

Test Bank for Polit & Beck Canadian Essentials of Nursing Research 4th Woo

TEST BANK SAMPLE PREVIEW

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1. Most definitions of evidence-based practice (EBP) call for the integration of best research evidence with:
 - A) patient preferences and values.
 - B) well-worded clinical questions.
 - C) systematic reviews.
 - D) rankings on the evidence hierarchy.

2. Research utilization is a process that begins with which event?
 - A) A clinical problem that needs to be solved
 - B) A problem-focused trigger
 - C) A finding from existing research
 - D) A well-worded clinical question

3. The best-known early research utilization (RU) project sought to bridge the gap between research and nursing practice. Which is the name of that well-known project?
 - A) Cochrane Collaboration
 - B) Stetler Model of Research Utilization
 - C) Conduct and Utilization of Research in Nursing (CURN) Project
 - D) Promoting Action on Research Implementation in Health Services (PARiHS)

4. Which statement is true?
 - A) The learning strategy called evidence-based medicine was initiated in the United States by an epidemiologist.
 - B) The Cochrane Collaboration, with centres around the world, is involved in preparing and disseminating systematic reviews.
 - C) Research utilization (RU) currently is a more prominent concept than evidence-based practice (EBP).
 - D) The Michigan Nurses' Association launched one of the first evidence-based practice projects, which focused on the preparation of systematic reviews.

5. Which argument is used by advocates of EBP?
 - A) EBP provides an excellent basis for lobbying for health research funding.
 - B) EBP offers a good framework for self-directed lifelong learning.
 - C) EBP is universally embraced within the health care community.
 - D) EBP promotes the elimination of health disparities.

6. Knowledge translation is a term most often associated with:
 - A) international efforts to translate evidence into other languages.
 - B) the use of evidence by individual clinicians in their practice.
 - C) the adaptation of innovations for diverse cultural groups.
 - D) system-wide efforts to apply new evidence in practice settings.

7. What is the purpose of an evidence hierarchy?
 - A) To promote the creation of systematic reviews
 - B) To guide researchers in selecting a research design
 - C) To rank order evidence according to the strength of evidence provided
 - D) To provide an incentive structure for those undertaking research

8. Most evidence hierarchies put which evidence source at the pinnacle?
 - A) Randomized clinical trials (RCTs)
 - B) Systematic reviews
 - C) In-depth qualitative studies
 - D) It depends on the research question.

9. Which is a major barrier to evidence-based practice in nursing?
 - A) The absence of necessary skills, among many nurses, for locating and critically evaluating nursing studies
 - B) The unfamiliarity of most nurses with the concept of evidence-based practice
 - C) The abundance of clients for whom EBP is not relevant
 - D) The absence of a relevant evidence hierarchy for most nursing studies

10. Which is an example of a systematic review?
 - A) An RCT study published in the journal Nursing Research
 - B) A meta-analysis available in the Cochrane database
 - C) A synopsis published in the online journal Evidence-Based Nursing
 - D) A clinical practice guideline from the National Guideline Clearinghouse

11. Which is a systematic review that integrates quantitative research findings?
 - A) Randomized controlled trial
 - B) Primary study
 - C) Metasynthesis
 - D) Meta-analysis

12. Several resources support evidence-based practice, including metasyntheses. What is a metasynthesis?
- A) A systematic integration and interpretation of qualitative research findings
 - B) A systematic review that integrates quantitative findings statistically
 - C) A synthesis and appraisal of research evidence with specific recommendations for clinical decision making
 - D) A guideline that offers a set of interventions to treat or prevent a cluster of symptoms
13. Which statement best describes clinical practice guidelines?
- A) They offer a set of recommendations for a specific area of practice, based on a distillation of available evidence.
 - B) They provide general recommendations for evidence-based decision making.
 - C) They are universally useful, regardless of context or country of adoption.
 - D) They are designed to offer suggestions for areas in which more research is needed.
14. Which can be used to critically appraise clinical practice guidelines?
- A) A systematic review
 - B) The Iowa model
 - C) The AGREE II instrument
 - D) An evidence hierarchy
15. Which model was explicitly developed with the idea that individual nurses could engage in research utilization?
- A) Iowa Model of EBP
 - B) Johns Hopkins Nursing EBP Model
 - C) Cochrane Model
 - D) Stetler Model
16. For individual-level efforts for putting research into practice, nurses follow five major steps. What is the first step in the process?
- A) Searching for and obtaining relevant research evidence
 - B) Appraising and synthesizing research evidence
 - C) Framing a clinical question that can be answered with research evidence
 - D) Integrating evidence with other factors, such as patient preferences

