

EXAM 1 STUDY GUIDE

INTRODUCTION TO RESEARCH

Myths of research
Goals of behavioral research
Basic vs. Applied research
Descriptive Design
Correlational Design
Experimental Design
Quasi-Experimental Design

THEORIES AND HYPOTHESES

Difference between a theory and hypothesis
What makes for a good theory
What is necessary for a statement to be a hypothesis
Null vs. alternative hypotheses
“Proving the null”
HARKing vs. Post hoc explanation
Systematic vs. Error variability
Situational variability
Individual differences
Temporal variability

ELEMENTS OF A MANUSCRIPT

Introduction: its purpose and what information goes into it
Method: its purpose and what information goes into it
Results: its purpose and what information goes into it
Discussion: its purpose and what information goes into it

EXPERIMENTAL VALIDITY

Internal Validity

Ways to ensure internal validity from 2-group designs
Ways to ensure internal validity from pretest-posttest designs

Know why we never can have identical groups

Eight Threats to Internal Validity

- Selection
- Selection by maturation interaction
- Regression toward the mean
- Mortality
- History
- Testing
- Instrumentation
- Maturation

Which of the 8 refer to changes in the participants vs. changes in the scores

Which of the 8 occur in 2-group designs, and which occur in pre-post designs

Extraneous variables

External validity

- Ways to obtain external validity
- Typical problems with external validity
- How external and internal validity are related

Construct validity

- Definition of a construct
- Ways to obtain construct validity
- Typical problems with construct validity
- How construct and internal validity are related