

# BOOK REVIEWS

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## **Conducting and Reading Research in Health and Human Performance**

Fourth Edition by Ted A. Baumgartner and Larry D. Hensley. ISBN 0072972904. McGraw-Hill, New York, NY, 2006, xxii + 388 pp, \$91.25, hardcover.

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Very few textbooks are available for teachers of research methods in health education, as well as those in other health and human performance (HHP) disciplines. Most graduate programs in HHP, and some undergraduate programs, require their students to successfully complete a research methods class. Yet, for most students, successful completion of ten hinges on having a textbook that conveys, in a clear and understandable manner, the myriad of technical jargon that the research and statistics worlds have to offer. The authors of this book attempt to do just that for their readers.

### **Intended Audience and Purpose**

According to the authors, *Conducting and Reading Research in Health and Human Performance* was developed to primarily serve students in master's-level introduction to research courses. Designed for both nonthesis and thesis-track students in mind, this book has the purpose of describing how to conduct research, design research instruments, and evaluate research results.

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### **About the Authors**

The authors, Ted Baumgartner and Larry Hensley, are no strangers to these topics. Baumgartner has trained students in measurement and statistics for over 30 years, first at Indiana University, and since 1977, at The University of Georgia. Currently at the University of Northern Iowa, Hensley has taught courses in statistics, research methods, and measurement for over 20 years. Both authors are leaders in their fields in measurement and research methods. For instance, Baumgartner founded and served as the first journal editor for *Measurement in Physical Education and Exercise Science*.

### **Overview of the Book**

*Conducting and Reading Research in Health and Human Performance* is broken down into 17 chapters in 4 sections. Part One, *The Research Process*, is an eclectic mixture of several important, but loosely related topics, including reading and evaluation of research reports, sampling procedures, ethical concerns in research, and literature searches. One aspect of this section with which I am particularly impressed is the emphasis of theory as being central to scientific research. A second aspect is the clarity of presentation regarding the research process. This process can be difficult to grasp for many students. However, a well-designed flowchart (p. 28) denoting the steps in the research process and a fine discussion of types of research questions (pp. 30-33), complete with examples from published research reports, may serve as useful learning aids. Lastly, by placing the treatment of ethical concerns in research in the introductory section, Baumgartner and Hensley clearly show that an understanding of ethics, including issues of IRBs and reporting (eg, authorship, plagiarism), is of foremost importance. Unfortunately, in my opinion, other authors of research and evaluation texts often leave ethical considerations as an afterthought for students, placing ethics information in concluding chapters (if ethics is even included at all!).

In Part Two (Types of Research) the authors discuss 4 main categories of research: experimental research, descriptive research, qualitative research, and meta-analysis. A final chapter considers other research approaches employed in HHP, such as historical and epidemiological research, as well as creative activities (utilized by dance scholars). The thrust of this section is largely focused on research designs which employ quantitative methodologies; however, I commend the authors on their handling of qualitative investigation. The examples extracted from published qualitative studies should yield tremendous insight for students into what qualitative inquiry can “look like” in its many forms. Finally, meta-analysis is a vital contribution to the scientific knowledge base. However, the discussion on how to conduct a meta-analytic study (pp. 224-226) seems advanced and unnecessary. Introductory methods students should be familiar with why meta-analytic studies are needed, but I argue they do not really need to know how to conduct one. Further, only examples from published meta-analyses related to exercise science are illustrated, which may leave students in other HHP fields uninterested in this valuable tool.

Part Three includes 3 chapters: “Descriptive Data Analysis,” “Inferential Data Analysis,” and “Measurement in Research.” In this section the authors do an excellent job at conveying the foundations of data analytic techniques and issues although 2 minor weaknesses are apparent. First, assumptions underlying the various statistical tests are discussed only as an afterthought. To me, these assumptions should be considered up front when considering each individual technique. Second, the authors provide a potentially very useful flowchart (p. 321) for how to select appropriate statistical tests. Some students, however, may have difficulty following the chart given its lack of detail.

