PRE-EXPERIMENTAL and QUASI EXPERIMENTAL DESIGNS

Assignment
Beins, Chapter 7, pps 182-198

Terms you should know.

Pre-experimental designs
Ex Post Facto Design

One-Shot Case Study

One Group Pre-test, Post Test

Threats to internal validity
Selection
History
Maturation
Testing
Instrumentation Change
Testing
<table>
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<th>Statistical Regression</th>
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<tbody>
<tr>
<td>Quasi-experimental design.</td>
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<td>Non-Equivalent Control Group, Pretest-Posttest</td>
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<td>Interrupted Time Series</td>
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<td>Baseline</td>
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<td>Control Series Design</td>
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Concepts you should master.

1. When would you use each of the quasi-experimental designs?

2. What is the major problem with each of the quasi-experimental designs?

3. How do the quasi-experimental designs differ from true experimental designs?

4. For each of the following 1) Identify what type of study was done and 2) critically evaluate it in terms of overall design and possibility for confounding, and 3) how could the study be strengthened.
   a. Doll Mation decided to evaluate the effects of low level sound on the sleeping behavior of dogs. She took a group of dogs and through a set of hidden speakers played a 200 Hz sound to the dogs at 20 decibels. She then evaluated their sleeping behavior.
      i. Design
      ii. Evaluation
      iii. Recommendations for strengthening.
b. Dot T. Eyze wanted to assess the effectiveness of a new drug on the mood of undergraduates. Dot tested a group of volunteers using the Affect State Scale. She selected two groups. Group A mean score was at the 85th percentile, and group B’s mean was at the 15th percentile. She administered the drug to both groups and found that group A’s mean score dropped to the 74th percentile and group B’s scores rose to a mean of 26th percentile.

i. Design

ii. Evaluation

iii. Recommendations for strengthening

iv. Would adding a third group with a mean score at the 50th percentile have improved the study? If so, how?
Application

1. The following questions refer to Pasto & Baker’s article, *Evaluation of a Brief Intervention for Increasing Seat Belt Use on a College Campus* (Patten Article 18).

   a. Introduction.
      i. What is the major research question being studied here?

   b. Method.
      i. What kind of design is this?
      ii. How were subjects identified?
      iii. What intervention was made to influence seat belt use?

   c. Results.
      i. How were the data reported?
      ii. What changes did the authors note?

   d. Discussion
      i. What conclusions did the author make.
      ii. Based on the nature of the sample, do you think that these results can be generalized to the population as a whole? Why?
      iii. What additional research does this article suggest?

   e. How might you redesign this study to make it more like an experiment?

   f. The authors note that the data were gathered unobtrusively, what might have happened had the authors gotten informed consent prior to the study?