



RESEARCH METHODS IN HEALTH PROMOTION

Richard A. Crosby
Ralph J. DiClemente
Laura F. Salazar

Editors

Foreword by Lawrence W. Green

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CONTENTS

Figures, Tables, and Boxes ix

Foreword xiii

Acknowledgments xv

The Editors xvii

The Contributors xix

PART ONE: FOUNDATIONS OF HEALTH PROMOTION RESEARCH 1

1 Key Steps in the Research Process 3

Richard A. Crosby, Ralph J. DiClemente, and Laura F. Salazar

2 Philosophy of Science and Theory Construction 23

Laura F. Salazar, Ralph J. DiClemente, and Richard A. Crosby

3 Ethical Issues in Health Promotion Research 41

John F. Santelli

PART TWO: RESEARCH DESIGN 73

- 4 Choosing a Research Design 75
Laura F. Salazar, Richard A. Crosby, and Ralph J. DiClemente
- 5 Conducting Observational Research 107
Richard A. Crosby, Laura F. Salazar, and Ralph J. DiClemente
- 6 Designing Randomized Controlled Trials in Health
Promotion Research 129
Ralph J. DiClemente, Laura F. Salazar, and Richard A. Crosby
- 7 Qualitative Research Strategies and Methods for Health
Promotion 150
Laura F. Salazar, Richard A. Crosby, and Ralph J. DiClemente
- 8 Program Evaluation 199
Nancy Thompson, Michelle C. Kegler, and David R. Holtgrave

PART THREE: MEASUREMENT, SAMPLING, AND ANALYSIS 227

- 9 Measurement in Health Promotion 229
Richard R. Clayton and Richard A. Crosby
- 10 Improving Validity of Self-Reports for Sensitive Behaviors 260
Rick S. Zimmerman, Katherine A. Atwood, and Pamela K. Cupp
- 11 Principles of Sampling 289
Richard A. Crosby, Laura F. Salazar, and Ralph J. DiClemente
- 12 Analytic Techniques for Observational Research 317
Richard A. Crosby, Ralph J. DiClemente, and Laura F. Salazar
- 13 Basic Principles of Statistical Analysis for Randomized
Controlled Trials 347
Ralph J. DiClemente, Laura F. Salazar, and Richard A. Crosby

**PART FOUR: CORE SKILLS RELATED TO HEALTH PROMOTION
RESEARCH 369**

14 Introduction to Scientific Writing 371

Richard A. Crosby, Ralph J. DiClemente, and Laura F. Salazar

15 Crafting a Successful Research Proposal 400

Ralph J. DiClemente, Laura F. Salazar, and Richard A. Crosby

Name Index 429

Subject Index 435

FIGURES, TABLES, AND BOXES

Figures

- 1.1. A Trajectory of Research in Health Promotion 10
- 1.2. Schematic Illustration of the Nine-Step Research Process 16
- 2.1. Health Belief Model Components and Linkages 35
- 3.1. General Requirements for Informed Consent (45 CFR 46.116) 55
- 3.2. Internet Resources on Human Subjects' Protection 65
- 4.1. The Chain of Research in Health Promotion 76
- 4.2. HIV Prevalence Among Men Who Have Sex with Men, at Sexually Transmitted Disease Clinics, by Region (1993–1997) 85
- 4.3. HIV Prevalence Among Men Who Have Sex with Men, at Sexually Transmitted Disease Clinics, by Race or Ethnicity (1993–1997) 85
- 6.1. A Schematic Illustration of a Randomized Controlled Trial (RCT) 132
- 7.1. Model of Psychological Responses to a Serological HSV-2 Diagnosis 163
- 8.1. Common Evaluation-Related Costs 202
- 8.2. Basic Logic Model Components 204
- 8.3. Abbreviated Program Logic Model 205
- 8.4. Logic Model with Detailed Inputs, Activities, and Outputs 206
- 8.5. Sample Survey 209
- 9.1. A Female Adolescent's Daily Smoking Pattern 246
- 9.2. Cigarettes Per Day Averaged over Each Week 248

