates a relationship between exercise and weight.

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Operationally define the underlined variables in the following hypothesis statements and say what the “relationship” in each may be.

- Exercise is related to levels of stress.
- A pregnant woman's diet affects the birth weight of her baby.
- The size of a meeting is related to the quality of the meeting.
- Visual imagery improves memory.
- Working while going to college effects the educational outcome of the student

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Generating Research Ideas

- Challenging common sense
- Observe the world around you looking for regularities and asking why
- Reviewing past research
- Solving practical problems
- Testing theories

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Theories

- Organize and explain existing data.
- Lead to insights that generate new studies and new data.
- Are supported when new data are consistent with the theory.
- Must be revised when new data are collected that reveal weaknesses in the theory.
- May be replaced by newer theories that provide better explanations for the data.

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Drawbacks of Theory-Based Research

- Theory may divert attention away from other important issues and problems.
- Theory may provide a wrong way of looking at the world and may prevent us from finding more accurate ways of viewing phenomena.

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APA Research Articles

- Abstract
 - Short summary of the research article for library indexing purposes.
- Introduction
 - Describes the research problem, reviews related past research, provides current research question and rationale.
- Method
 - Describes subjects, research procedures and materials.

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APA Research Articles

- Results
 - Describes results and portrays them in statistical tables and/or graphs.
- Discussion
 - Relates results to research and hypotheses cited in the Introduction , discusses the implications of these results and suggests future directions for research.
- References
 - Lists the sources of all research cited in the previous sections.

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Example APA Style Research Paper

- Look at the Ward & Carnes (2002) article.
 - What is contained in the Introduction section and what is the format for giving credit to the work of others?
 - Note the contents of the subsections of the Method section
 - How are the results presented?
 - Does the Discussion section relate the results to previous research, note methodological weaknesses and point out areas for further study?

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