Nancy Burns • Susan K. Grove

The PRACTICE *of* NURSING RESEARCH

APPRAISAL, SYNTHESIS, and GENERATION of EVIDENCE

SIXTH EDITION

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To our readers and researchers, nationally and internationally, who will provide the science to develop an evidence-based practice for nursing.

To our family members for their constant input, support, and love, especially our husbands

Jerry Burns

and

Jay Suggs.

Nancy and Susan

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PREFACE

Research is a major force in the nursing profession that is used to change practice, education, and health policy. Our aim in developing the sixth edition of *The Practice of Nursing Research: Appraisal, Synthesis, and Generation of Evidence* is to increase excitement about research and to facilitate the development of evidence-based practice for nursing. It is critically important that all nurses, especially those in advanced-practice roles (nurse practitioners, clinical nurse specialists, nurse anesthetists, and nurse midwives), have an understanding of research and its link to the development of evidence-based practice. Nurses will have a significant role in providing evidence-based care and promoting quality, cost-effective healthcare outcomes for patients and families. Doctoral students might use this text to facilitate their development of research evidence through their dissertations.

The depth and breadth of content presented in this edition reflect the increase in research activities and the growth in research knowledge since the previous edition. Nursing research is introduced at the baccalaureate level and becomes an integral part of graduate education (master's and doctoral) and clinical practice. We hope that this new edition might increase the number of nurses at all levels involved in research activities such as critically appraising studies; using evidence-based guidelines in practice; and conducting quantitative, qualitative, outcome, and intervention research.

NEW CONTENT

The sixth edition provides comprehensive coverage of nursing research and is focused on the learning needs and styles of today's nursing student and practicing nurse. Several exciting, new areas of content are included in the sixth edition:

- Chapter 1, Discovering the World of Nursing Research, includes major revisions, with a model of the elements of evidence-based practice (EBP). This EBP model is linked to the framework for the textbook and stresses the significance of research in developing EBP.
- Chapter 2, The Evolution of Evidence-Based Practice in Nursing, is retitled and focused on building an EBP for nursing. This chapter includes the historical development of EBP in health care and methodologies for developing an EBP in nursing. In addition, the reader is introduced to the best research evidence for practice that is provided by systematic reviews, meta-analyses, integrative reviews, metasummaries, and metasyntheses. The chapter includes a table that presents the purposes of these syntheses, the types of research included in these syntheses (the "sampling frame"), and the analysis for achieving the different types of syntheses. A model of the continuum of the levels of research evidence, from strongest to weakest evidence, is now provided.
- Chapter 4, Introduction to Qualitative Research, includes an introduction to and the philosophical bases for the following types of qualitative research: (1) phenomenology, (2) grounded theory, (3) ethnography, (4) historical research, (5) philosophical inquiry, and (6) critical social theory research, including feminist research.
- Chapter 6, Review of Relevant Literature, includes an expanded discussion of the processes for searching the literature for relevant sources. Details are provided for using state-of-the-art resources for conducting systematic reviews, integrative reviews, meta-analyses, and metasyntheses to determine the best research evidence for practice.
- Chapter 9, Ethics in Research, features updated coverage of (1) the Health Insurance Portability and Accountability Act (HIPAA), (2) U.S. Department of Health and Human Services (DHHS) regulations for protection of human subjects in research, and (3) Food and Drug Administration (FDA) regulations for protection of human research subjects. The chapter also discusses how changes in the laws have affected nursing research, with an expanded focus on the ethics of conducting qualitative studies and the processes for protecting participants in these studies.
- Chapter 11, Selecting a Quantitative Research Design, includes many currently used designs that are not covered in other leading texts but that are important to understand.
- Chapter 12, Outcomes Research, a unique feature of our text, was significantly rewritten to promote understanding of the history, significance, and impact of outcomes research on nursing

and health care, for both students and nurses in clinical practice. New content is included on nursing-sensitive patient outcomes, advanced-practice nursing outcomes, and practice-based research networks. In addition, the methodologies for conducting outcomes research have been expanded.

