

## Chapter 02: Evolution of Research in Building Evidence-Based Nursing Practice

### Gray: Burns and Grove's The Practice of Nursing Research, 8th Edition

#### MULTIPLE CHOICE

1. In which way did Florence Nightingale contribute most substantially to evidence-based practice?
  - a. She conducted outcomes research about the power of nursing for creating change.
  - b. She was the first woman elected to the Royal Statistical Society.
  - c. She collected and analyzed data that changed the care of hospitalized soldiers.
  - d. She calculated mortality rates under varying conditions.

ANS: C

Nightingale collected data on soldier morbidity and mortality rates and the factors influencing them and presented her results in tables and pie charts, a sophisticated type of data presentation for the period. Nightingale's research enabled her to instigate attitudinal, organizational, and social changes. She changed the attitudes of the military and society toward the care of the sick. The military began to view the sick as having the right to adequate food, suitable quarters, and appropriate medical treatment, which greatly reduced the mortality rate.

DIF: Cognitive Level: Application

2. If a nurse manager wants to study how well last year's policies governing implementation of a "bundle" of interventions to prevent cross-contamination of MRSA has been working in the manager's units, which of the following strategies would the manager be most likely to use?
  - a. Outcomes research
  - b. Mixed methods research
  - c. Ethnographic research
  - d. Experimental research

ANS: A

Outcomes research emerged as an important methodology for documenting the effectiveness of healthcare services in the 1980s and 1990s. This type of research evolved from the quality assessment and quality assurance functions that originated with the professional standards review organizations (PSROs) in 1972. During the 1980s, William Roper, the director of the Health Care Finance Administration (HCFA), promoted outcomes research for determining the quality and cost-effectiveness of patient care. Mixed methods research is conducted when the study problem and purpose are best addressed using both quantitative and qualitative research methodologies. Ethnography attempts to tell the story of people's daily lives while describing the culture in which they live. Experimental research is an objective, systematic, controlled investigation conducted for the purpose of predicting and controlling phenomena. This type of research examines causality through rigorous control of variables.

DIF: Cognitive Level: Analysis

3. A researcher publishes a paper describing and explaining how faith, pain, adherence to therapy, and meditation interact during the rehabilitation process. The description of the process is based on many interviews the researcher conducted with persons during and following rehabilitation experiences. Which type of methodology did this research employ?

- a. Ethnography
- b. Phenomenology
- c. Exploratory-descriptive
- d. Grounded theory

ANS: D

Grounded theory methodology emphasizes interaction, observation, and descriptions of relationships among concepts. Throughout the study, the researcher explores, proposes, formulates, and validates relationships among the concepts until a theory evolves. The theory developed is grounded in, or has its roots in, the data from which it was derived. Ethnography attempts to tell the story of people's daily lives while describing the culture in which they live. Phenomenology explores an experience as it is lived by the study participants and reported from participants' points of view. Exploratory-descriptive qualitative research is conducted to address an issue or problem in need of a solution or understanding.

DIF: Cognitive Level: Analysis

4. A panel of researchers conducts several studies, all drawn from an existent hospital and clinic database. The studies focus on quality and effectiveness within that system. The specific studies address mortality rates in elders within a year after hip fracture, functional outcomes 6 months after admission to a neurosurgical ICU after traumatic brain injury, rate of nurse injuries in an emergency department, and number of patient falls on various floors of the hospital. What type of research is this?
  - a. Experimental research
  - b. Outcomes research
  - c. Ethnographic research
  - d. Grounded theory research

ANS: B

Outcomes research emerged as an important methodology for documenting the effectiveness of healthcare services in the 1980s and 1990s. This type of research evolved from the quality assessment and quality assurance functions that originated with the professional standards review organizations (PSROs) in 1972. During the 1980s, William Roper, the director of the Health Care Finance Administration (HCFA), promoted outcomes research for determining the quality and cost-effectiveness of patient care. Experimental research is an objective, systematic, controlled investigation conducted for the purpose of predicting and controlling phenomena. This type of research examines causality through rigorous control of variables. Ethnography attempts to tell the story of people's daily lives while describing the culture in which they live. Grounded theory methodology emphasizes interaction, observation, and descriptions of relationships among concepts.

