

Includes 22
New Articles

Methodological & Issues & Strategies in Clinical Research

Second Edition

Edited by
Alan E. Kazdin

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Alan E. Kazdin

American Psychological Association
Washington, DC

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Published by
American Psychological Association
750 First Street, NE
Washington, DC 20002

Copies may be ordered from
APA Order Department
P.O. Box 92984
Washington, DC 20090-2984

In the UK and Europe, copies may be ordered from
American Psychological Association
3 Henrietta Street
Covent Garden, London
WC2E 8LU England

Typeset in Goudy by G&S Typesetters, Inc., Austin, TX

Cover designer: Minker Design, Bethesda, MD
Printer: Hamilton Printing Company, Rensselaer, NY
Technical/production editor: Ida Audeh

Library of Congress Cataloging-in-Publication Data

Methodological issues and strategies in clinical research / Alan E. Kazdin, editor.—2nd ed.
p. cm.

Rev. ed. of : Methodological issues & strategies in clinical research. 1st ed. © 1992.

Includes bibliographical references and index.

ISBN 1-55798-481-6 (hardcover : alk. paper). — ISBN 1-55798-482-4 (pbk. :
alk. paper).

1. Clinical psychology—Research—Methodology. I. Kazdin, Alan E. II. Title:
Methodological issues & strategies in clinical research.

[DNLM: 1. Psychology, Clinical—methods. 2. Research Design. WM 105 M5925
1998]

RC467.8.M48 1998

616.89'0072 —dc21

DNLM/DLC

for Library of Congress

97-42491
CIP

British Library Cataloguing-in-Publication Data

A CIP record is available from the British Library

Printed in the United States of America

Second edition, first printing.

Methodological
& Issues
& Strategies
in Clinical
Research
Second Edition

CONTRIBUTORS

- Michael E. Addis**, Department of Psychology, University of Washington
David H. Barlow, Department of Psychology, Boston University
Alan S. Bellack, Department of Psychiatry, University of Maryland School of Medicine
Daryl J. Bem, Department of Psychology, Cornell University
Peter David Blanck, College of Law, University of Iowa
Stephen J. Ceci, Department of Psychology, Cornell University
Lee Anna Clark, Department of Psychology, University of Iowa
Gregory N. Clarke, Center for Health Research, Portland, Oregon
Jacob Cohen, Department of Psychology, New York University
David A. Cole, Department of Psychology, University of Notre Dame
Michael Cowles, Department of Psychology, York University
Betsy Davis, School of Psychology, University of Oregon
Caroline Davis, Department of Psychology, York University
René V. Dawis, Department of Psychology, University of Minnesota
Mark A. Fine, Department of Psychology, University of Dayton
Robert W. Frick, Department of Psychology, State University of New York at Stony Brook
Roland H. Good III, School of Psychology, University of Oregon
Anthony G. Greenwald, Department of Psychology, University of Washington
Steven C. Hayes, Department of Psychology, University of North Carolina
Grayson N. Holmbeck, Department of Psychology, Loyola University of Chicago
Louis M. Hsu, Department of Psychology, Fairleigh Dickinson University
Neil S. Jacobson, Department of Psychology, University of Washington
Alan E. Kazdin, Department of Psychology, Yale University
Gregory A. Kimble, Department of Psychology, Duke University

Kelly Koerner, Department of Psychology, University of Washington
Gerald P. Koocher, Department of Psychology, Children's Hospital, Boston
Lawrence A. Kurdek, Department of Psychology, Wright State University
Wolfgang Linden, Department of Psychology, University of British Columbia
Brendan A. Maher, Department of Psychology, Harvard University
Alvin R. Mahrer, Department of Psychology, University of Ottawa
Scott E. Maxwell, Department of Psychology, University of Notre Dame
Samuel Messick, Educational Testing Service, Princeton, New Jersey
Mary L. Miers, National Institute of Neurological Disorders and Stroke, Bethesda, Maryland
Dale T. Miller, Department of Psychology, Princeton University
Douglas G. Mook, Department of Psychology, University of Virginia
Karla Moras, Department of Psychiatry, University of Pennsylvania School of Medicine
E. R. Oetting, Department of Psychology, Colorado State University
Sumie Okazaki, Department of Psychology, University of Wisconsin
Deborah A. Prentice, Department of Psychology, Princeton University
Robert Rosenthal, Department of Psychology, Harvard University
Ralph L. Rosnow, Department of Psychology, Temple University
Mary Jane Rotheram-Borus, Division of Social and Community Psychiatry, University of California, Los Angeles Health Sciences Center
Frank L. Schmidt, Department of Management and Organizations, University of Iowa
Nina R. Schooler, Department of Psychiatry, University of Pittsburgh School of Medicine
Lee Sechrest, Department of Psychology, University of Arizona
Joan E. Sieber, Department of Psychology, California State University, Hayward
Bradley Smith, Institute for Addictions Research, State University of New York at Buffalo
Stanley Sue, Department of Psychology, University of California, Los Angeles
Leslie A. Telfer, Veterans Administration Center, Palo Alto, California
Paula Truax, Department of Psychology, University of Washington
Jennifer Waltz, Department of Psychology, University of Washington
Bruce E. Wampold, Division of Counseling Psychology, University of Wisconsin
David Watson, Department of Psychology, University of Iowa
Frances K. Wen, Department of Psychology, University of British Columbia
Allan W. Wicker, Department of Psychology, Claremont Graduate School
Brian T. Yates, Department of Psychology, The American University