17. In the following clinical question, what is the Outcome (O component)? “What is the effect of relaxation therapy versus biofeedback on the functional ability of patients with rheumatoid arthritis?”
- A) Functional ability
 - B) Rheumatoid arthritis
 - C) Biofeedback
 - D) Relaxation therapy
18. In the following clinical question, what is the Intervention/influence/exposure (I component)? “Does taking antidepressants affect the risk of suicide in cognitively impaired adolescents?”
- A) Adolescence
 - B) Suicide
 - C) Antidepressant use
 - D) Cognitive impairment
19. In the following clinical question, what is the Population (P component)? “Do stress and depression affect dyspnea in patients with chronic obstructive pulmonary disease (COPD)?”
- A) Patients who are stressed
 - B) Patients who are depressed
 - C) Patients who experience dyspnea
 - D) Patients with COPD
20. In the following clinical question, what is the Comparison (C component)? “Does chronic stress affect inflammatory responses in older men with atherosclerotic disease?”
- A) Chronic stress
 - B) Inflammatory response
 - C) Atherosclerotic disease
 - D) No “C” component is stated.
21. In which clinical question is fatigue the “I” component?
- A) Does fatigue affect agitation in cognitively impaired elders?
 - B) Does a physical activity intervention affect fatigue in patients undergoing cardiac rehabilitation?
 - C) What is the meaning of fatigue among patients with sleep apnea?
 - D) Does the level of depression of patients suffering from chronic fatigue improve by participating in an exercise intervention?

22. In the following clinical question, which PICO component is the health promotion program? “Does a nurse-led health promotion program improve the eating habits of community-dwelling elders?”
- A) The population (P)
 - B) The intervention or influence (I)
 - C) The comparison (C)
 - D) The outcome (O)
23. In the following clinical question, which PICO component is the eye masks? “Do ear plugs, relative to eye masks, have a beneficial effect on perceived sleep quality among patients in intensive care?”
- A) The population (P)
 - B) The intervention or influence (I)
 - C) The comparison (C)
 - D) The outcome (O)
24. In the following clinical question, what is the Intervention (I component)? “In hospitalized children aged 8 to 12 years undergoing surgery, does imagery-induced relaxation reduce postoperative pain?”
- A) Children aged 8 to 12 years having surgery
 - B) Surgical procedures
 - C) Postoperative pain
 - D) Imagery-induced relaxation
25. In the following clinical question, what is the Population (P component)? “What is it like for mothers, compared to fathers, to become the parent of a medically fragile preterm infant?”
- A) Medically fragile preterm infants
 - B) Mothers of medically fragile preterm infants
 - C) Fathers of medically fragile preterm infants
 - D) Parents of medically fragile preterm infants
26. In the following clinical question, which PICO component is missing? “Relative to sterile water, what is the effect of sucrose on pain during intravenous cannulation?”
- A) The population (P)
 - B) The intervention or influence (I)
 - C) The comparison (C)
 - D) The outcome (O)

