

Test Bank

for

Research Design in Clinical Psychology

Fourth Edition

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Boston New York San Francisco
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Preface and Comments to the Instructor

This pamphlet provides test items for each of the chapters in *Research Design in Clinical Psychology* (4th edition). The items emphasize central concepts and their application. The goal is to assist students in applying the contents to research, particularly their own investigations. Three types of items or questions are provided: the multiple-choice, definitions, and essay questions. I omitted what students occasionally refer to as “trick” questions, i.e., efforts to evoke a mistaken answer by emphasizing subtle or paradoxical facets of the question or answer. Our task as instructors is to facilitate mastery of key concepts and the ability to apply them in evaluating and designing research. Eschewing “trick” questions does not mean that all of the questions are easy. It is important to encourage and test for different levels of mastery and the student’s ability to connect, distinguish, and apply concepts. For example, it is essential for the student to learn such concepts as statistical significance and effect size. Both concepts rely heavily on issues related to how an investigation is designed (e.g., sampling, procedures and their execution, selection of levels of the independent variable or groups). Understanding key concepts is one level; knowing how the concepts are related to each other and, in research design, are influenced by methods under the control of the investigator are yet other levels of mastery. The questions afford the instructor opportunities to select from these different levels of mastery. The different test-item formats themselves, including multiple choice, definitions, and essays, contribute to a continuum of difficulty among the items provided.

For multiple-choice questions the correct answer, page number where the answer can be found, and level of difficulty are noted. The *definition questions* include the page number in the text in which the term is defined and level of difficulty. In addition to pages listed after the answers, almost all of the terms can also be found in the Glossary of the textbook. Level of difficulty includes three levels: Easy (E), Medium (M), and Challenging (C). Of course, the judgments in making these designations are subjective and can be challenged. Yet, the designations were based on several considerations such as whether the answer is merely a straightforward repetition of some term and definition in the text, whether the concept is likely to be more difficult to the student because of unfamiliarity prior to the course (e.g., loose protocol effect rather than random assignment), the difficulty of the response alternatives in the case of multiple-choice answers, whether competing or closely related concepts are likely to make the item difficult, and whether multiple concepts from the text were required to answer the question. Based on these considerations, level of difficulty (E, M, or C) was assigned and serves as an approximate guideline for the instructor.

The *essay questions* are integrative and usually draw from multiple pages within the chapter. The skills focus on understanding the concepts, discussing the relations among concepts, and applying the key points to evaluate or design hypothetical studies. I believe all of the questions are fairly challenging. Because of these features, page numbers, skill required, and level of the question are not listed after each essay question. Outlines at the beginning of each chapter, chapter headings and subheadings, and the subject index of the book indicate where the answers can be found.

There number of questions varies slightly from chapter to chapter, commensurate with the scope of the content, new concepts, and critical issues that also vary by chapter. Chapters 1 and 19, the first and

final chapters, do not have questions associated with them. These chapters provide an orientation to the subject matter and the book and a perspective about methodology. Introductory and concluding chapters

place methodology in broader contexts and, when written, were conceived as intellectual “warm-up” and “cool-down” sections. Key concepts that are raised in these chapters (e.g., parsimony) emerge in other chapters where they are covered by test items.

At the end of this test item manual, I have added a few questions referred to as *advanced questions* and *self-esteem boosters*. I have routinely included such questions in my exams. I have not tested whether the questions boost self-esteem; occasionally, they have evoked smiles, and more often pity. Needless to say, for many students methodology, research design, and statistics border on the dry and serve as a sacrifice one makes towards one’s career goals. The book itself fights this stereotype by conveying that the exciting substantive findings, the conclusions one reaches from one’s own research or research of others, and what is known or thought to be known very much depend on pivotal methodological issues. The items at the end of the test manual are designed to make the exams or content slightly more fun.

Several individuals assisted with questions either on this version or a prior version. Among the contributors are Raquelle Kaye, Nicole Kazdin, Marshall Rosier, and Kathryn Truax. I am grateful to each of them. Also, I am pleased to acknowledge Rebecca Pascal, Executive Editor, at Allyn and Bacon. She has been consistently supportive and helpful with the book and this test manual and I am grateful for our collaboration.

