

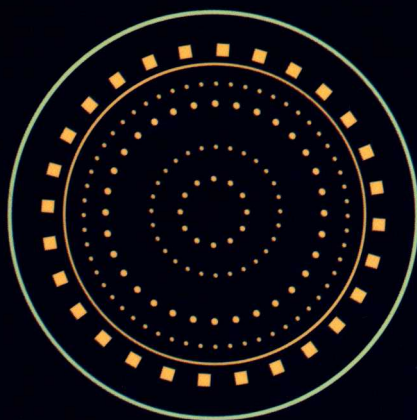
RESOURCE MANUAL
FOR

NURSING RESEARCH

Generating and Assessing
Evidence for Nursing Practice

Denise F. Polit
Cheryl Tatano Beck

TENTH EDITION



Resource Manual for

Nursing Research

GENERATING AND ASSESSING EVIDENCE
FOR NURSING PRACTICE

TENTH EDITION

Denise F. Polit, PhD, FAAN

President

Humanalysis, Inc.

Saratoga Springs, New York, *and*

Professor

Griffith University School of Nursing

Brisbane, Australia

(www.denisepolit.com)

Cheryl Tatano Beck, DNSc, CNM, FAAN

Distinguished Professor

School of Nursing

University of Connecticut

Storrs, Connecticut

 **Wolters Kluwer**

Philadelphia • Baltimore • New York • London
Buenos Aires • Hong Kong • Sydney • Tokyo

Acquisitions Editor: Christina Burns
Product Development Editor: Katherine Burland
Editorial Assistant: Cassie Berube
Marketing Manager: Dean Karampelas
Production Project Manager: Cynthia Rudy
Design Coordinator: Joan Wendt
Manufacturing Coordinator: Karin Duffield
Prepress Vendor: Absolute Service, Inc.

Tenth edition

ISBN-13: 978-1-49631-335-5

Copyright © 2017 Wolters Kluwer.

Copyright © 2012 Wolters Kluwer Health | Lippincott Williams & Wilkins. Copyright © 2008, 2004, 1999 by Lippincott Williams & Wilkins. Copyright © 1995, 1991, 1987, 1983, 1978 by J. B. Lippincott Company.

All rights reserved. This book is protected by copyright. No part of this book may be reproduced or transmitted in any form or by any means, including as photocopies or scanned-in or other electronic copies, or utilized by any information storage and retrieval system without written permission from the copyright owner, except for brief quotations embodied in critical articles and reviews. Materials appearing in this book prepared by individuals as part of their official duties as U.S. government employees are not covered by the above-mentioned copyright. To request permission, please contact Wolters Kluwer at Two Commerce Square, 2001 Market Street, Philadelphia, PA 19103, via email at permissions@lww.com, or via our website at lww.com (products and services).

9 8 7 6 5 4 3 2 1

Printed in the United States of America

This work is provided “as is,” and the publisher disclaims any and all warranties, express or implied, including any warranties as to accuracy, comprehensiveness, or currency of the content of this work.

This work is no substitute for individual patient assessment based on health care professionals’ examination of each patient and consideration of, among other things, age, weight, gender, current or prior medical conditions, medication history, laboratory data, and other factors unique to the patient. The publisher does not provide medical advice or guidance, and this work is merely a reference tool. Health care professionals, and not the publisher, are solely responsible for the use of this work including all medical judgments and for any resulting diagnosis and treatments.

Given continuous, rapid advances in medical science and health information, independent professional verification of medical diagnoses, indications, appropriate pharmaceutical selections and dosages, and treatment options should be made and health care professionals should consult a variety of sources. When prescribing medication, health care professionals are advised to consult the product information sheet (the manufacturer’s package insert) accompanying each drug to verify, among other things, conditions of use, warnings, and side effects and identify any changes in dosage schedule or contraindications, particularly if the medication to be administered is new, infrequently used, or has a narrow therapeutic range. To the maximum extent permitted under applicable law, no responsibility is assumed by the publisher for any injury and/or damage to persons or property, as a matter of products liability, negligence law or otherwise, or from any reference to or use by any person of this work.

LWW.com



thePoint®

<http://thepoint.lww.com/activate>

**Resource Manual for Nursing Research:
Generating and Assessing Evidence for
Nursing Practice, 10th edition**

**Go to thePoint for a helpful Toolkit of
resources for students!**

**Polit
Scratch Gently
to Reveal Code**



Note: Book cannot be returned
once panel is scratched off.