DIF: Cognitive Level: Application

5. A researcher designs a study. The data are collected by means of a questionnaire, the study has a clear purpose statement, the results are presented as a narrative without statistical analysis, and the suggestions made for practice are worded as general suggestions. What type of research is this?
  - a. Qualitative research
  - b. Quantitative research
  - c. Mixed methods research
  - d. Meta-analysis

ANS: A

Quantitative research is a formal, objective, systematic process implemented to obtain numerical data, which are then analyzed statistically for generating understanding of various aspects of the world. Qualitative research is also systematic, but it is an interactive, naturalistic, and subjective approach that results in a narrative. Mixed methods research most commonly uses both quantitative and qualitative approaches, producing both statistical analysis and narrative. Meta-analysis is the statistical pooling of results from previous studies into a single quantitative analysis that provides one of the highest levels of evidence about an intervention's effectiveness.

DIF: Cognitive Level: Application

6. A newly employed nurse administrator wants to know more about the employees on the units the administrator supervises. The manager accesses the managerial database and gathers data about all of the current employees on the unit, including work shift, number of years employed, age, gender, educational preparation, certifications, work history, and professional accomplishments, analyzing the data statistically. What type of quantitative research is this?
- Descriptive research
  - Correlational research
  - Quasi-experimental research
  - Experimental research

ANS: A

The quantitative research methods are classified into four categories: (1) descriptive, which defines the magnitude of a concept and its characteristics, (2) correlational, which determines association between or among variables, (3) quasi-experimental, which tests an intervention and lacks control in at least one of three areas, and (4) experimental, which tests an intervention and includes both a control group and random assignment. This is a research study, even though it depends upon existent data, collected by another manager. Its purpose is to describe the employees.

DIF: Cognitive Level: Analysis

7. A human resources employee performs research focusing on the professional life span of nurses within this particular institution and tries to discover whether their choice of work area is connected with the number of years they work in the institution. What type of quantitative research is this?
- Descriptive research
  - Correlational research
  - Quasi-experimental research
  - Experimental research

ANS: B

The quantitative research methods are classified into four categories: (1) descriptive, which defines the magnitude of a concept and its characteristics, (2) correlational, which determines association between or among variables, (3) quasi-experimental, which tests an intervention and lacks control in at least one of three areas, and (4) experimental, which tests an intervention and includes both a control group and random assignment. This study investigates the connection or association between work area and length of time worked.

DIF: Cognitive Level: Analysis

8. In an attempt to assess whether selection of a same-gender psychiatrist leads to better mental health outcomes, clients newly referred for mental health services are told they may choose their own psychiatrists. At the beginning of treatment, and again after 3 months of therapy, measures of mental health are performed. What type of quantitative research is this?
- Descriptive research
  - Correlational research
  - Quasi-experimental research
  - Experimental research

ANS: C

The quantitative research methods are classified into four categories: (1) descriptive, which defines the magnitude of a concept and its characteristics, (2) correlational, which determines association between or among variables, (3) quasi-experimental, which tests an intervention and lacks control in at least one of three areas, and (4) experimental, which tests an intervention and includes both a control group and random assignment. This research study is designed to test an intervention but does not include random assignment, one of the requisites of experimental research.

DIF: Cognitive Level: Analysis

9. In a rehabilitation unit, patients are randomly assigned to high fiber diets versus ordinary fiber diets, in order to measure the effect on constipation. What type of quantitative research is this?
- Descriptive research
  - Correlational research
  - Quasi-experimental research
  - Experimental research

ANS: D

The quantitative research methods are classified into four categories: (1) descriptive, which defines the magnitude of a concept and its characteristics, (2) correlational, which determines association between or among variables, (3) quasi-experimental, which tests an intervention and lacks either a control group or random assignment, and (4) experimental, which tests an intervention and includes both a control group and random assignment. This research study tests an intervention and includes both a control group and random assignment.