Part Four is titled Writing and Reporting and consists of 2 chapters. The first, “Developing the Research Proposal,” contains several examples of real research proposals and may be particularly useful for students as they begin to develop the first three chapters of their thesis/dissertation. The second chapter, “Writing the Research Report,” outlines what usually appears in the remaining thesis/

dissertation sections and indicates how these sections differ from what’s typically found in journal publications. Missing from this section is any discussion of reporting results in other important ways, such as to funding agencies, community stakeholders and other laypersons, media outlets, or policymakers.

### **Strengths**

The most apparent strengths of this fourth edition text are that it is an easy read and it maintains comprehensive coverage of the core HHP research strategies and issues. This book is greatly improved from previous editions. For instance, in the section on data analysis, Baumgartner and Hensley have added a chapter on measurement, including such essential concepts as reliability and validity. A new chapter on literature reviews, in the first section, serves as a logical bridge between the selecting the research question step (in the preceding chapter) and the following chapter, “Developing the Research Plan.” Additionally, chapter objectives and a summary of these objectives at the conclusion of each chapter have been added. Glossaries highlighting important terms, both in the margins and at end of the book, are helpful for any reader keeping track of new and unfamiliar vocabulary.

Teachers of research methods courses and users of this text may find as a helpful supplementary resource the McGraw-Hill online learning center, which has PowerPoint presentations for all 17 chapters. Moreover, for about \$20 the SPSS 12.0 student edition is available with text purchase.

### **Weaknesses**

Given these strengths, *Conducting and Reading Research in Health and Human Performance* has a few notable weaknesses. First, the authors may be attempting to market this text to teachers in too many different HHP disciplines. As a health educator, I found that many of the core research issues related to health education were included, but without much depth. Further, many of the examples provided were from Baumgartner and Hensley’s field of physical education and exercise science, which may appear irrelevant or foreign to health education students and thus require instructors to “fill in the gaps.”

Missing from this text is information related to interpreting and presenting research results in nontextual (ie, graphical) formats. It is also apparent that the thrust of this book is on conventional research methods and traditional approaches to statistical analysis. The book not only utilizes but also focuses on old-fashioned terms that other disciplines are evolving away from—one term being null hypothesis testing. Given the contentious debates in other professional literatures concerning the (not so) usefulness of hypothesis testing,<sup>1</sup> it seems that other terms such as research questions (rather than hypothesis testing) should be given priority. Another weakness is that Baumgartner and Hensley do not discuss confidence intervals at all. Further, they fail to emphasize important contemporary issues including the differences between statistical and practical significance. Although this book is intended as an introduction to research, I was disappointed to read only a single sentence regarding true multivariate statistical techniques (ie, those which employ multiple independent and dependent variables): “Other multivariate techniques often used by researchers are canonical correlation, discriminant analysis, and factor analysis” (p. 317). No mention is made regarding structural equation modeling. The authors do provide a short list of resources on multivariate statistics for the enthusiastic reader, including a reference to one of my personal favorite texts, Tabachnick and Fidell’s *Using Multivariate Statistics* (although they cite the 1989 edition, and there is an improved 2001 version available<sup>2</sup>).

In the “Searching the Literature” chap-

ter, the authors list various journals by HHP discipline. Two journal names listed under health education, *Health Education Quarterly* (now *Health Education and Behavior*) and *Health Values* (which ceased publication in 1995 and is now the *American Journal of Health Behavior*), have their more current titles/names omitted. I may be nit-picking about minor details here, but I believe a fourth edition textbook should be current in listing our field’s flagship periodicals.

### Recommendation

Given these weaknesses, *Conducting and Reading Research in Health and Human Performance* is an easy read and would make learning about research and the research process relatively painless for most students in HHP. I have yet to find a comprehensive research-methods text tailored solely for graduate students in health education. In my opinion, this text would be suitable for senior undergraduate students. Further, as the authors encompass many examples specific to the various HHP fields—health and physical education, recreation, dance, sport management, etc—this book may be more applicable in classes enrolling students from these multiple fields (ie, mixed classes as opposed to classes made up of, say, only health education students). ■

### REFERENCES

1. Buhi ER. The insignificance of “significance” tests: three recommendations for health education researchers. *American Journal of Health Education*. 2005;36:109-112.
2. Tabachnick BG, Fidell LS. *Using Multivariate Statistics* (4th ed.). Boston, MA: Allyn and Bacon 2001.