9.3. Cigarettes: Average Daily Number	249
9.4. Average Proportion of Cigarettes Smoked While Drinking on Days That Smoking Was Reported	250
10.1. Model of the Cognitive Process of Information Retrieval	264
11.1. The Relationship of a Sample to a Population	294
11.2. An Example of a Figure Used to Represent Recruitment Success	306
11.3. Effect Size in Two Similar Studies	309
12.1. Distribution of Health-Risk Behaviors for 569 Detained Adolescents	319
12.2. Number of Sex Partners (Lifetime) Reported by Detained Adolescents	320
12.3. Number of Pap Tests (Lifetime) Reported by 273 Women	321
12.4. Scatterplots Illustrating Direct and Inverse Correlations	332
12.5. The Sum of Pearson r Values Does Not Necessarily Equate with R^2	336
13.1. Number of Participants Experiencing a Heart Attack in a Stress-Reduction Program and a Control Condition	355
13.2. Statistical Decision Map	356
13.3. Standard Pretest-Posttest Design	360
14.1. Examples of Journals That Publish Articles Relevant to Health Promotion	374
14.2. Common Study Limitations	387
14.3. How a Manuscript Becomes a Published Journal Article	396
15.1. Example of a Figure Outlining the Research Design	412
15.2. Template for a Five-Year Project Timeline	427

Tables

3.1. Categories of Exempt Research in the U.S. Federal Regulations	52
5.1. A Comparison of Volunteers and Nonvolunteers	116
7.1. Predispositions of Quantitative and Qualitative Modes of Inquiry	153
7.2. Emergent Themes Related to Getting a Future AIDS Vaccine	167
7.3. A Comparison of Strategies in the Conduct of a Hypothetical Project: "Arrivals and Departures: Patterns of Human Attachment"	174
10.1. Advantages and Disadvantages of Approaches Related to Cognitive Factors	269
10.2. Advantages and Disadvantages of Approaches Related to Situational Factors	277
11.1. Examples of Research Questions Displayed by Level of Analysis	291
11.2. Sampling Frames with High and Low Degrees of Generalizability	292
12.1. Frequency Distribution of Race or Ethnicity for a Sample of 569 Detained Adolescents	325

- 12.2. Contingency Table of Data Pertaining to a Study of Breast Self-Examination Practices 329
- 13.1. Comparability of the HIV Risk Reduction and General Health Promotion Conditions 351
- 13.2. Effects of an HIV Risk-Reduction Intervention on Adolescents' Sexual Behaviors 358
- 13.3. Differences on Condom Attitude Scores by Study Group 362
- 13.4. Effects of an HIV Risk-Reduction Intervention on Condom Attitude Scores 362
- 13.5. Effects of an HIV Risk-Reduction Intervention on HIV Knowledge and Self-Esteem 363
- 14.1. Description of Scale Measures and Bivariate Correlations of These Measures with Self-Esteem Among African American Adolescent Females 383

Boxes

- 2.1. The "8 × 8" Recommendation 27
- 2.2. Early AIDS Hypotheses 36
- 3.1. Research with Prison Populations, Section 46.306 59
- 3.2. Scenarios for Ethical Consideration 68
- 4.1. Prevalence Versus Incidence 77
- 4.2. Common Threats to Internal Validity 89
- 5.1. Example of a Recruitment Brochure 113
- 5.2. Examples of Recruitment Scripts 115
- 6.1. A Control Group Is Not the Same as a Comparison Group 139
- 7.1. Text Transcribed Verbatim from an Interview with a Patient from an STD Clinic 156
- 7.2. Sample Results Write-Up 159
- 7.3. Meaning of Condom Use 160
- 7.4. Louisiana State Legislation 171
- 7.5. English and Spanish Semistructured Interview Guide from a Study of Mexican and Mexican American Women 185
- 9.1. Example of a Scale 234
- 9.2. Example of an Index 235
- 10.1. The Randomized Lists Technique: A Promising But Experimental Approach to Improving Validity in Surveys 275
- 11.1. A Comparison of Two Techniques to Sample Women with Abnormal Pap Test Results in the Past Five Years 298

- 11.2. Probability Sampling Made Easy 301
- 11.3. Examples of Convenience Samples with “Large Conclusions” 303
- 11.4. Example of a Matrix for Quota Sampling 304
- 11.5. As Sample Size Goes Up, Significance Is Easier to “Find” 310
- 12.1. Four Levels of Data 322
- 12.2. Confidence Intervals 327
- 14.1. Examples of Abridged Grammar in Abstracts 377
- 14.2. Examples of Effective Conclusions 389
- 15.1. Sample Letter of Support 413
- 15.2. Tips for Successful Proposal Writing 428