DIF: Cognitive Level: Analysis

10. A researcher uses interviews with two or three open-ended questions to study women in the staging phase of breast cancer treatment, in order to understand their experiences and the meanings they attribute to those experiences. What type of research is this?
- Phenomenological research
  - Grounded theory research
  - Ethnographic research
  - Exploratory-descriptive qualitative research

ANS: A

Phenomenology explores an experience as it is lived by the study participants and reported from participants' points of view. Grounded theory methodology emphasizes interaction, observation, and descriptions of relationships among concepts. Ethnography attempts to tell the story of people's daily lives while describing the culture in which they live. Exploratory-descriptive qualitative research is conducted to address an issue or problem in need of a solution or understanding.

DIF: Cognitive Level: Analysis

11. A researcher uses an interview with eight open-ended questions to study women in a new multi-staging phase of breast cancer treatment, which includes serial biopsies and necessitates weekly closed biopsy, in order to understand more about social factors that impinge upon their experience. What type of research is this?
  - a. Phenomenological research
  - b. Grounded theory research
  - c. Ethnographic research
  - d. Exploratory-descriptive qualitative research

ANS: B

Grounded theory methodology emphasizes interaction, observation, and descriptions of relationships among concepts. Throughout the study, the researcher explores, proposes, formulates, and validates relationships among the concepts until a theory evolves. The theory developed is grounded in, or has its roots in, the data from which it was derived. Ethnography attempts to tell the story of people's daily lives while describing the culture in which they live. Exploratory-descriptive qualitative research is conducted to address an issue or problem in need of a solution or understanding. Phenomenology explores an experience as it is lived by the study participants and reported from participants' points of view.

DIF: Cognitive Level: Analysis

12. A researcher conducts many interviews, over a 1-year period, with women in the treatment phase of breast cancer, all of whom are attending a breast cancer support group, in order to understand what happens in the support group, how the members are affected by membership, and how the members contribute to the group. The researcher herself is also in treatment for breast cancer and is a member of the support group. What type of research is this?
  - a. Phenomenological research
  - b. Grounded theory research
  - c. Ethnographic research
  - d. Exploratory-descriptive qualitative research

ANS: C

Ethnography attempts to tell the story of people's daily lives while describing the culture in which they live. The researcher may live in or become part of the cultural setting to gather the data. Phenomenology explores an experience as it is lived by the study participants and reported from participants' points of view. Grounded theory methodology emphasizes interaction, observation, and descriptions of relationships among concepts. Exploratory-descriptive qualitative research is conducted to address an issue or problem in need of a solution or understanding.

DIF: Cognitive Level: Analysis

13. A researcher investigates the cause-and-effect relationship between the incidence of children's spinal cord injury and the current state law requiring that all children under the age of 8 will ride in special car harnesses. Which form of nursing research should the researcher employ?
- Meta-analysis
  - Mixed methods research
  - Qualitative research
  - Quantitative research

ANS: D

Quantitative research is a formal, objective, systematic process implemented to obtain numerical data, which are then analyzed statistically for generating understanding of various aspects of the world. Qualitative research is also systematic, but it is an interactive, naturalistic, and subjective approach that results in a narrative. Mixed methods research most commonly uses both quantitative and qualitative approaches, producing both statistical analysis and narrative. Meta-analysis is the statistical pooling of results from previous studies into a single quantitative analysis that provides one of the highest levels of evidence about an intervention's effectiveness.

DIF: Cognitive Level: Analysis

### MULTIPLE RESPONSE

1. Florence Nightingale researched mortality and morbidity rates in soldiers during the Crimean War and investigated various factors that influenced both, presenting her results as pie charts and graphs. Consequently, it is known that she conducted which types of research? (*Select all that apply.*)
- Phenomenological research
  - Causational research
  - Descriptive research
  - Correlational research
  - Ethnographic research

ANS: C, D

Nightingale is noted for her data collection and statistical analyses during the Crimean War. She gathered data on soldier morbidity and mortality rates and the factors influencing them and presented her results in tables and pie charts, a sophisticated type of data presentation for the period. There is no evidence that she designed causational (experimental or quasi-experimental) research or any type of qualitative research.