Log on today!

Visit <http://thepoint.lww.com/activate> to learn more
about **thePoint®** and the flexible learning solutions available
from Wolters Kluwer! Use the code provided to access the
student resources.

Preface

This *Resource Manual* for the 10th edition of *Nursing Research: Generating and Assessing Evidence for Nursing Practice* complements and strengthens the textbook in important ways. The manual provides opportunities to reinforce the acquisition of basic research skills through systematic learning exercises, and we have placed particular emphasis on exercises that involve careful reading and critiquing of actual studies. Critiquing skills are increasingly important in an environment that promotes evidence-based nursing practice. Moreover, the ability to think critically about research decisions is fundamental to being able to design and plan one's own study.

Full research reports and a grant application are included in 13 appendices to this *Resource Manual*. These reports, which represent a rich array of research endeavors, form the bases for exercises in each chapter. There are reports of quantitative, qualitative, and mixed methods studies, an evidence-based practice project report, an instrument development paper, a meta-analysis, and a metasynthesis. We are particularly excited about being able to include a full grant application that was funded by the National Institute of Nursing Research, together with the Study Section's summary sheet. We firmly believe that nothing is more illuminating than a good model when it comes to research communication.

An important feature of this *Resource Manual*—added in the 8th edition—is the Toolkit, which offers important research resources to beginning and advanced researchers. Our mission was to include easily adaptable tools for a broad range of research situations. In our own careers as researchers, we have found that adapting existing forms, manuals, or protocols is far more efficient and productive than “starting from scratch.” By making these tools available as Word files, we have made it possible for you to adapt tools to meet your specific needs, without the tedium of having to retype basic information. We wish we had had this Toolkit in our early years as researchers! We think seasoned researchers are likely to find parts of the Toolkit useful as well.

The *Resource Manual* consists of 31 chapters—one chapter corresponding to every chapter in the textbook. Each chapter has relevant resources and exercises. The answers to exercises for which there are objective answers are included at the back of the book in Appendix N. Each of the 31 chapters consists of the following components:

- *A Crossword Puzzle.* Terms and concepts presented in the textbook are reinforced in an entertaining and challenging fashion through crossword puzzles.
- *Study Questions.* Each chapter contains several short individual exercises relevant to the materials in the textbook.
- *Application Exercises.* These exercises are designed to help you read, comprehend, and critique nursing studies. These exercises focus on studies in the appendices and

ask questions that are relevant to the content covered in the textbook. There are two sets of questions—*Questions of Fact* and *Questions for Discussion*. The Questions of Fact will help you to read the report and find specific types of information related to the content covered in the textbook. For these questions, there are “right” and “wrong” answers. For example, for the chapter on sampling, a question might ask: How many people participated in this study? The Questions for Discussion, by contrast, require an assessment of the merits of various features of the study. For example, a question might ask: Was there a *sufficient number* of study participants in this study? The second set of questions can be the basis for classroom discussions.

- **Toolkit** ✖. This section, found online on thePoint, includes tools and resources that can save you time—and that will hopefully result in higher quality tools than might otherwise have been the case. Each chapter has tools appropriate for the content covered in the textbook. Also included for each chapter are links to relevant open-access journal articles.

We hope that you will find these resources rewarding, enjoyable, and useful in your effort to develop and hone skills needed in critiquing and doing research.

Contents

PART 1

Foundations of Nursing Research 1

- | | | |
|---|--|----|
| 1 | Introduction to Nursing Research in an Evidence-Based Practice Environment | 2 |
| 2 | Evidence-Based Nursing: Translating Research Evidence into Practice | 7 |
| 3 | Key Concepts and Steps in Qualitative and Quantitative Research | 12 |

PART 2

Conceptualizing and Planning a Study to Generate Evidence for Nursing 21

- | | | |
|---|---|----|
| 4 | Research Problems, Research Questions, and Hypotheses | 22 |
| 5 | Literature Reviews: Finding and Critiquing Evidence | 29 |
| 6 | Theoretical Frameworks | 36 |
| 7 | Ethics in Nursing Research | 42 |
| 8 | Planning a Nursing Study | 48 |

PART 3

Designing and Conducting Quantitative Studies to Generate Evidence for Nursing 55