Chapter 1 Introduction

No questions for this chapter (please see the Preface)

Chapter 2 Drawing Valid Inferences I: Internal and External Validity

A. Multiple-Choice Questions

2.1 Internal validity is best defined as:

- a) The extent to which rival hypotheses can explain the findings of an experiment
- b) The extent to which an experiment rules out alternative explanations of the findings
- c) The extent to which the findings are thought to be true of the current experiment
- d) The extent to which the findings can be applied to similar groups of people

Answer: b Page: 24 Level: M

2.2 Which of the following is NOT a threat to the internal validity of an experiment?

- a) History
- b) Maturation
- c) Attrition
- d) Sample characteristics

Answer: d Page: 24-32 Level: M

2.3 What is a typical approach used by researchers to control for the possible influences of history and maturation a longitudinal experiment?

- a) Include a placebo group in the design
- b) Include an additional experimental condition in the design
- c) Include a no-treatment group in the design
- d) Control for differences in the history of participants

Answer: c Page: 25-26 Level: M

2.4 An example of the instrumentation threat to internal validity is:

- a) Questions in the survey are periodically reworded
- b) Standardized tests are used
- c) The experimenter leaves the room during the test
- d) None of the above

Answer: a Page: 27 Level: C

2.5 Statistical regression, as a threat to internal validity, refers to:

- a) The shift of statistical significance as the number of participants increase
- b) The tendency of modal responses to move away from the center of the distribution
- c) The inability of certain designs to detect statistically significant difference, should they exist
- d) The tendency of extreme scores to move toward the mean of the distribution when a measure is readministered

Answer: d Page: 28 Level: C

2.6 What is typically done to reduce the possibility of selection biases?

- a) Choose the sample from a population that is believed to be very similar
- b) Control for the similarity of experimental participants
- c) Use random assignment to place participants into different experimental conditions
- d) Add a control group to the experiment

Answer: c Page: 29 Level: M

2.7 External validity is mostly concerned with:

- a) The accuracy of experimental hypotheses
- b) The importance of applying the findings of experiments to different samples
- c) The generalizability of the findings beyond the setting and sample of the experiment
- d) The validity and appropriateness of using lab research in natural settings

Answer: c Page: 36 Level: M

2.8 Generalizing research findings from animals to human beings is considered to be a potential threat to:

- a) Internal validity
- b) Statistical conclusion validity
- c) External validity
- d) Construct validity

Answer: c Page: 37 Level: E

2.9 Why is it important to use a number of different stimulus items in an experiment?

- a) So that the relationship among items can be determined
- b) In order to determine how each individual item impacts performance
- c) To ensure that you have enough items in order to find a significant effect
- d) Too few items may limit the generality of the findings

Answer: d Page: 42 Level: C

2.10 Reactivity may pose a threat to the external validity of an experiment because:

- a) Participants may act differently since they are aware they are being observed
- b) Participants may not want to complete the experimental protocol
- c) Participants may be responding to internal scripts that are dictating their behavior
- d) Participants may attempt to discover the purpose of the experiment and act accordingly

Answer: a Page: 42 Level: M

2.11 The primary problem with using a pretest in an experiment is:

- a) The pretest may actually encourage participants to be dishonest during the experiment
- b) The pretest may sensitize participants and encourage them to act in a specific manner
- c) The pretest may bias the experimenter to expect a certain experimental outcome
- d) The pretest may lessen the impact of the experimental manipulation and delude the findings

Answer: b Page: 46 Level: E

2.12 The timing of measurement (e.g., pretest, posttest, after treatment) is an important consideration in experimental design because:

- a) Various times may produce larger effects than others
- b) Various times may produce smaller effects than others
- c) Measures given before the experimental manipulation or treatment (i.e., pretest) may be the best estimate of the participant
- d) Results may be determined by the timing of the measurement in that different times may produce different results

Answer: d Page: 47 Level: C

2.13 What is the best way to reduce threats to internal and external validity?

- a) Maintain strict experimental controls
- b) Random sampling and assignment
- c) Replication of research findings
- d) Sufficient number of research participants

Answer: c Page: 49 Level: C

2.14 Failing to generalize results to other populations or settings:

- a) Is typically due to experimenter error and could have been avoided
- b) Can suggest possible mechanisms or varied mechanisms involved in the phenomenon of interest
- c) Is not helpful to research since it suggests that the initial experiment was seriously flawed
- d) All of the above