PREFACE

This book of readings is designed to improve understanding of methodology and research practices in clinical psychology. Students and professionals who are in training or actively involved in research are the intended audience. Although the primary focus is on clinical psychology, many of the articles address issues that span the field of psychology more generally. The issues and methods raised in the readings are particularly relevant to areas of research within psychology (e.g., clinical, counseling, educational, and school psychology) and to other disciplines (e.g., psychiatry and social work). These areas span theory, research, and application and, hence, share many methodological challenges and opportunities.

The emphasis of this book is on the dominant paradigm that characterizes contemporary scientific research. Among the salient characteristics of this paradigm are the focus on theory, systematic assessment, and quantitative analyses of results. Just as scientific research is not the only way of knowing (e.g., deduction, intuition), the current paradigm is not the only way of studying phenomena empirically (e.g., qualitative research, nonstatistical methods of data evaluation). Nevertheless, it is central that students and professionals master and keep abreast of the dominant paradigm, understand the many methodological options and advances, and be alert to the many obstacles and shoals when designing their studies. The goal of this book is to foster greater understanding of the strengths, limitations, and options of methodology in the context of contemporary research practices.

The book includes articles about experimental design; the principles, procedures, and practices that govern research; assessment; sources of artifact and bias; methods of data analyses and interpretation; ethical issues; and publication and communication of the results of research. The organization of the book conveys features of research that follow in approximate logical and temporal order as they arise in the flow of an investigation. Thus, under-

pinnings of research, development of the research idea, and procedures within the study obviously precede data analyses and the write-up of the study. The book includes the following sections:

- Background and Underpinnings of Research
- Methods: Principles and Practices
- Assessment
- Data Analysis, Evaluation, and Interpretation
- Special Topics in Clinical Research
- Ethics in Research
- Publication and Communication of Research

The chapter topics follow the flow and sequence of the research process. Underlying this book and the selection of articles is the view that diverse facets of design are integrally related at the outset, that is, they emerge when the study is conceived. For example, in the planning stage of a study, the theory and rationale are (or at least should be) related to the plans for the data analyses and anticipated interpretations of the results. Typically, at this point investigators are not too concerned with analyses of the results or, of course, with the critical issues that will form the basis of the discussion in any report or write-up of the study. Yet, critical thought about how one is likely to analyze the data and the specific conclusions one wishes to draw greatly influence core features of the design, such as the experimental conditions, the plan for their administration between or within subjects, sample size and composition, and the type and range of measures.

Similarly, limitations of a study are usually discussed at the end of the journal article that describes the study. This is clearly the place to discuss them, and many limitations can be identified only when the study is completed. For example, the reader may learn during the study only that 90% of subjects¹ in the control group went on a group vacation and missed the posttest. Yet, many of the questions that are converted later to limitations can be identified and considered before the first subject is tested. If no effects or no differences are obtained, can this investigation be regarded as a strong and careful test of the hypotheses? Do the conditions of the investigation represent a sample of the conditions to which the investigator wishes to generalize? Do the control or comparison groups permit the investigator to comment specifically on what was responsible for group differences? These, of course, are all questions about methodology.

