

PRINCIPLES OF EVALUATION AND RESEARCH *for Health Care Programs*

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*To Kevin
My husband*

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Preface

This text was written for undergraduate students enrolled in an introductory course related to research or evaluation. The chapters are in a sequential order that forms the foundation for the knowledge needed to understand basic evaluation or research projects. This text is not intended to achieve complete understanding or proficiency in the complex subjects of health science evaluation and research. However, the chapters provide an overview of topics needed to review published literature, collect primary data, analyze data using basic statistics, and present results in written or verbal formats for their intended audiences.

The first three chapters set the stage for evaluation and research. Chapter 1 explains the differences and similarities between evaluation and research, along with how to review literature and develop research questions or goals and objectives that will be addressed in various studies. Chapter 2 introduces ethics, which is a core element in evaluation and research and needs consideration during the development phase. Chapter 3 explores determinants of health, such as health disparities and access to health care. Without regard to social determinants, evaluators and researchers miss key elements in the lives of their target audience that influence health outcomes outside of health care.

The next several chapters define terms and concepts that should be understood prior to planning an evaluation and research study. Chapter 4 introduces various types of theories and models along with examples from current literature on how the theories and models have been used as the framework for project development. The list of theories and models is not intended to be comprehensive, but rather an introduction to examples that are commonly used. Once the research questions or evaluation goals and objectives and an appropriate theory are selected, it is time to explore types of data. Chapter 5 defines the concepts of reliability and validity as well as random and systematic errors. The chapter ends

with a detailed description of how to conduct a pilot test and why they are essential. Chapter 6 provides a detailed discussion of qualitative data including types qualitative designs, potential ethical issues, and analyses utilized in qualitative data. Chapter 7 presents some basic elements of research including the difference between basic and applied research, variables, group assignment, constructs, and operational definitions. After these concepts are understood, the three basic types of research design (true experimental, quasi-experimental, and nonexperimental) are defined and examples are provided to enhance understanding. Chapter 8 focuses on survey design, including types of surveys and how to select them. Various tests, inventories, and scales are introduced along with examples and reasons for selecting one survey type over another. A discussion of how culture and diversity influences data collection is included near the end of the chapter.

Chapters 9, 10, and 11 focus on basic skills related to data. Chapter 9 introduces how data are classified as categorical or continuous and then organized using frequency distributions. Building on this knowledge, the concepts of measures of central tendency, the normal curve, standard deviation, and variance are explained in detail with plenty of examples. This chapter serves as the foundation for understanding the next two chapters. Chapter 10 describes terms related to population and samples. There are three main topics covered: sample size considerations, probability and nonprobability samples, and sampling bias. Each topic deserves important consideration when determining the sample size needed for any evaluation or research project. Chapter 11 introduces inferential statistics and defines the terms *scientific hypothesis*, *research questions*, *null hypothesis*, and *alternative hypothesis*. The next section presents basic statistical tests (e.g., chi-square, *t*-tests, and correlation coefficients). The chapter ends with a discussion of type I and type II errors.

The last chapters provide skills related to budgets, reports, and presentations, and the text culminates with a case study. Chapter 12 is divided into two sections. The first section describes various types of budgets with examples to practice basic skills. Budget justifications are also presented. The second section defines the types of cost analyses and how each type is used. Chapter 13 illustrates several ways to present results including abstracts, executive summaries, reports, manuscripts, posters, and verbal presentations. Chapter 14 is a lengthy case study reinforcing all aspects presented in this book.

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University of South Florida College of Public Health granted me time to complete this text.

Most educators say that the best way to learn a subject is to teach it. After writing this text, I have revised this advice to say:

“The best way to learn a subject is not to teach it, but rather to write a book about it.”