- | | | |
|----|--|-----|
| 9 | Quantitative Research Design | 56 |
| 10 | Rigor and Validity in Quantitative Research | 62 |
| 11 | Specific Types of Quantitative Research | 68 |
| 12 | Sampling in Quantitative Research | 73 |
| 13 | Data Collection in Quantitative Research | 78 |
| 14 | Measurement and Data Quality | 85 |
| 15 | Developing and Testing Self-Report Scales | 91 |
| 16 | Descriptive Statistics | 96 |
| 17 | Inferential Statistics | 102 |
| 18 | Multivariate Statistics | 110 |
| 19 | Processes of Quantitative Data Analysis | 116 |
| 20 | Clinical Significance and Interpretation of Quantitative Results | 121 |

PART 4**Designing and Conducting Qualitative Studies
to Generate Evidence for Nursing 127**

21	Qualitative Research Design and Approaches	128
22	Sampling in Qualitative Research	133
23	Data Collection in Qualitative Research	137
24	Qualitative Data Analysis	143
25	Trustworthiness and Integrity in Qualitative Research	149

PART 5**Designing and Conducting Mixed Methods Studies
to Generate Evidence for Nursing 155**

26	Basics of Mixed Methods Research	156
27	Developing Complex Nursing Interventions Using Mixed Methods Research	163
28	Feasibility Assessments and Pilot Tests of Interventions Using Mixed Methods	168

PART 6**Building an Evidence Base for Nursing Practice 173**

29	Systematic Reviews of Research Evidence: Meta-Analysis, Metasynthesis, and Mixed Studies Review	174
30	Disseminating Evidence: Reporting Research Findings	180
31	Writing Proposals to Generate Evidence	185

Appendix A: Computer Intervention Impact on Psychosocial Adaptation of Rural Women With Chronic Conditions	190
---	------------

Appendix B: Rooting for the Breast: Breastfeeding Promotion in the NICU	205
--	------------

Appendix C: A Nurse-Facilitated Depression Screening Program in an Army Primary Care Clinic: An Evidence-Based Project	216
---	------------

Appendix D: Translation and Validation of the Dietary Approaches to Stop Hypertension for Koreans Intervention: Culturally Tailored Dietary Guidelines for Korean Americans With High Blood Pressure	229
---	------------

Appendix E: Sharing a Traumatic Event: The Experience of the Listener and the Storyteller Within the Dyad	244
Appendix F: Fatigue in the Presence of Coronary Heart Disease	255
Appendix G: Care Transition Experiences of Spousal Caregivers: From a Geriatric Rehabilitation Unit to Home	271
Appendix H: Randomized Controlled Trial of a Psychoeducation Program for the Self-Management of Chronic Cardiac Pain	292
*Critique of Study	309
Appendix I: Differences in Perceptions of the Diagnosis and Treatment of Obstructive Sleep Apnea and Continuous Positive Airway Pressure Therapy Among Adherers and Nonadherers	320
*Critique of Study	345
Appendix J: The Development and Testing of the Nursing Teamwork Survey	352
Appendix K: Effect of Culturally Tailored Diabetes Education in Ethnic Minorities With Type 2 Diabetes: A Meta-Analysis	366
Appendix L: A Metaethnography of Traumatic Childbirth and Its Aftermath: Amplifying Causal Looping	388
Appendix M: Older Adults' Response to Health Care Practitioner Pain Communication: Grant Application to NINR	402
Appendix N: Answers to Selected Resource Manual Exercises	443