DIF: Cognitive Level: Analysis

2. Which statements about quantitative research are accurate? (*Select all that apply.*)
- The results of quantitative research should be generalized back to the population from which the sample was drawn.
  - The methods of quantitative research are consistent with the philosophy of logical positivism.
  - Quantitative research addresses quantities, relationships, and causes.
  - Quantitative research predominates in the nursing research literature.
  - Quantitative research is always experimental.
  - Quantitative research tells the story of the research participants' daily lives, within

their culture.

ANS: A, B, C, D

The quantitative methodology is used to describe variables, examine relationships among variables, and determine cause-and-effect interactions between variables. In this text, the quantitative research methods are classified into four categories: (1) descriptive, (2) correlational, (3) quasi-experimental, and (4) experimental. Quantitative research utilizes statistical analyses to reduce and organize data, describe variables, examine relationships, and determine differences among groups. The quantitative approach to scientific inquiry emerged from a branch of philosophy called logical positivism, which operates on strict rules of logic, truth, laws, axioms, and predictions. Generalization involves the application of trends or general tendencies (which are identified by studying a sample) to the population from which the research sample was drawn. Researchers must be cautious in making generalizations, because a sound generalization requires the support of many studies with a variety of samples. Ethnography attempts to tell the story of people's daily lives while describing the culture in which they live.

DIF: Cognitive Level: Analysis

3. Which statements about qualitative research are accurate? (*Select all that apply.*)
- Qualitative research findings may be generalized.
  - Qualitative research generates information that can contribute to theory formation.
  - Qualitative research yields data such as audiotapes, videotapes, field notes, and other data that are based on language, not numbers.
  - Qualitative research is not systematic.
  - Qualitative research does not contain or imply a purpose.
  - Qualitative researchers interpret the meaning revealed to them by the participants.
  - Qualitative research is uncontrolled.

ANS: B, C, F

The findings from a qualitative study are unique to that study, and it is not the researcher's intent to generalize the findings to a larger population. Throughout the study, the grounded theory researcher explores, proposes, formulates, and validates relationships among the concepts until a theory evolves. Qualitative researchers use observations, interviews, and focus groups to gather data. Qualitative data take the form of words that are recorded on paper or electronically. Qualitative research is a systematic, interactive, subjective, naturalistic, scholarly approach used to describe life experiences, cultures, and social processes from the perspectives of the persons involved. The problem and purpose to be studied determine the type of research to be conducted, and the researcher's knowledge of both types of research promotes accurate selection of the methodology for the problem identified. Qualitative researchers are encouraged to question generalizations and to interpret meaning based on individual study participants' perceptions and realities.

DIF: Cognitive Level: Analysis

4. Which of the following are true of quantitative research and quantitative researchers? (*Select all that apply.*)
- Quantitative research addresses human responses by measuring or counting them.
  - Quantitative research presents information by clustering it or counting it.
  - Quantitative researchers maintain objectivity in their data collection and data analysis methods.

- d. Quantitative research describes variables, relationships among variables, and differences among groups.
- e. Precision is not especially important in quantitative research.
- f. Quantitative researchers operate in a concrete realm.
- g. All quantitative research findings can be generalized.

ANS: A, B, C, D, F

The quantitative approach to scientific inquiry emerged from a branch of philosophy called logical positivism, which operates on strict rules of logic, truth, laws, axioms, and predictions. Quantitative researchers hold the position that truth is absolute and that there is a single reality that one could define by careful measurement. The quantitative researcher must be completely objective, never allowing values, feelings, or personal perceptions to enter into the measurement of reality. Quantitative researchers believe that all human behavior is objective, purposeful, and measurable. Quantitative research requires the use of (1) structured interviews, questionnaires, or observations, (2) scales, or (3) physiological measures that generate numerical data. Statistical analyses are conducted to reduce and organize data, describe variables, examine relationships, and determine differences among groups. Control, precise measurement methods, and statistical analyses are used to ensure that the research findings accurately reflect reality so that the study findings can be generalized. Generalization involves the application of trends or general tendencies (which are identified by studying a sample) to the population from which the research sample was drawn. Researchers must be cautious in making generalizations, because a sound generalization requires the support of many studies with a variety of samples.