27. Which is a question that would be asked in appraising research evidence in an individual EBP effort?
- A) What are the P, I, C, and O components?
 - B) How rigorous and reliable is the evidence?
 - C) With what other information should I integrate the evidence?
 - D) Is a relevant systematic review available?
28. Which activity is part of an organizational—but not an individual—EBP endeavour?
- A) Asking a good question/identifying a problem
 - B) Searching for evidence
 - C) Assessing implementation potential
 - D) Appraising evidence
29. The Iowa Model identifies problem-focused triggers for implementing an EBP project. Which is a problem-focused trigger in the Iowa Model?
- A) A paper published about a patient fall intervention in a nursing journal
 - B) A new clinical guideline on strategies to reduce patient falls
 - C) An observed increase in patient falls among patients on a neurologic unit
 - D) A journal club discussion of a paper on patient falls
30. The Iowa Model identifies several knowledge-focused triggers for implementing an EBP project. Which source would be considered a knowledge-focused trigger?
- A) A report in the New England Journal of Medicine regarding the transmission of the Zika virus
 - B) Increases in the readmission rate of heart failure patients
 - C) Poor patient satisfaction survey results
 - D) Increase in medication errors
31. Which issue is of particular importance in determining the implementation potential of the EBP project for the organization?
- A) The effectiveness of the innovation
 - B) Nurses' attitude toward the innovation
 - C) Patients' attitude toward the innovation
 - D) The cost–benefit ratio of introducing the innovation

32. After a product for an institutional EBP project has been developed (e.g., a formal guideline or protocol for an innovation), what is typically the next step?
- A) Appraising the evidence
 - B) Undertaking a pilot test
 - C) Evaluating implementation potential
 - D) Making a decision about whether to adopt the product
33. Which statement is true?
- A) Original research is a necessary activity for health care institutions.
 - B) Quality improvement is a necessary activity for health care institutions.
 - C) Quality improvement has as its primary goal the development of generalizable knowledge.
 - D) Quality improvement is essentially just another name for an organizational evidence-based practice project

Answer Key

1. A
2. C
3. C
4. B
5. B
6. D
7. C
8. B
9. A
10. B
11. D
12. A
13. A
14. C
15. D
16. C
17. A
18. C
19. D
20. D
21. A
22. B
23. C
24. D
25. D
26. A
27. B
28. C
29. C
30. A
31. D
32. B
33. B

Chapter 2

Fundamentals of Evidence-Based Nursing Practice

Statement of Intent

The purpose of this chapter is to further sensitize students to the need to incorporate findings from nursing studies into their practice and to give them some tools for doing so. This chapter begins by distinguishing research utilization (RU) and evidence-based practice (EBP). Later in the chapter, new in this edition, is a discussion about the similarities and differences between primary research, EBP projects, and quality improvement projects.

We discuss the concept of *evidence hierarchies* in this chapter but offer a new way to portray them (Fig. 2.1). Standard evidence hierarchies do a poor job of communicating that there are different levels of evidence for different types of question. The standard evidence hierarchies (with systematic reviews of RCTs at the pinnacle) are appropriate for Therapy/intervention questions but are *not* appropriate for, say, Prognosis or Meaning questions. We show systematic reviews at the pinnacle (Level I), but Level II evidence depends on the nature of the inquiry.

In this chapter, we also discuss some of the key resources available to health care practitioners wishing to pursue EBP. We introduce the terms *systematic review*, *meta-analysis*, and *metasynthesis* and discuss how to locate and appraise *clinical practice guidelines*. Although methods of conducting systematic reviews are increasingly complex and sophisticated, we feel that it is essential for nursing research consumers to be able to understand at least basic features of systematic reviews. We have included an entire chapter on systematic reviews, which we have placed at the end of the book because it is necessary to first teach students some fundamental design and statistical concepts.

We describe EBP efforts for both individual nurses, who may be faced with clinical scenarios requiring the identification and appraisal of best evidence, and for groups of nurses who may undertake a project to develop, adapt, or implement evidence-based clinical practice guidelines. Some of the materials on organizational EBP projects (details about *implementation potential*) no longer appear in the textbook but are available as part of this instructor's manual as a separate file, Supplement 2-1, at thepoint.lww.com/politessentials9e.

Perhaps the most important feature of this chapter is the guidance for developing well-worded clinical questions. It cannot be emphasized too strongly that students will need a lot of practice in asking good EBP questions. They also will need a lot of encouragement to "brainstorm" ideas for questions as well as positive reinforcement for their efforts. The templates for asking questions (Table 2.1 of the textbook; also available in Word format as part of this instructor's manual as a separate file, Table 2-1, at thepoint.lww.com/politessentials9e) will hopefully facilitate the process, but the templates are of little value if students are not given adequate practice and support.