FOREWORD

Much that has been written on research methods misses the mark for students of the health professions because academic authors tend to emphasize research methods that will meet scientific needs rather than practitioner needs. They often start with theory or research questions from more basic disciplines and ask what opportunities or challenges clinical, school, or community health situations offer to test those theories. It seems too often that preprofessional students are being trained to turn their practices into community laboratories to serve the cause of science and theory testing, rather than using science and theory to solve their problems in practice. The editors of this volume have challenged their contributing authors (and themselves, with the many chapters they have written) to show how their research methods can answer the questions that practitioners are asking. They acknowledge the growing demand for evidence-based practice and theory-based practice, but they demonstrate that these will come most effectively when we have more practice-based evidence and practice-based theory.

Rather than starting with theories and asking what practice situations can offer to test them, practice-based research starts with problems in practice and asks what research and theory can offer to solve them. It is that twist that sets this book apart from the usual emphasis of textbooks often used in professional preparation programs.

Each chapter offers applied examples from health promotion that illustrate the key concepts or research methods presented in that chapter. The chapters

present a series of pros and cons for the methods presented, and case studies that challenge readers to apply what they have learned. Another added value of this book as distinct from the numerous textbooks available on research methods for each of the cognate disciplines (for example, epidemiology, psychology, sociology, anthropology, political science, economics) underpinning health promotion practice, is that this book seeks the multidisciplinary blending of methods necessary to understand, predict, and address the several ecological levels at which causation happens and change must occur. Any of the excellent research methods books from other disciplines would deal only with a relatively narrow slice of the multilayered reality that health promotion must address. Research methods in health promotion must blend methods from psychology and sociology, for example, to encompass the ecological reality of reciprocal determinism between individual behavior and environment.

While integrating these several complexities of multiple methods and multiple levels of analysis, the editors have strived to give cohesiveness to varied research methods by maintaining a consistent theme that “research involves a predetermined series of well-defined steps.” They revisit these steps throughout in a common sequential format. They seek to present a cohesive understanding of the role of science in public health and, more specifically, in health promotion. At the same time that they are ecumenical in their admission of the methods from various disciplines, they are critical in evaluating their use and their limitations in health promotion research, and the ethical issues surrounding some methods of experimental design, sampling, and randomization in the health promotion context.

The editors have drawn on their considerable academic experience in teaching students of health promotion, and their field experience in practice-based research in HIV/AIDS, school health, reducing health disparities, and numerous other areas of public health, to represent research methods specifically for students in health promotion.

November 2005

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Finally, we wish to acknowledge all scholars who aspire to make the world a safer and healthier place to live and those students who will shape and guide the future of health promotion research and practice.

Thanks to my family for their continued inspiration, and especially to my wife for her love, support, and perseverance in my years of growth as a scholar.

—R.A.C.

To my lovely wife, Gina, and beautiful daughter, Sahara Rae, for their love, support, patience, and encouragement. They are always in my thoughts.

—R.J.D

I would like to thank my wonderful husband, Chuck, whose support and love sustained me through the process, and my amazing children, who inspire me every single day.

—L.F.S.

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**RESEARCH METHODS
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PART ONE

FOUNDATIONS OF HEALTH
PROMOTION RESEARCH



CHAPTER ONE

KEY STEPS IN THE RESEARCH PROCESS

Richard A. Crosby, Ralph J. DiClemente, and Laura F. Salazar

Health promotion has become a cornerstone of efforts designed to prevent morbidity and premature mortality (Smedley and Syme, 2000). Indeed, many nations have embraced health promotion as an approach to enriching and extending the lives of their people. Core tasks of health promotion include the primary and secondary prevention of disease and health-compromising conditions. These tasks are reflected in two overarching goals established by the

United States Department of Health and Human Services: to “increase the quality and years of healthy life” and to “eliminate health disparities” (Department of Health and Human Services, 2000). Of course, the broad scope of these tasks presents an enormous challenge to the discipline of health promotion. This challenge demands that the efforts and resources of health promotion practitioners must be firmly grounded in the context of research findings.

To begin, then, it is important to state that health promotion research is the harbinger of effective health promotion practice. Thus, a great deal of time and attention should be devoted to research agendas before health promotion programs are designed and widely implemented. In turn, successful research endeavors must ensure rigor. Rigor may best be viewed as the hallmark of science.