- Chapter 13, Intervention Research, reflects the increasing number of intervention studies being done in nursing and is also a unique feature of our text.
- Chapter 14, Sampling, now includes extensive coverage of sampling methods and sample sizes for qualitative research. New content in this chapter includes the formulas for calculating the acceptance and refusal rates for potential subjects and the retention and attrition rates for subjects participating in a study. Additional content is included to assist researchers in recruiting and retaining subjects for their studies.
- Chapter 15, Measurement Concepts, features detailed coverage of measurement in conducting qualitative studies and measuring outcomes of healthcare. New content included in this chapter is the use of sensitivity, specificity, and likelihood ratios to determine the quality of diagnostic tests. Understanding these concepts is important in delivering EBP.
- Chapter 16, Measurement Methods Used in Developing Evidence for Practice, provides more detail on the use of physiological measurement methods in research. An increasing number of nursing studies are focused on the measurement of the outcomes from interventions using physiological measurement methods, and this chapter equips the reader to understand and take part in those studies.
- Chapter 17, Collecting and Managing Data, now covers the importance of intervention fidelity and quality measurement in conducting the high-quality quasi-experimental and experimental studies needed to generate research evidence about the effectiveness of nursing interventions for practice.
- Chapter 23, Qualitative Research Methodology, has been completely reorganized to facilitate understanding of the conduct of qualitative research. The chapter features a marked increase in the examples from current qualitative studies.
- Chapter 25, Disseminating Research Findings, features expanded and updated content on communicating study findings through presentation and publication.
- Chapter 26, Critical Appraisal of Nursing Studies, now includes the concept of critical appraisal instead of critique. The critical appraisal processes for quantitative and qualitative studies to build an EBP for nursing are detailed.
- Chapter 27, Strategies for Promoting Evidence-Based Nursing Practice, has undergone extensive revision to achieve a completely new focus on evidence-based practice. The chapter now includes a discussion of the strengths and concerns related to evidence-based practice, guidelines for critically appraising systematic reviews, guidelines for critically appraising and conducting meta-analyses, and guidelines for critically appraising and conducting integrative reviews. Stetler's Model of Research Utilization to Facilitate Evidence-Based Practice and the Iowa Model of Evidence-Based Practice to Promote Quality of Care are presented to direct nurses in making evidence-based changes in their practice. The Grove Model for implementing national standardized guidelines in practice is described with the JNC VII used as an example for treating hypertension. Internet sites that include best research evidence for practice are identified. Finally, Evidence-Based Practice Centers and their contributions to evidence-based practice are described.

The sixth edition is written and organized to facilitate ease in reading, understanding, and implementing the research process. The major strengths of this text include the following:

- State-of-the-art coverage of EBP—a topic of vital and growing importance in a health care arena focused on quality and cost-effectiveness of patient care.
- A clear, concise writing style that is consistent among the chapters to facilitate student learning.
- Comprehensive coverage of quantitative, qualitative, outcomes, and intervention research techniques.
- A balanced coverage of qualitative and quantitative research methodologies.
- Electronic references and websites that direct the student to an extensive array of information that is important for conducting studies and using research findings in practice.
- Rich and frequent illustration of major points and concepts from the most current nursing research literature from a variety of clinical practices areas.
- A strong conceptual framework that links nursing research with EBP, theory, knowledge, and philosophy.

Our text provides a comprehensive introduction to nursing research for graduate and practicing nurses. At the master's and doctoral level, the text provides not only substantive content related to research but also practical applications based on the authors' experiences in conducting various types of nursing research, familiarity with the research literature, and experience in teaching nursing research at various educational levels.

The sixth edition of this text is organized into 4 units and 29 chapters. Unit One introduces the reader to the world of nursing research. The content and presentation of this unit have been designed to introduce EBP and to assist the reader in overcoming the barriers frequently experienced in understanding the language used in nursing research.

Unit Two provides an in-depth presentation of the research process for both quantitative and qualitative research. As with previous editions, this text provides extensive coverage of the many types of quantitative and qualitative research.