Special Class Projects

1. Present the following incomplete question to the class and have students "fill in the blank" with as many outcomes (O component) as possible.
Among patients undergoing day surgery (P), does a music relaxation intervention (I) affect _____ (O)?

Have students present a few of their examples to the class. You might consider awarding the student who generates the most legitimate answers (perhaps within a given time frame) a prize, or bonus points toward the final grade.

2. Divide the class into teams of three or four students. Have each team prepare one of each type of question, using the template in Table 2.1 of the textbook (also available in Word format as part of this instructor's manual as a separate file, Table 2-1, at thepoint.lww.com/politessentials9e). Have each team read one of their questions to the class (and then have the rest of the class identify the PIO or PICO components for the question). Have a classroom discussion about which type of question the students found hardest to generate.
 - Note: Sometimes even faculty have a hard time distinguishing (or coming up with examples for) Prognosis versus Etiology questions. For prognosis questions, a health problem or health condition is usually the *independent variable*. By contrast, with Etiology questions, the health problem or health condition is usually the *dependent (outcome) variable*.
3. Use the Self-Test PowerPoint slides for Chapter 2 as a class activity to give students an opportunity to apply what they have learned about asking clinical questions and the PIO components of a question. These slides are not intended to be used to evaluate student performance but rather to reinforce concepts, give more illustrations of clinical questions and provide an opportunity for discussion if there is any confusion.

TEST QUESTIONS AND ANSWERS

True/False

1. Research utilization is essentially synonymous with evidence-based practice. (False)
2. The evidence-based practice movement originated in the United States. (False)
3. A well-known early nursing research utilization project is the CURN project. (True)
4. An evidence hierarchy for a Meaning question ranks RCTs as Level II evidence. (False)

5. A metasynthesis integrates knowledge from multiple qualitative studies. (True)
6. In a meta-analysis, the unit of analysis is an individual study rather than an individual study participant. (True)
7. In the PICO acronym, the "O" component of clinical questions stands for *Observation*. (False)
8. In the PICO acronym, the "C" component is the comparator for the "I" component. (True)
9. In asking clinical foreground questions, there is always a "P" component, regardless of question type. (True)
10. Systematic reviews are always in the form of a meta-analysis. (False)
11. A key step in an individual EBP effort is to integrate appraised research evidence with expertise and local contextual information. (True)
12. Problem-focused triggers in the Iowa Model are akin to research utilization. (False)
13. In organizational EBP projects, an important activity is pilot testing and evaluating an evidence-based innovation. (True)
14. Quality improvement projects are essentially the same as EBP projects. (False)

Application Questions

1. The following is a list of questions that a clinician interested in EBP might ask. For each, indicate whether this is a *foreground question* or a *background question*.
 1. When do complications of pneumonia usually occur? (Background question)
 2. What bedrest elevation for mechanically ventilated patients is maximally effective in reducing the risk of ventilator-associated pneumonia? (Foreground question)
 3. What is it like for patients with HIV or AIDS to adapt to changes in body weight and ensuing body image changes? (Foreground question)
 4. What is the pathophysiology of Lyme disease? (Background question)
 5. Which large-volume enema solution—tap water, soap suds, or polyethylene glycol-electrolyte solution—results in the least mucosal irritation in patients with constipation? (Foreground question)
 6. What is the risk of bronchopulmonary aspiration during enteral feeding? (Background question)
 7. Do patients receiving an intradermal injection experience greater discomfort with bevel-up or bevel-down needle injection? (Foreground question)
 8. Does depression contribute to mortality among patients with heart failure? (Foreground question)
 9. What is it like for people with a history of severe phobias to overcome their phobia? (Foreground question)
 10. What effect does altitude change have on circadian physiology? (Background question)

2. In questions 2, 5, 7, and 8 from Application Question 1, indicate (a) the Population; (b) the Intervention, influence, or exposure; and (if appropriate) (c) the Outcome.