DIF: Cognitive Level: Analysis

5. Ethnographic research might focus upon which topics? (*Select all that apply.*)
- a. Bacterial cultures
  - b. Cultural beliefs of the ancient Romans
  - c. How children in Alaska play during the winter
  - d. The members of Alcoholics Anonymous who share 20 years of abstinence
  - e. The mentoring process in a labor-delivery unit
  - f. Conversational Spanish

ANS: C, D, E

Ethnographic research was developed by anthropologists to investigate cultures through an in-depth study of the members of the culture. Ethnographic research attempts to tell the story of people's daily lives while describing the culture in which they live. The ethnographic research process is the systematic collection, description, and analysis of data to develop a description of cultural behavior. The researcher (ethnographer) may be present in the cultural setting itself, both before and during data collection. Sometimes the researcher is a part of the culture or becomes a part of it, to facilitate data collection. Ethnographic researchers describe, compare, and contrast different cultures to add to our understanding of the impact of culture on human behavior and health.

DIF: Cognitive Level: Analysis

6. A researcher is operating from the point of view of logical positivism. Which research methods would the logical positivist use? (*Select all that apply.*)
- a. Grounded theory research
  - b. Correlational research



- c. Historical research
- d. Quasi-experimental research
- e. Quantitative descriptive research
- f. Exploratory-descriptive qualitative research

ANS: B, D, E

The quantitative approach to scientific inquiry emerged from a branch of philosophy called logical positivism, which operates on strict rules of logic, truth, laws, axioms, and predictions. Quantitative researchers hold the position that truth is absolute and that there is a single reality that one could define by careful measurement. The quantitative research methods are classified into four categories: (1) descriptive, (2) correlational, (3) quasi-experimental, and (4) experimental.

DIF: Cognitive Level: Analysis

7. Early nursing research by Nightingale focused on improving patient outcomes. What were the principal topics for the next wave of nursing research, in the first half of the 20th century? (*Select all that apply.*)
- a. Evidence-based practice (EBP)
  - b. Primary nursing's advantages in hospitals
  - c. Nursing education, as opposed to nurse training
  - d. The nursing process and nursing diagnosis
  - e. Staffing, patient assignments, and type of care

ANS: C, E

From 1900 to 1950, research activities in nursing were limited, but a few national studies were conducted related to nursing education. These studies included the Nutting Report, 1912; Goldmark Report, 1923; and Burgess Report, 1926. On the basis of recommendations of the Goldmark Report, more schools of nursing were established in university settings. The baccalaureate degree in nursing provided a basis for graduate nursing education, with the first master of nursing degree offered by Yale University in 1929. A research trend that started in the 1940s and continued in the 1950s focused on the organization and delivery of nursing services. Studies were conducted on the numbers and kinds of nursing personnel, staffing patterns, patient classification systems, patient and nurse satisfaction, and unit arrangement. Types of care such as comprehensive care, home care, and progressive patient care were evaluated. In the 1970s, the nursing process became the focus of many studies, with the investigations of assessment techniques, nursing diagnoses classification, goal-setting methods, and specific nursing interventions. Primary nursing care, which involves the delivery of patient care predominantly by registered nurses (RNs), was the trend for the 1970s. The vision for nursing research in the 21st century includes conducting quality studies through the use of a variety of methodologies, synthesizing the study findings into the best research evidence, using this research evidence to guide practice, and examining the outcomes of EBP.