The quality of a study is usually related to the coherence of its conceptualization (hypotheses, predictions), the procedures to test that conceptualization (sample, measures, conditions, data evaluation), and the interpreta-

¹ The term *participants* is usually recommended for use in place of the term *subjects*. In the context of research methods, however, there are many participants in research, including persons who design the study (investigators), implement or carry out the procedures to run the study (experimenters), and provide the data (subjects). The term *subjects* is retained to maximize clarity of the reference group.

tions the author makes on the basis of these procedures. Methodology is not just a set of practices, such as random assignment and use of control groups, but more fundamentally pertains to correspondence between what the investigator wishes to say about the findings and what he or she is entitled to say on the basis of how the study was designed and conducted. Although the topics of the present book reflect and are organized according to the flow of research, some of the selected articles transcend and blur boundaries and discrete steps of research; they were selected to convey the interdependence of all phases of research in relation to drawing valid conclusions.

Research design is dynamic and cumulative; methods of design, assessment, and evaluation continually evolve and emerge. Thus, the book can only sample the available articles to address relevant domains to aid the researcher. Articles were selected to address core topics, including generating and testing hypotheses, selecting the sample, developing or selecting measures, designing studies that are statistically powerful, presenting the data, and communicating the results. Several articles from the first edition were retained because they still reflect classic statements on key topics.

In the second edition, articles were added to expand on core concepts, to reflect contemporary issues in research, and to elaborate ethical responsibilities in relation to research participants and to science more generally. Examples include articles on mediators and moderators, methods for studying efficacy and effectiveness of psychotherapy, making research relevant to clinical practice and policy, criteria used by review boards to evaluate scientific and ethical practices in research, and key features of preparing empirical and review papers for publication. Furthermore, since the first edition, the Ethical Principles of Psychologists and Code of Conduct that guide research (and other professional activities) have been revised and expanded (American Psychological Association, 1992).² Salient topics central to the design and execution of research are discussed, including ethical issues, oversight of research by committees that review scientific merit and ethical practices, and standards of scientific conduct more generally.

A book of readings on methodology has a great potential for missing the best-seller list. (Moreover, I regret to report that as I prepare this Preface, the movie rights for this book have still not been decided.) Articles in edited volumes are notoriously uneven in quality and level. The topic of methodology adds to the risk by being viewed as dry, technical, and difficult competition against alternatives for Saturday night entertainment. However, I attempted to steer sharply away from the shoals of checkered quality and tedium.

To that end, three considerations guided the selection of articles. First, articles were designed to cover several steps or stages that emerge in planning and executing research. Key stages in the research process include developing

²References cited in this section and in sections that introduce remaining portions of the book appear in a single reference section at the end of the book.

the research idea; selecting methods, procedures, and assessment devices; analyzing and interpreting the data; and preparing a written report to communicate what was accomplished and why. Second, articles were selected not only to improve our understanding of research methods but also to provide concrete recommendations and practices to guide the design of an investigation. Thus, many of the articles include suggestions that can be readily applied to improve an investigator's research. Finally, an effort was made to identify highly readable articles. Hundreds of articles on methodology and research design within the past several years were identified and evaluated. From these, articles were selected that eschewed technical jargon, extensive formula, and related features that might engender insomnia among the most vigilant. Each of the articles has been published previously. An advantage is they have traversed the review and publication process and hence their merit already has been favorably evaluated in advance of inclusion in this volume. In many cases, the articles are considered to be classics because of the message and clarity of presentation.

The rationale for selecting readable articles extends beyond the obvious. Technical writings and coverage of individual topics are critical to the development of research acumen. At the same time, such writings often require detailed discussion and dialogue to establish the core concepts and to cull their implications. The process of selection in the present book was designed to identify articles whose critical points could be readily gleaned from the articles themselves. Consequently, the book can be used on its own, particularly for graduate and advanced undergraduate courses, or as a supplement to other texts (e.g., Kazdin, 1998; Rosenthal & Rosnow, 1991).

Several persons have contributed to the development of the book. The contributors whose articles are included are gratefully acknowledged not only for their articles but also for the special contribution their work makes to psychology. Gary R. VandenBos, Julia Frank-McNeil, and Ted Barood of the American Psychological Association provided valuable support. Colleagues (faculty and students) in the Department of Psychology at Yale University provide in an ongoing way a very special environment for deliberating, discussing, and dissecting research issues and hence served as an important impetus for the present book. In addition, many students have commented on the specific articles that are included in the book and thus helped to screen their final selection. While this book was prepared, I received support from a Research Scientist Award (MH00353) from the National Institute of Mental Health and by the John D. and Catherine T. MacArthur Foundation Research Network on Psychopathology and Development. I am extremely grateful for the support and the learning opportunities these grants provided.

Alan E. Kazdin

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