Unit Three addresses the implications of research for the discipline and profession of nursing. Content is provided to direct the student in conducting critical appraisals of both quantitative and qualitative research. A detailed discussion of EBP is provided, with models to direct nurses in providing evidence-based health care. Nursing and medical practice guidelines are included and provide essential direction for implementing evidence-based advanced nursing practice roles, such as nurse practitioner, clinical nurse specialist, nurse anesthetist, and nurse midwife.

Unit Four addresses seeking support for research. Readers are given direction for developing quantitative and qualitative research proposals and seeking funding for their research.

The changes in the sixth edition of this text reflect the advances in nursing research and also incorporate comments from outside reviewers, colleagues, and students. Our desire to promote the continuing development of the profession of nursing was the incentive for investing the time and energy required to develop this new edition.

STUDENT ANCILLARIES

An **Evolve Learning Resources website** is available at *http://evolve.elsevier.com/Burns/practice/* and features a wealth of assets, including the following:

Approximately 400 Interactive Review Questions
Data Sets and Data Set Activities
An Author Index
Sample Qualitative and Quantitative Research Proposals, and a Sample Funded Proposal
Nine Appendixes
Applied Nursing Research Discount Subscription Offer

A printed **Study Guide** accompanies this edition of *The Practice of Nursing Research.* This study guide is keyed chapter-by-chapter to the text. It includes the following:

- *Relevant Terms* activities that help students understand and apply the language of nursing research
- *Key Ideas* exercises that reinforce essential concepts
- *Making Connections* activities that give students practice in the higher-level skills of comprehension and content synthesis
- Puzzles that serve not only as a clever learning activity but also as a welcome "fun" activity for busy adult learners
- *Exercises in Critical Appraisal* that provide experiences for students and practicing nurses to critically evaluate both quantitative and qualitative studies
- *Going Beyond* activities that provide suggestions for further study
- An Answer Key that offers immediate feedback to reinforce learning
- A Published Studies appendix

INSTRUCTOR ANCILLARIES

The **Instructor's Resources** are available on Evolve at http://evolve.elsevier.com/Burns/practice/. Instructors also have access to the online student resources. The Instructor Resources includes an Instructor's Manual with Data Set Activities and syllabi, an expanded Test Bank including 600 questions (some in the NCLEX® Examination alternate format), PowerPoint Presentations totaling over 700 slides, and an Image Collection consisting of most images from the text.

The **Evolve Course Management System**, provided free for instructors, is an interactive learning environment that works in coordination with *The Practice of Nursing Research*, Sixth Edition, to provide online course management tools you can use not only to manage your course but also enhance classroom and home learning experiences. You can use Evolve to do the following:

- Publish your class syllabus, outline, and lecture notes.
- Set up "virtual office hours" and e-mail communication.
- Share important dates and information through the online class *Calendar.*
- Encourage student participation through *Chat Rooms* and *Discussion Boards.*

ACKNOWLEDGMENTS

Writing the sixth edition of this textbook has allowed us the opportunity to examine and revise the content of the previous edition based on input from the literature, a number of scholarly colleagues, and our graduate and undergraduate students. A textbook such as this requires synthesizing the ideas of many people and resources. We have attempted to extract from the nursing literature the essence of nursing knowledge related to the conduct of nursing research. Thus we would like to thank those nursing scholars who shared their knowledge with the rest of us in nursing and who made this knowledge accessible for inclusion in this textbook.

The ideas from the literature were synthesized and discussed with our colleagues and students to determine the revisions needed for the sixth edition. We would like to express our appreciation to Dean Elizabeth Poster, Associate Dean of Research; Dr. Carolyn Cason, Associate Dean of Doctoral Studies; Dr. Jennifer Gray; and faculty members of the School of Nursing at the University of Texas at Arlington, for their support during the long and sometimes arduous experiences that are inevitable in developing a book of this magnitude. We would like to extend a special thanks to Helen Hough for her scholarly input regarding the literature review chapter. We would also like to thank Dr. Margarete Sandelowski for her suggestions regarding the qualitative research content in this text. We particularly value the questions raised by our students regarding the content of this text, which allow us a peek at the learner's perception.

We would also like to recognize the excellent reviews of the colleagues who helped us make important revisions in this text.

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