Question 2:

P: mechanically ventilated patients
I: variation in bedrest elevation
O: risk of ventilator-associated pneumonia

Question 5:

P: patients with constipation
I: three alternative large-volume enema solutions
O: amount of mucosal irritation

Question 7:

P: patients receiving an intradermal injection
I: positioning of the bevel during needle injection
O: degree of discomfort

Question 8:

P: patients with heart failure
I: depression
O: mortality

3. Here is a brief summary of an EBP effort by a practicing nurse. Read the summary and then respond to the questions that follow.

McDonald was caring for a 27-year-old woman who just delivered her first infant by emergency cesarean birth. The mother was upset because she believed that she would have to deliver any subsequent children by cesarean birth. She asked McDonald about the risks of birth complications with vaginal birth after cesarean (VBAC). McDonald decided to look for the best possible evidence to answer her question.

Short-Answer Questions

- Would the *trigger* in McDonald's effort be described as problem-focused or knowledge-focused? (Problem-focused)
- Would McDonald need to pose a clinical background question OR a clinical foreground question to identify relevant evidence? (A clinical foreground question)
- In searching for evidence, McDonald would need to ask a clinical question that would include identifying the *Population*. What would that population be? (Women who have had a cesarean birth)
- McDonald's clinical question would identify an *Intervention, influence, or exposure*—what would that be? (Having a vaginal birth after cesarean)
- Would McDonald likely find the answer to a question about future risks of birth complications from VBAC in a metasynthesis? (No, the question is not about meaning or process, it is about the effect of a certain exposure.)
- In appraising the evidence located in this inquiry, would McDonald likely

- apply the AGREE II instrument? (No, McDonald would not be evaluating a clinical practice guideline.)
- g. Would McDonald need to assess implementation potential in this effort? (No, this is an individual EBP effort, not an institutional effort.)

Essay Question

- a. Do you think that McDonald made a good decision to search for best evidence? Defend your rationale in terms of costs and benefits of taking action to finding and evaluating evidence versus not taking action in this example.

4. Read the following summary and answer the questions that follow.

A group of nurses working in a community health center were unsure of how to answer questions from patients about appropriate means of cleansing children's wounds in home settings. Most nurses felt that sterile saline should be recommended to minimize the risk of infection, but others believed that tap water was adequate for cleansing acute wounds. The nurses decided to examine the evidence and located a systematic review in the Cochrane database. Among the studies that had been conducted, the review concluded that there were no differences in rates of infection or healing between the use of tap water versus sterile saline in the cleansing of wounds. However, few of the studies that had been done involved the use of children, and most had been conducted in health care settings. The nurses decided to initiate a new study to gather more focused and informative evidence about the effects of saline solution versus tap water in cleansing children's wounds.

Short-Answer Questions

- a. Does this summary describe an EBP effort? (Yes, nurses wanted to determine best practices with regard to cleansing of children's wounds.)
- b. Would the trigger be described as problem-focused or knowledge-focused? (Problem-focused)
- c. Did the nurses use pre-appraised evidence? (Yes, a systematic review from the Cochrane database is an example of pre-appraised evidence.)
- d. The nurses decided to initiate a new study because they deemed the evidence base inadequate. Would their new study be a qualitative or quantitative study? (Quantitative)

Essay Questions

- a. Discuss which aspects of the Iowa Model were completed as part of this project, and which were not. What other activities could the nurses have undertaken to better conform to the Iowa Model?
- b. The nurses decided to undertake a new study based on what they found in the systematic review. Comment on this decision.