PART 1

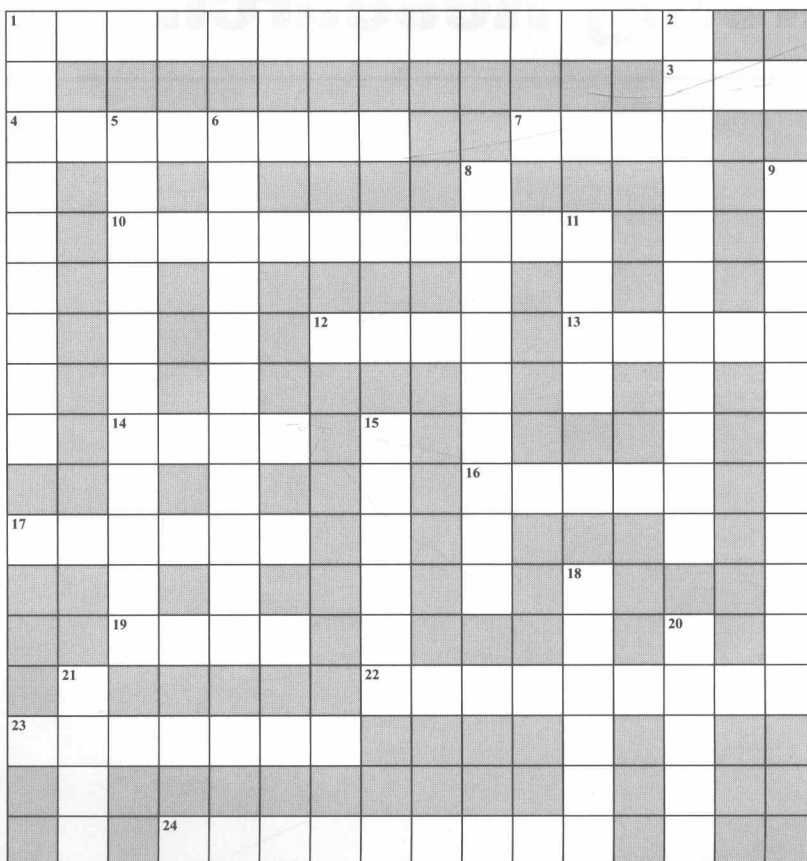
Foundations of Nursing Research

CHAPTER 1

Introduction to Nursing Research in an Evidence-Based Practice Environment

■ A. Crossword Puzzle

Complete the crossword puzzle below, which uses terms and concepts presented in Chapter 1. (Puzzles may be removed for easier viewing.)



Note that there is a crossword puzzle in every chapter of this *Resource Manual*. We hope they will be a “fun” way for you to review key terms used in each chapter. However, we are not professional puzzle designers and so there are some oddities about the puzzles. These oddities are not intended to be trick questions but rather represent liberties we took in trying to get as many terms as possible into the puzzle. So, for example, there are a lot of acronyms (e.g., evidence-based practice = EBP) and abbreviations (e.g., evidence = evid) and even a few words that are written backwards (e.g., evidence = ecnivede). Two-word answers sometimes appear with a hyphen (e.g., evidence-based) and sometimes they are just run together (e.g., evidencebased). The crossword puzzle answers are at the back of this *Resource Manual*, in case our intent is too obscure!

ACROSS

1. Nurses are increasingly encouraged to develop a practice that is _____ (hyphenated).
3. The clinical learning strategy developed at the McMaster School of Medicine (acronym)
4. A world view, a way of looking at natural phenomena
7. _____ ematic reviews are said to be the cornerstone of EBP because they integrate research evidence on a topic.
10. The world view that assumes that there is an orderly reality that can be studied objectively
12. The precursor to the National Institute of Nursing Research (acronym)
13. Successively trying alternative solutions is known as _____ and error.
14. Research designed to solve a pressing practical problem is _____ ied research.
16. Nurses get together in practice settings to critique studies in the context of journal _____.
17. Research designed to guide nursing practice is referred to as _____ al nursing research.
19. The U.S. agency that promotes and sponsors nursing research (acronym)
22. A source of evidence reflecting ingrained customs
23. The _____ of nursing research began with Florence Nightingale.
24. The degree to which research findings can be applied to people who did not participate in a study is called _____ ability.

DOWN

1. Evidence that is rooted in objective reality and gathered through the senses
2. The assumption that phenomena are not random but rather have antecedent causes
5. The repeating of a study to determine if findings can be upheld with a new group of people
6. A purpose of doing research, involving a depiction of phenomena (e.g., their prevalence or nature)

8. A scheme for ordering the utility of evidence for practice is an evidence _____.
9. A purpose of doing research, often linked to theory
11. The techniques used by researchers to structure a study are called research _____ ods.
15. The type of research that analyzes narrative, subjective materials is _____ ative research.
18. The use of findings from research in a practice setting is called research _____ ation.
20. Constructivist inquiry typically takes place in the _____.
21. Expanded _____ emination of research findings, as a result of advanced technology, helps to promote EBP by making evidence for practice more widely accessible.

