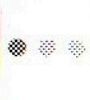


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- Chapter 9: Descriptive Research
 - Chapter 10: Experimental and Causal-Comparative Designs
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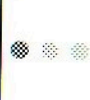


Descriptive Research



Descriptive Quantitative Research

- ❖ Identifying the characteristics of an observed phenomenon
- ❖ Exploring possible correlations among two or more phenomena
- ❖ In every case, descriptive research examines a situation AS IT IS.



Descriptive Research Designs

- Correlation Research
- Developmental Designs
- Observational Studies
- Survey Research



Conducting Interviews in a Quantitative Study

- o Representative of the group
- o Suitable Location
- o Establish Rapport
- o Written Permission
- o Focus Actual not abstract/hypocritical
- o Don't put words in their mouths
- o Record responses verbatim
- o Keep reactions inside
- o Remember that you are not necessarily getting the "facts"




Added Interview Guidelines for the Qualitative Study

- o Consider how you can quantify the responses
- o Consider asking questions that will elicit qualitative information
- o Pilot test the questions
- o Restrict each question to a single idea
- o Save controversial questions for the latter part of the interview
- o Seek clarification when necessary



Steps that Lead to a Highly Effective Interview

- o Set it up well in advance
- o Send the agenda of questions
- o As for permission to tape the conference
- o Confirm date in writing
- o Send reminder and another set of questions 10 days prior
- o Be prompt; follow agenda
- o Following interview type manuscript and get written acknowledgement of its accuracy
- o After material is incorporated into research paper, send that section of the report to the interviewee for final approval and written permission to use the data in your report



Constructing a Questionnaire

- o Keep it short
- o Simple, clear, unambiguous language
- o Check for unwarranted assumptions implicit in questions
- o Word questions as to not give clues about preferred or more desirable responses
- o Check for consistency
- o Define in advance coding

Constructing a Questionnaire (continued)

- Keep respondent's task simple
- Provide clear instructions
- Give a rationale for any item whose purpose may be unclear
- Make it attractive and professional
- Conduct a pilot test
- Scrutinize the almost-final product carefully to make sure it addresses your needs.

Guidelines to Maximize Your Mailed Questionnaire Return Rate

- Consider the timing
- Make a good first impression
- Motivate potential respondents
- Include a SASE
- Offer the results of your study
- Be gently persistent

Technology and the Questionnaire

- Computer databases can be efficient and effective tools
- Databases combined with word processing can expedite work
- Mail merge allows personalization
- Scanning computer preformatted answer sheets saves time

Choosing a Sample in a Descriptive Study

- A researcher can use results obtained from a sample to make generalizations about the entire population only if the sample is truly representative of the population
- External Validity
- The sampling should be so carefully chosen that all of the characteristics of the total population in the same relationship would be seen were the researcher to inspect the total population
- Ideally, samples are population microcosms



Sampling Designs

Probability Sampling

Each segment of the population will be represented

Nonprobability Sampling

There is no way to forecast or guarantee that each element of the population will be represented



Probability Sampling

- Simple Random Sampling
- Stratified Random Sampling
- Proportional Stratified Sampling
- Cluster Sampling
- Systematic Sampling



Nonprobability Sampling

- Convenience Sampling
- Quota Sampling
- Purposive Sampling



Important Facts : Sampling

- Percentages are meaning less unless the sample is representative of the overall population
- The results of a survey are no more trustworthy than the representativeness of the sample

Identifying a Sufficient Sample Size

- For small populations ($n < 100$), survey the entire population
- For $n = 500$, sample 50% of population
- For $n = 1,500$, sample 20% of population
- When $n > 5,000$, the population size is irrelevant, a sample of 400 would be adequate
- Note: The size of a sample also depends on how homogeneous/heterogeneous the population

Bias in Research Sampling

- Bias is any influence, conditions, or set of conditions that singly or together distort the data
- Data are delicate and sensitive to unintended influences
- Data are highly susceptible to distortion
- Sampling bias

Computerizing Data Collection in Descriptive Analysis


- Directly enter data as an observation is being made
- Have participants enter their own responses
- Use the computer to transcribe data that were initially recorded through other media
- Use the computer to monitor the quality of the data being collected

Interpreting Data in Descriptive Research

- Data are of little or no value merely as data.