Supplement 2-1: Worksheet: Criteria for Evaluating the Implementation Potential of an Innovation Under Scrutiny

TRANSFERABILITY OF THE FINDINGS
1. Will the innovation “fit” in the proposed setting?
2. How similar are the target population in the research and that in the new setting?
3. Is the philosophy of care underlying the innovation fundamentally different from the philosophy prevailing in the practice setting? How entrenched is the prevailing philosophy?
4. Is there a sufficiently large number of clients in the practice setting who could benefit from the innovation?
5. Will the innovation take too long to implement and evaluate?
FEASIBILITY
1. Will nurses have the freedom to carry out the innovation? Will they have the freedom to terminate the innovation if it is considered undesirable?
2. Will the implementation of the innovation interfere inordinately with current staff functions?
3. Does the administration support the innovation? Is the organizational climate conducive to an RU/EBP endeavor?
4. Is there a fair degree of consensus among the staff and among the administrators that the innovation could be beneficial and should be tested? Are there major pockets of resistance or uncooperativeness that could undermine efforts to implement and evaluate the innovation?
5. To what extent will the implementation of the innovation cause friction within the organization? Does the utilization project have the support and cooperation of departments outside the nursing department?
6. Does the nursing staff have the skills needed to carry out the project (both the implementation and the clinical evaluation)? If not, how difficult will it be to collaborate with or to secure the assistance of others with the necessary skills?

TRANSFERABILITY OF THE FINDINGS

7. Does the organization have the equipment and facilities necessary for the innovation? If not, is there a way to obtain the needed resources?
8. If nursing staff need to be released from other practice activities to learn about and implement the innovation, what is the likelihood that this will happen?
9. Are appropriate measuring tools available for a clinical evaluation of the innovation?

COST/BENEFIT RATIO OF THE INNOVATION

1. What are the risks to which clients would be exposed during the implementation of the innovation?
2. What are the potential benefits that could result from the implementation of the innovation?
3. What are the risks of maintaining current practices (i.e., the risks of *not* trying the innovation)?
4. What are the material costs of implementing the innovation? What are the costs in the short term during utilization, and what are the costs in the long run, if the change is to be institutionalized?
5. What are the material costs of *not* implementing the innovation (i.e., Could the new procedure result in some efficiencies that could lower the cost of providing service?)?
6. What are the potential nonmaterial costs of implementing the innovation to the organization (e.g., lower staff morale, staff turnover, absenteeism)?
7. What are the potential nonmaterial benefits of implementing the innovation (e.g., improved staff morale, improved staff recruitment)?

TABLE 2.1 Question Templates for Selected Clinical Foreground Questions: PIO and PICO		
Type of Question	PIO Question Template (Questions Without an Explicit Comparison)	PICO Question Template (Questions With an Explicit Comparison)
Therapy/treatment/intervention	In _____ (P opulation), what is the effect of _____ (I ntervention) on _____ (O utcome)?	In _____ (P opulation), what is the effect of _____ (I ntervention), in comparison to _____ (C omparative/alternative intervention), on _____ (O utcome)?
Diagnosis/assessment	For _____ (P opulation), does _____ (I dentifying tool/procedure) yield accurate and appropriate diagnostic/assessment information about _____ (O utcome)?	For _____ (P opulation), does _____ (I dentifying tool/procedure) yield more accurate or more appropriate diagnostic/assessment information than _____ (C omparative tool/procedure) about _____ (O utcome)?
Prognosis	For _____ (P opulation), does _____ (E xposure to disease or condition) increase the risk of _____ (O utcome)?	For _____ (P opulation), does _____ (E xposure to disease or condition), relative to _____ (C omparative disease or condition) increase the risk of _____ (O utcome)?
Etiology/harm	In (P opulation), does _____ (I nfluence, exposure, or characteristic) increase the risk of _____ (O utcome)?	Does (I nfluence, exposure, or characteristic) increase the risk of _____ (O utcome) compared to _____ (C omparative influence, exposure or condition) in _____ (P opulation)?
Description (prevalence/incidence)	In _____ (P opulation), how prevalent is _____ (O utcome)?	<i>Explicit comparisons are not typical, except to compare different populations.</i>

TABLE 2.1 Question Templates for Selected Clinical Foreground Questions: PIO and PICO		
Meaning or process	What is it like for _____ (Population) to experience _____ (situation, condition, circumstance)? OR What is the process by which _____ (Population) cope with, adapt to, or live with _____ (situation, condition, circumstance)?	<i>Explicit comparisons are not typical in these types of questions.</i>