■ B. Study Questions

1. Why is it important for nurses who will never conduct their own research to understand research methods?
2. What are some potential consequences to the nursing profession if nurses stopped conducting their own research?
3. What are some of the current changes occurring in the health care delivery system, and how could these changes influence nursing research and the use of research findings?
4. Below are descriptions of several research problems. Indicate whether you think the problem is best suited to a qualitative or quantitative approach, and explain your rationale.
 - a. What is the decision-making process of patients with prostate cancer weighing treatment options?
 - b. What effect does room temperature have on the colonization rate of bacteria in urinary catheters?
 - c. What are sources of stress among nursing home residents?
 - d. Does therapeutic touch affect the vital signs of hospitalized patients?
 - e. What is the meaning of *hope* among Stage IV cancer patients?
 - f. What are the effects of prenatal instruction on the labor and delivery outcomes of pregnant women?
 - g. What are the health care needs of the homeless, and what barriers do they face in having those needs met?
5. What are some of the limitations of quantitative research? What are some of the limitations of qualitative research? Which approach seems best suited to address problems in which you might be interested? Why is that?

6. Scan through the titles in the table of contents of a recent issue of a nursing research journal (e.g., *Nursing Research*, *Research in Nursing & Health*, *International Journal of Nursing Studies*). Find the title of a study that you think is basic research and another that you think is applied research. Read the abstracts for these studies to see if you can determine whether your original supposition was correct.
7. Apply the questions from Box 1.1 of the textbook (available as a Word document in the Toolkit ✎ on thePoint*) to one of the following studies, available in open-access journal articles (links to the articles are provided in the Toolkit):
 - Kneck, A., Fagerberg, I., Eriksson, L., & Lundman, B. (2014). Living with diabetes—development of learning patterns over a 3-year period. *International Journal of Qualitative Studies on Health and Well-Being*, 9, 24375.
 - Park, Y. H., & Chang, H. (2014). Effect of a health coaching self-management program for older adults with multimorbidity in nursing homes. *Patient Preference and Adherence*, 8, 959–970.
8. Consider the nursing research priorities identified by the National Institute of Nursing Research or Sigma Theta Tau International, as identified in the book or on the websites of those organizations. Which priority resonates with *you*? Why?

■ C. Application Exercises

EXERCISE 1: STUDY IN APPENDIX A

Read the abstract and introduction to the report by Weinert and colleagues (“Computer intervention impact”) in Appendix A. Then answer the following questions:

Questions of Fact

- a. Does this report describe an example of “disciplined research”?
- b. Is this a qualitative or quantitative study?
- c. What is the underlying paradigm of the study?
- d. Does the study involve the collection of empirical evidence?
- e. Is this study applied or basic research?
- f. Is the specific purpose of this study identification, description, exploration, explanation, and/or prediction and control?
- g. Could the study be described as cause-probing?
- h. Does this study have an EBP-focused purpose, such as one about treatment, diagnosis, prognosis, harm and etiology, or meaning and process?

Questions for Discussion

- a. How relevant is this study to the actual practice of nursing?
- b. Could this study have been conducted as *either* a quantitative or qualitative study? Why or why not?

EXERCISE 2: STUDY IN APPENDIX B

Read the abstract and introduction to the report by Cricco-Lizza (“Rooting for the breast”) in Appendix B. Then answer the following questions:

Questions of Fact

- Does this report describe an example of “disciplined research”?
- Is this a qualitative or quantitative study?
- What is the underlying paradigm of the study?
- Does the study involve the collection of empirical evidence?
- Is this study applied or basic research?
- Is the specific purpose of this study identification, description, exploration, explanation, and/or prediction and control?
- Could the study be described as cause-probing?
- Does this study have an EBP-focused purpose, such as one about treatment, diagnosis, prognosis, harm and etiology, or meaning and process?

Questions for Discussion

- How relevant is this study to the actual practice of nursing?
- Could this study have been conducted as *either* a quantitative or qualitative study? Why or why not?
- Which of the two studies cited in these exercises (the one in Appendix A or Appendix B) is of greater interest and/or relevance to you personally? Why?

