



Introduction to Meta-Analysis

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E-Book	ISBN: 978-1-119-96437-7	August 2011	\$60.99
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DESCRIPTION

This book provides a clear and thorough introduction to meta-analysis, the process of synthesizing data from a series of separate studies. Meta-analysis has become a critically important tool in fields as diverse as medicine, pharmacology, epidemiology, education, psychology, business, and ecology. *Introduction to Meta-Analysis*:

- Outlines the role of meta-analysis in the research process
- Shows how to compute effects sizes and treatment effects
- Explains the fixed-effect and random-effects models for synthesizing data
- Demonstrates how to assess and interpret variation in effect size across studies
- Clarifies concepts using text and figures, followed by formulas and examples
- Explains how to avoid common mistakes in meta-analysis
- Discusses controversies in meta-analysis
- Features a web site with additional material and exercises

A superb combination of lucid prose and informative graphics, written by four of the world's leading experts on all aspects of meta-analysis. Borenstein, Hedges, Higgins, and Rothstein provide a refreshing departure from cookbook approaches with their clear explanations of the what and why of meta-analysis. The book is ideal as a course textbook or for self-study. My students, who

used pre-publication versions of some of the chapters, raved about the clarity of the explanations and examples. David Rindskopf, Distinguished Professor of Educational Psychology, City University of New York, Graduate School and University Center, & Editor of the Journal of Educational and Behavioral Statistics .

The approach taken by Introduction to Meta-analysis is intended to be primarily conceptual, and it is amazingly successful at achieving that goal. The reader can comfortably skip the formulas and still understand their application and underlying motivation. For the more statistically sophisticated reader, the relevant formulas and worked examples provide a superb practical guide to performing a meta-analysis. The book provides an eclectic mix of examples from education, social science, biomedical studies, and even ecology. For anyone considering leading a course in meta-analysis, or pursuing self-directed study, Introduction to Meta-analysis would be a clear first choice. Jesse A. Berlin, ScD

Introduction to Meta-Analysis is an excellent resource for novices and experts alike. The book provides a clear and comprehensive presentation of all basic and most advanced approaches to meta-analysis. This book will be referenced for decades. Michael A. McDaniel, Professor of Human Resources and Organizational Behavior, Virginia Commonwealth University

ABOUT THE AUTHOR

Michael Borenstein, Director of Biostatistical Programming Associates

Professor Borenstein is the co-editor of the recently published Wiley book *Publication Bias in Meta-Analysis*, and has taught dozens of workshops on meta-analysis. He also helped to develop the best-selling software programs for statistical power analysis.

Hannah Rothstein, Zicklin School of Business, Baruch College

Professor Rothstein teaches regular seminars on meta-analysis and systematic reviews, and has 20 years of active research in the area of meta-analysis. She has authored several meta-analyses as well as articles on methodological issues in the area, and made numerous presentations on the topic. Having contributed chapters to two books on meta-analysis, she co-edited *Publication Bias in Meta-Analysis*.

Larry Hedges, University of Chicago

A pioneer in meta-analysis, Professor Hedges has published over 80 papers in the area (many describing techniques he himself developed, that are now used as standard), co-edited the *Handbook for Synthesis Research*, and co-authored three books on the topic including the seminal *Statistical Methods for Meta-Analysis*. He has also taught numerous short courses on meta-analysis sponsored by various international organizations such as the ASA.

Julian Higgins, MRC Biostatistics Unit, Cambridge

Dr Higgins has published many methodological papers in meta-analysis. He works closely with the Cochrane Collaboration and is an editor of the *Cochrane Handbook*. He has much experience of teaching meta-analysis, both at Cambridge University and, by invitation, around the world.

FEATURES

- Provides worked examples throughout, with visual explanations, using screenshots from Excel spreadsheets and computer programs such as Comprehensive Meta-Analysis (CMA) or Strata.
 - Details instructions for performing the analyses shown in the screenshots, and manipulating the variables to fully master the techniques.
 - Accompanied by a free download of an instructional version of comprehensive meta-analysis to enable the readers to perform all the exercises from the book.
 - Authored by four of the leading names in meta-analysis research.
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