Two Basic Principles of Research

- ❖ The purpose of research is to seek the answer to a problem in light of the data that relate to the problem.
- ❖ Although collecting data for study and organizing it for inspection take care and precision, extracting meaning from data – what we have called the interpretation of the data – is all-important.




Experimental and Causal-Comparative Designs

Chapter 10




Experimental Research

- The basic purpose of an experimental study is to examine the possible influences that one factor or condition may have on another factor or condition; in other words, it examines **cause-and-effect relationships**.
- It controls for all factors except those whose possible effects are the focus of the investigation.
- Experimental research needs to be planned and designed.



The Importance of Control

- **Internal Validity:** the extent to which the design and the data it yields allow the researcher to draw accurate conclusions about cause-and-effect and other relationships within the data.
- **Confounding Variables:** a variable that may affect the sample and not allow the researcher to pin down what is the cause of any observed phenomena.



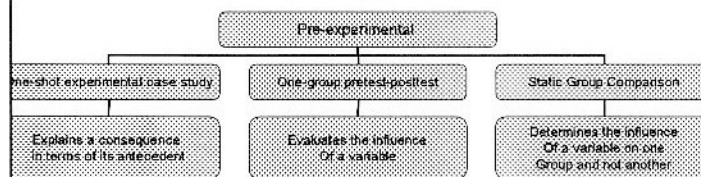
Strategies to Control for Confounding Variables

- Keep some things constant
- Include a control group
- Randomly assign people to groups
- Used matched pairs
- Expose participants to both or all experimental conditions
- Statistically control for confounding variables

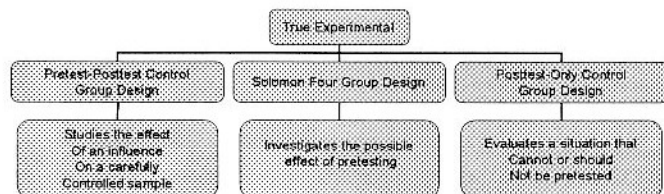
Experimental Research Designs

- Pre-Experimental Designs
- True Experimental Designs
- Quasi-Experimental Designs

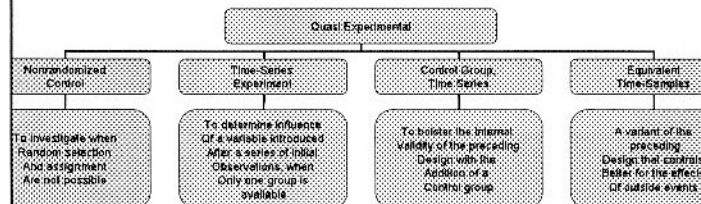
Pre-Experimental Designs



True Experimental Designs



Quasi-Experimental Designs



Causal-Comparative Designs

- o In many situations it is impossible or unethical to manipulate certain variables.
- o For example, one cannot introduce a new virus, withhold instructions, ask parents to abuse their children, or modify a person's personality to compare the effects of these factors on the dependent variables in one's research problem.

Causal-Comparative Designs

- o They provide a means to examine how a specific independent variable affects the dependent variable of interest.
- o Like correlation research, they look at existing conditions.
- o Like experimental research, they compare groups and intend to identify cause and effect.

Causal-Comparative Designs

- o There is no direct manipulation of the independent variable.
- o The researcher cannot control for confounding variables.
- o It is often Ex post facto (after the fact) research – looking back over time for possible causal influences on present characteristics or behaviors.

Factorial Designs

- o Factorial Designs are used when two or more independent variables are studied.
- o This design allow the researcher to determine whether the two independent variables interact in some way as they influence the dependent variable.