■ D. The Toolkit



For Chapter 1, the Toolkit on thePoint® contains the following:

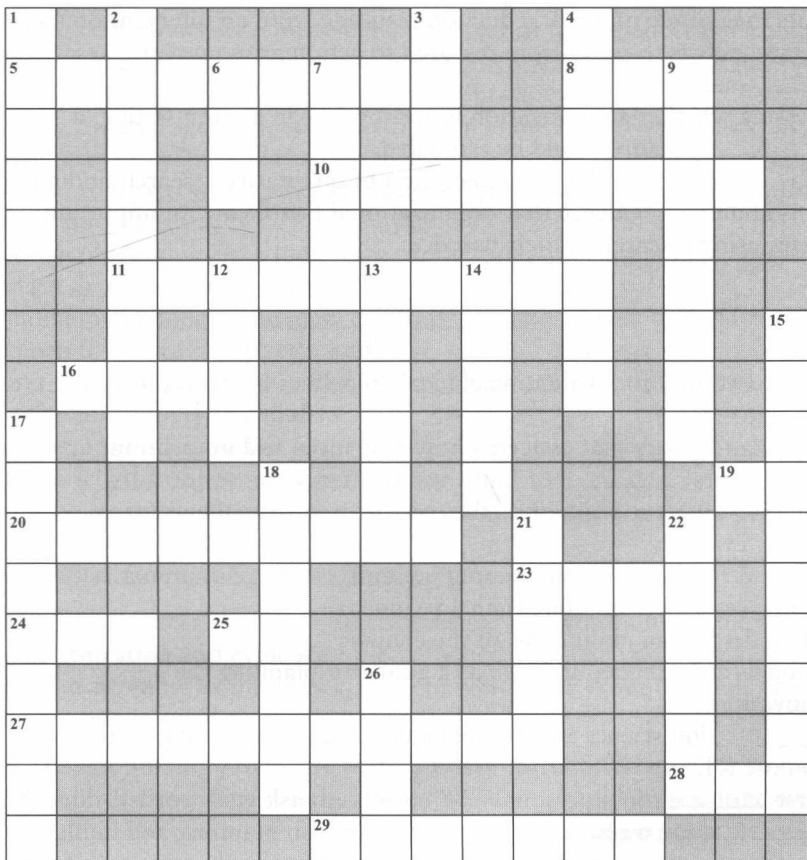
- Questions for a Preliminary Overview of a Research Report (Box 1.1 of the textbook)
- Links to some useful websites relating to content in Chapter 1
- Links to relevant open-access journal articles for Chapter 1

CHAPTER 2

Evidence-Based Nursing: Translating Research Evidence into Practice

■ A. Crossword Puzzle

Complete the crossword puzzle below, which uses terms and concepts presented in Chapter 2. (Puzzles may be removed for easier viewing.)



ACROSS

5. A best-practice clinical _____ based on rigorous systematic evidence is an important tool for evidence-based care.
8. A type of study that ranks high as a source of evidence for therapy questions (acronym)
10. Environmental readiness for an innovation concerns its implementation _____ in a given setting.
11. _____ reviews of RCTs are at the pinnacle of evidence hierarchies for therapy questions.
16. _____ ground questions are ones that can best be answered based on current research evidence.
19. A knowledge-focused trigger is the start-point for _____ (acronym).
20. Evidence-based decision making should integrate best research evidence with clinical _____.
23. A widely used model for planning EBP projects, developed by Titler and colleagues, is called the _____ Model.
24. Researchers can compute an index called a(n) _____ as an estimate of the absolute magnitude of a risk reduction resulting from an intervention (acronym).
25. Systematic efforts to move from research to action are sometimes described as _____ (acronym).
27. In assessing whether an innovation is appropriate in a given setting, a _____ ratio should be estimated.
28. A meta-_____ thesis involves an integration of qualitative research findings.
29. There is abundant evidence that organizational factors are an important _____ to nurses using research in their practice.

DOWN

1. A widely used tool for evaluating clinical guidelines is called the _____ instrument.
2. An important theory that concerns how new ideas and innovations are disseminated is called Rogers' _____ of Innovations Theory.
3. Evidence-based practice involves the conscientious use of current _____ evidence.
4. The journal *Evidence-Based Nursing* presents _____ summaries of studies and systematic reviews from more than 150 journals.
6. Acronym describing main focus of the chapter
7. EBP models are intended to serve as a guide for planning the _____ mentation of an innovation.
9. _____ ion science is a discipline devoted to developing methods to promote KT.
12. The first _____ in a personal EBP effort is to ask well-worded clinical questions.
13. EBP _____ are a resource to guide clinicians in planning and implementing an EBP project.