1. Public Health Practice and the Best Available Evidence
   Chapter Objectives
   Evidence-Based Public Health Practice: Definitions, Purposes, and Methods
   Characteristics of Evidence-Based Public Health Practice: Community Health and Service Needs, Evidence, Programs, and Evaluation
   Evidence-Based Medicine and Evidence-Based Public Health
   Current Best Available Evidence for Public Health Programs and the Role of Evaluation Research
   Evaluation and Effectiveness Research: Definitions and Methodological Considerations
   Program Costs and Program Effectiveness
   Evaluation Researchers and Other Evaluators and Researchers
   Summary of Chapter 1: Public Health Practice and the Best Available Evidence

2. Community Health and Health Service Needs and Evidence-Based Programs
   Chapter Objectives
   Identifying Health and Health Care Risks or Needs, Preferences, and Values
   Methods for Assessing Community Health Care and Health Services Needs
3. **Finding the Best Available Evidence: Questions, Practical Concerns, and Ethics**  

Chapter Objectives  
The Evidence and the Research Literature  
*Eight Literature Reviewing Tasks*  
Choosing an Online Bibliographic Database  
Online Journals  
*What Are Your Questions? PICO or Problem (Need), Interventions, Comparison, and Outcome*  
Research Questions, Descriptors, and Key Words  
*More Search Terms: Authors, Titles, Title Words, and Journals and Then Some—Limiting the Search*  
Searching With Boolean Operators  
Online Search  
Reviewing References  
*Is Everything Worthwhile Published?*  
Calling in the Experts
4. Research Design, Validity, and Best Available Evidence

Chapter Objectives 107
Research Methods and Research Design 108

The Randomized Controlled Trial: Going for the Gold 108
Factorial Designs 118
Doing It Randomly 119
Random Clusters 120

Ensuring Baseline Equivalence: What Evidence-Based Public Health Practice Should Watch For 122
Improving on Chance 122
Blinding 124
Quasi-Experimental Research Designs 127
Nonrandomized Controlled Trials: 127

Concurrent Controls 127
Time-Series Designs 130
Historical Controls 131
Interrupted or Single Time-Series Designs 132
Observational Designs 132
Cohort Designs 132
Case-Control Designs 135
Cross-Sectional Designs

Observational Designs and Controlled Trials: Compare and Contrast

The Bottom Line: Internal and External Validity

Internal Validity Is Threatened

External Validity Is Threatened

The Problem of Incomparable Participants: Statistical Methods to the Rescue

Analysis of Covariance

Propensity Score Methods

Summary of Chapter 4: Research Design, Validity, and Best Available Evidence

Words to Remember

The Next Chapter

Exercises

References

5. Wanted! Valid and Meaningful Data as Proof of Best Available Evidence

Chapter Objectives

Collecting Data: Evaluation’s Main Measures

Self-Administered Survey Questionnaires

Why Researchers Use Self-Administered Survey Questionnaires

What Evidence-Based Public Health Practice Should Watch For

Forced-Choice (Multiple-Choice) Achievement Tests

Why Researchers Use Multiple-Choice Achievement Tests

What Evidence-Based Public Health Practice Should Watch For

Record Reviews

Why Researchers Use Records

What Evidence-Based Public Health Practice Should Watch For

Observations

Why Researchers Use Observations

What Evidence-Based Public Health Practice Should Watch For

Interviews

Why Researchers Use Interviews

What Evidence-Based Public Health Practice Should Watch For