DIF: Cognitive Level: Synthesis

8. Which statements are true of the Cochrane Center and Cochrane Collaboration, begun in the 1970s by Professor Archie Cochrane? (*Select all that apply.*)
- a. It was originally called the Walter Reed Army Institute of Research.
  - b. It developed the original master's degrees in nursing practice.
  - c. It serves as a repository for evidence-based practice guidelines.

- d. It was the first association to publish a nursing research journal.
- e. It is the online library resource for research literature reviews.

ANS: C, E

Professor Archie Cochrane originated the concepts of evidence-based practice in his book *Effectiveness and Efficiency: Random Reflections on Health Services*. Cochrane advocated the provision of health care based on research to improve the quality of care and patient outcomes. To facilitate the use of research evidence in practice, the Cochrane Center was established in 1992, and the Cochrane Collaboration in 1993. The Cochrane Collaboration and Library house numerous evidence-based practice resources, such as systematic reviews of research and evidence-based guidelines for practice. A Department of Nursing Research was established in the Walter Reed Army Institute of Research in 1957. This was the first nursing unit in a research institution that emphasized clinical nursing research. The baccalaureate degree in nursing provided a basis for graduate nursing education, with the first master of nursing degree offered by Yale University in 1929. The Association of Collegiate Schools of Nursing, organized in 1932 and later renamed the American Association of Colleges of Nursing (AACN), promoted the conduct of research to improve education and practice, also sponsoring the publication of the first research journal in nursing, *Nursing Research*, in 1952 (Fitzpatrick, 1978).

DIF: Cognitive Level: Evaluation

9. How does quantitative research contribute to evidence-based practice? (*Select all that apply.*)
- a. It provides facts that nurses can add to their knowledge base. This makes practice more objective and quantifiable.
  - b. It provides scientific support for policies already in place. More evidence makes an existent policy more defensible.
  - c. It provides evidence of opposing policies already in place. Evidence in opposition to policies may result in new policies.
  - d. It allows the nurse to understand the personal experience of illness and the meaning the client attaches to it. This engenders compassion.
  - e. It contributes evidence that will make nursing practice almost completely evidence-based, eliminating different styles of nursing practice.

ANS: B, C

Quantitative research is best defined as a formal, objective, systematic study process implemented to obtain numerical data in order to answer a research question. This research method is used to describe variables, examine relationships among variables, and determine cause-and-effect interactions between variables. Evidence-based practice is the conscientious integration of best research evidence with clinical expertise and patient values and needs in the delivery of quality, cost-effective health care. Best research evidence is a summary of the highest quality, current empirical knowledge in a specific area of health care that is developed from a synthesis of quality studies in that area. Consequently, new research can affect the sum total of research evidence. The qualitative research method of phenomenology allows understanding of the lived experience and the meaning it engenders. The aim of phenomenology is to explore an experience as it is lived by the study participants and interpreted by the researcher.

DIF: Cognitive Level: Analysis

10. What does appropriate generalization require? (*Select all that apply.*)

- a. Any type of sample, whether or not it is representative
- b. Application of findings to the population from which the sample was drawn
- c. More than one research study using the same research questions and variables
- d. Statistical analysis that shows consistent results across studies
- e. One single study with strong results

ANS: B, C, D

Statistical analyses are conducted to reduce and organize data, describe variables, examine relationships, and determine differences among groups. Control, precise measurement methods, and statistical analyses are used to ensure that the research findings accurately reflect reality so that the study findings can be generalized. Generalization involves the application of trends or general tendencies (which are identified by studying a sample) to the population from which the research sample was drawn. The sample must represent the population. Researchers must be cautious in making generalizations, because a sound generalization requires the support of many studies with a variety of samples. Replicating or repeating of studies with similar methodology adds to the quality of the research evidence.

DIF: Cognitive Level: Analysis

11. What best characterizes the contribution of qualitative nursing research to evidence-based practice? (*Select all that apply.*)
  - a. It presents collective common evidence of healthcare clients' experiences, which may provide inspirations for individual practice.
  - b. It provides stories of how healthcare clients feel. This lets nurses know what people in similar circumstances can be expected to experience and feel.
  - c. It provides evidence that determines how nurses should interact with various cultures. This mandates action.
  - d. Its purpose is to test theory.
  - e. It reveals participants' experiences and individual viewpoints, feelings, and interpretations. These can provide guidelines for client-centered care.

