Research Methods In Developmental Psychology

Or – How do we figure out what is important in development?
Research Journals

• Publish scholarly and academic information.
• Scholars publish most of their research in journals.
• Articles are written for other professionals in the field.
• Articles undergo intense scrutiny by a board of experts in the field.
• Serve as the core of information in virtually every academic discipline.
Journal Article Format

- **Abstract** - a brief summary of the article.
- **Introduction** - introduces the issue that is being studied along with a concise literature review, theoretical implications, and hypotheses.
- **Method** - provides a clear description of the experiment and all its elements.
- **Results** - reports the analysis of the data collected.
- **Discussion** - presents conclusions, inferences, and interpretations of findings.
- **References** - the bibliographic information for each source cited in the article.
Ethics of research are concerned with the well-being of subjects with regard to physical and mental harm. Participants or their parents must give informed consent.
<table>
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<tr>
<th><strong>TABLE 2.3</strong> Basic Ethical Guidelines for Psychological Researchers</th>
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<tr>
<td>Do no harm.</td>
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<td>Accurately describe risks to potential subjects.</td>
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<td>Ensure that participation is voluntary.</td>
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<td>Minimize any discomfort to participants.</td>
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<td>Maintain confidentiality.</td>
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<td>Do not unnecessarily invade privacy.</td>
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<td>Use deception only when absolutely necessary.</td>
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<td>Remove any misconceptions caused by deception (debrief).</td>
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<td>Provide results and interpretations to participants.</td>
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<td>Treat participants with dignity and respect.</td>
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Naturalistic Observation

• Systematic people (or animal) watching.
  – Advantages?
  – Disadvantages?
Case Studies

- An in-depth look at an individual
- Used when unique aspects of a person’s life cannot be duplicated
- Not readily generalizable
- Concern over reliability of judgments made by single psychologist
Correlational Research

• Describes the strength of the relation between two or more events or characteristics.

• The more strongly two events are correlated, the more effectively we can predict one from the other.

• Correlation does not equal causation.
Experimental Research

• This allows researchers to determine the causes of behavior.

• It uses experimentation: carefully regulated procedures in which one or more significant factors is manipulated, and all others held constant.

• Experimental research involves independent and dependent variables, experimental groups, control groups, and random assignment.
Definition of Independent and Dependent Variables

• Independent variables are the manipulated, influential, experimental factors.

• Dependent variables are the factors that are measured in an experiment. They can change as the IV is manipulated.
Quasi-Experimental Designs

• Many important research questions are not answered easily using true experimental designs.
• Ethically we cannot always control the assignment of participants to conditions or cannot manipulate the independent variable.
• Quasi means “almost” or “approximately.”
Meta-Analysis

• Meta-analysis is a statistical procedure that allows a researcher to pool the data from many studies on the same topic.

• In theory, a well done meta-analysis can tell us more about a subject than one study about the topic.
Time Span of Research

- The Cross-Sectional Approach
- The Longitudinal Approach
- The Sequential Approach
The Cross-Sectional Approach
Individuals of different ages are compared at one time.

<table>
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<th>Pros</th>
<th>Cons</th>
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<td>– Study can be accomplished in a short period of time.</td>
<td>– Provides no information about how individuals change.</td>
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<tr>
<td>– Researchers don’t have to wait for subjects to age.</td>
<td>– Provides no information about the stability of characteristics.</td>
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The Longitudinal Approach
The same individuals are studied over a period of time.

**Pros**
- Provide a wealth of information about stability and change in development.
- Provide insight into the importance of early experience for later development.

**Cons**
- Expensive and time consuming.
- Subjects more likely to drop out due to moving, losing interest, or illness.
- Subjects who remain may be more compulsive and conformity oriented.
The Sequential Approach

• A combination of the cross-sectional and longitudinal approach.
  – Begins with a cross-sectional study of individuals of different ages.
  – Months or years later, the same individuals are tested again along with a new group of subjects for each age level.
Cohort Effects

• Due to a person’s time of birth or generation, but not to actual age.
• They can powerfully affect the dependent measures in a study focused on age.
• Age changes in one cohort can be examined and compared with age changes in another cohort.