

Research Bias

Introduction

Just as a good decision maker must prevent bias from entering into his or her decisions, so too must a researcher make every effort to prevent bias from affecting research design and conduct. Experienced researchers know that errors in research carry indelible negative effects that can impact them, their organizations, and the clients who pay for the research.

Preventing Bias in Research

To prevent bias in a research project, researchers must

- clearly define the project's purpose, limitations, and delimitations;
- accurately describe its procedures;
- choose appropriate data collection methods;
- analyze the data appropriately; and
- justify the conclusions of the research.

Clearly define the project's purpose, limitations, and delimitations

Precise definition and delineation of the purpose of the research project, the statement of the problem, and the limitations of the project, all help eliminate ambiguity and prevent bias. The purpose statement of the research project is the core of the work; an ambiguous purpose can easily destroy the infrastructure of the project. The limitations and delimitations of the project also must be defined precisely and must remain unchanged throughout the project. The exclusion and/or incorporation of elements into the project not specified in the limitations or delimitations can also easily create serious problems by expanding (or reducing) the project scope and goals.

Accurately describe the project's procedures

Clear description of the research procedures will help produce objective results. Describing the research design clearly enables future researchers to enter into similar projects and provides a means for accurately estimating the validity and reliability of data. In case of problems in the procedural design, researchers must report them because such problems have effects upon the findings of the research project.

Choose appropriate data collection methods

Data collection methods should be appropriate for the research. Recall from

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your reading about judgment in decision making that a common bias related to the representativeness heuristic is an insensitivity to sample size. A research project that uses sampling methods should ensure that the sampling is representative.

Analyze the data appropriately

Researchers must analyze the data effectively and efficiently to expose their significance in the research project. Data analysis is the process by which the sums of accumulated data are reduced into the most appropriate size, summaries of such data are created, and attention is directed toward the detection of patterns. Finally, appropriate statistical techniques are applied.

Justify the conclusions

Researchers must present the findings of the data in the conclusions of the research. Findings state facts whereas conclusions are inferences emanating from the findings. Researchers must pay profound attention to basing conclusions only on the factual findings. Furthermore, they must specify the conditions in which their conclusions are valid. The conclusions must clearly connect the findings with the information collected and analyzed. Based on this connection, researchers may make recommendations for implementation.

Summary

Bias in a research project can occur in any part of it: the statements of purpose and limitations; the design and design procedures; data collection methods; statistical analysis; and the conclusions of the project itself. A research project designer should take steps to prevent bias from entering into any part of the design.