ANS: A, E

Qualitative research is a systematic, interactive, subjective, naturalistic, scholarly approach used to describe life experiences, cultures, and social processes from the perspectives of the persons involved. This type of research is conducted to explore, describe, and promote understanding of human experiences, events, and cultures over time. The findings from a qualitative study are unique to that study, and it is not the researcher's intent to generalize the findings to a larger population: what the participants experience, perceive, or feel is not generalizable to others. Because of this, the results may be used only to inform individual practice, perhaps contributing to nurse expertise, or to provide general guidelines without a mandate for practice.

DIF: Cognitive Level: Analysis

12. In which ways does the Quality and Safety Education for Nurses (QSEN) initiative relate to research? (*Select all that apply.*)
  - a. One of its six competencies for nursing education is evidence-based practice. This implies that evidence will be generated through systematic research.
  - b. QSEN funds current research projects, both quantitative and qualitative.
  - c. The QSEN initiative specifies the number of research projects that teaching hospitals must conduct yearly, in order to meet expectations.

- d. One of the expectations of nurses after graduate education is to be able to develop policies for practice that are based on research.
- e. It specifies that nurses will be able to integrate best current evidence with clinical expertise and patient preferences. This presupposes that there is current research evidence.

ANS: A, D, E

The Quality and Safety Education for Nurses initiative identified the following six essential competencies for nursing education: patient-centered care, teamwork and collaboration, EBP, quality improvement, safety, and informatics. The QSEN Program is focused on developing the requisite knowledge, skills, and attitude (KSA) statements for each of the competencies for pre-licensure and graduate education. Since 2007, the QSEN Institute website has provided teaching strategies and resources to facilitate the accomplishments of the QSEN competencies in nursing education programs. The EBP competency is defined as “integrating the best current evidence with clinical expertise and patient/family preferences and values for delivery of optimal health care.” Graduate level nursing students need to have KSAs to conduct critical appraisals of studies; summarize current research evidence; develop protocols, algorithms, and policies for use in practice based on research; and participate in the conduct of research activities. Part of developing an EBP is maintaining knowledge of current research. QSEN does not fund independent research, nor does it mandate yearly research requirements for hospitals or other institutions.

DIF: Cognitive Level: Analysis

13. How does the QSEN initiative apply to nursing graduate students? (*Select all that apply.*)
- a. QSEN guidelines for nurses with master’s degrees include designing multiple research projects and independently conducting such research.
  - b. Participation in ongoing research may be a job expectation in an advanced practice role.
  - c. Revisions to the QSEN knowledge, skills, and attitude (KSA) statements are generated from research.
  - d. Summarizing current research is required both within a nursing master’s program and subsequent to attaining the master’s degree.
  - e. Nurses with advanced degrees may be called upon to participate in healthcare team activities that generate decision trees for bedside nurses to use in patient care.

ANS: A, D, E

The Quality and Safety Education for Nurses initiative identified the following six essential competencies for nursing education: patient-centered care, teamwork and collaboration, EBP, quality improvement, safety, and informatics. The QSEN Program is focused on developing the requisite knowledge, skills, and attitude (KSA) statements for each of the competencies for pre-licensure and graduate education. Since 2007, the QSEN Institute website has provided teaching strategies and resources to facilitate the accomplishments of the QSEN competencies in nursing education programs. The EBP competency is defined as “integrating the best current evidence with clinical expertise and patient/family preferences and values for delivery of optimal health care.” Graduate level nursing students need to have KSAs to conduct critical appraisals of studies; summarize current research evidence; develop protocols, algorithms, and policies for use in practice based on research; and participate in the conduct of research activities. An expanded knowledge of research is an important part of developing an EBP and is necessary to accomplish the QSEN competencies.

DIF: Cognitive Level: Analysis