Answer: b Page: 52 Level: C

2.15 Reducing possible threats to internal validity will most likely lead to:

- a) Increasing the statistical significance of the findings
- b) Increasing the external validity of the findings
- c) Decreasing the generality of the findings
- d) Decreasing the validity of the conclusions

Answer: c Page: 52 Level: M

B. Definitions

2.1 Threats to validity

Page: 24 Level: E

2.2 Internal validity

Page: 24 Level: M

2.3 Statistical regression

Page: 28 Level: C

2.4 Diffusion of treatment

Page: 32 Level: M

2.5 Multiple-treatment interference

Page: 43 Level: C

2.6 Reactivity of experimental arrangements

Page: 42 Level: M

C. Essay Questions

Note to the Instructor: The essay questions are integrative and usually draw on multiple pages within the chapter. The skills focus on understanding the concepts, discussing the relations among concepts, and applying the key points to evaluate or design hypothetical studies. I believe all of the questions are fairly challenging. Because of these features, page numbers, skill required, and level of the question are not listed after each question.

2.1 What is the notion of plausible rival hypotheses? How is this notion related to research design?

2.2 For any three of the following threats to internal validity, define and provide a concrete example in the context of a research investigation: history, maturation, testing, instrumentation, statistical regression, selection biases, attrition, combination of selection and other threats, diffusion or imitation of treatment, and special treatment or reactions of controls.

2.3 Three threats to internal validity (testing, instrumentation, regression) pertain to assessment in some way. Explain.

2.4 What is external validity? Define. Also, define and give an example of each of two external validity threats.

2.5 Discuss the relation of internal and external validity? Give an example where internal validity would be a higher priority than external *and* another example where the reverse might be the case.

Chapter 3 Drawing Valid Inferences II: Construct and Statistical Conclusion Validity

A. Multiple-Choice Questions

3.1 What must be determined before construct validity is considered?

- a) The experiment has face validity
- b) The experiment is conducting using no less than two measures of each construct
- c) The experiment has sufficient external validity
- d) The experiment has sufficient internal validity

Answer: d Page: 56 Level: M

3.2 Construct validity is primarily concerned with:

- a) The explanation of the causal relationship between the experimental manipulation and the outcome
- b) The rationale for the measurement used in the experiment
- c) Ruling out alternative operational definitions of the construct of interest
- d) The validity of the interpretation in defining the construct of interest

Answer: a Page: 56 Level: M

3.3 When is contact and attention a threat to the construct validity of an experiment?

- a) Participants expectations may explain the findings
- b) Participants are not influenced by the experimental manipulation
- c) Participant are not given enough attention
- d) Control participants are not given the same manipulation as actual participants

Answer: a Page: 60 Level: M

3.4 To increase construct validity, an experimenter should:

- a) Decrease external validity and decrease the number of experimental stimuli
- b) Increase external validity and increase the number of experimental stimuli
- c) Decrease variability in experimental procedure and decrease the number of experimenters
- d) Increase power of the experiment and decrease the internal validity

Answer: b Page: 63 Level: C

3.5 What is a potentially serious threat to construct validity?

- a) Participant is unaware what is being measured
- b) Untrue rumors about a study
- c) Participants all receive same instructions
- d) Several measures of the same variable

Answer: b Page: 64 Level: C

3.6 The null hypothesis specifies:

- a) There are differences exist between participants
- b) There are no differences between groups
- c) The difference between conditions is not significant
- d) The observed results are not the true results

Answer: b Page: 67 Level: E

3.7 If a difference between groups is found to be statistically significant, the difference is thought to be:

- a) Important
- b) A large effect
- c) Reliable
- d) All of the above

Answer: c Page: 66 Level: M

3.8 Probability levels refer to:

- a) Alpha
- b) The probability of a null effect
- c) Beta
- d) The level of certainty of an effect

Answer: a Page: 67 Level: E

3.9 A Type I error refers to:

- a) The probability of accepting the null hypothesis when it is true
- b) The probability of rejecting the null hypothesis when it is false
- c) The probability of accepting the null hypothesis when it is false
- d) The probability of rejecting the null hypothesis when it is true

Answer: d Page: 69 Level: M