Rigor is properly thought of as a quantity—it exists (or fails to exist) in varying degrees. Although no study can be “perfect” in rigor, studies can have a high degree of rigor. As rigor increases, confidence in the findings also increases. Therefore, rigorous studies have great potential to shape health promotion practice.

Although this book focuses on the application of research methods to health promotion, there are at least two frameworks that address a number of other issues relevant to the conceptualization, design, implementation, evaluation of programs. In particular, an emerging framework, RE-AIM (Glasgow, Vogt, and Boles, 1999) can be used as both a design and an evaluation tool for health promotion planning. Also, the PRECEDE-PROCEED Model (Green and Kreuter, 2005) is a comprehensive framework for organizing the health promotion planning process from its inception to its widespread implementation and ongoing evaluation.

Illustration of Key Concepts

As was ancient Rome, rigor is built “one brick at a time.” Fortunately, clear blueprints exist for building rigorous studies. In fact, successful research can be characterized by a series of well-defined steps. Although some of these steps may appear tedious, they are all essential. Following the steps sequentially is equally important. In this chapter we provide an overview of the process and then illustrate each of the essential and sequential steps in detail.

Discovery

Without question, one of greatest rewards of health promotion research is the excitement generated by evidence-based conclusions. Health promotion research is a process that reveals insights into human behavior as it pertains to health and wellness. This exploration into people’s lives should never be taken for granted; indeed, the opportunity provides health promotion practitioners a partial blueprint for the design, implementation, and justification of behavioral and structural interventions.

The process of discovery in health promotion research is iterative. Each time a research question is addressed successfully, several new questions emerge. The diversity of potential research questions in any one aspect of health promotion creates an unending challenge (see Chapter Four for more detail regarding potential research purposes and questions). Research questions can be appear quite humble, yet demand rather complex and intense investigation efforts. Consider, for example, a question as simple as determining why people consume large amounts of saturated fats despite widespread awareness that these fats cause heart disease. An investigator could pursue cognitive reasons (for example, “those foods

taste really good” or “those foods are satisfying”), social reasons (such as “most party foods are not healthy, but having fun is more important”), cultural reasons (for instance, “those foods are a tradition in our house”), or economic reasons (for example, “fatty foods are usually more filling and less expensive than healthy foods”). An investigator could also approach the question based on perceived vulnerability of the study participants to the multiple forms of disease associated with a diet high in saturated fats (such as heart disease, stroke, obesity, and some forms of cancer). Obviously then, the seemingly humble research question is actually an entire research career. In fact, successful researchers typically devote themselves to only one or two areas of inquiry. This focus enables them to use the findings from one study as a platform to formulate subsequent research questions for the next study, and so on.

MINCUS “DISCOVERS” HIS RESEARCH IDEA.



Because health promotion research is a discovery process it is also a public venture. Conclusions from health promotion research often have a direct impact on public health (for example, “evidence suggests that people who wear sunscreen are less likely to develop skin cancers”) or an indirect impact on public health through changes in health promotion practice and policy (for example, the practice of providing same-day results for HIV testing is based on empirical findings that indicated low return rates for people testing positive). As a public venture, then, discovery through health promotion research is an indispensable contribution to maintaining the health and well-being of society. In the next section, we illustrate the discovery process using tobacco as the public health issue.



In a Nutshell

As a public venture, then, discovery through health promotion research is an indispensable contribution to maintaining the health and well-being of society.



Vignette: Preventing Tobacco Dependence

Globally, the use of tobacco is a behavior that leads to multiple forms of *morbidity* (incidence of disease in a given population) and premature *mortality* (incidence of death due to a particular disease in a given population). Thus, health promotion programs designed to prevent tobacco dependence among young people are strongly warranted. A substantial number of these programs seek to prevent youths from initial experimentation with tobacco. These approaches certainly have value; however, research suggests that among young people tobacco dependency may be an extended process, which may be amenable to intervention even after their initial use of the substance. Imagine, then, that you have been asked to determine the *efficacy* (that is, the ability to produce the desired effect) of providing behavioral interventions to youths who have recently begun to use tobacco, but have yet to develop a physical dependence.

A Nine-Step Model

The research process can easily become unwieldy. Even seemingly simple research questions may lead an investigator to wonder if he or she is “on the right track”