

Marquette University

e-Publications@Marquette

---

College of Nursing Faculty Research and  
Publications

Nursing, College of

---

2014

## Facilitating Undergraduate Nursing Students' Appraisal of Evidence

Margaret J. Bull

Marquette University, [margaret.bull@marquette.edu](mailto:margaret.bull@marquette.edu)

Follow this and additional works at: [https://epublications.marquette.edu/nursing\\_fac](https://epublications.marquette.edu/nursing_fac)

---

### Recommended Citation

Bull, Margaret J., "Facilitating Undergraduate Nursing Students' Appraisal of Evidence" (2014). *College of Nursing Faculty Research and Publications*. 436.

[https://epublications.marquette.edu/nursing\\_fac/436](https://epublications.marquette.edu/nursing_fac/436)

# Facilitating Undergraduate Nursing Students' Appraisal of Evidence

Margaret J. Bull, PhD, RN

Evidence-based practice (EBP) has been defined as a framework for clinical practice that integrates best available scientific evidence with clinical expertise, and patient preferences and values to make decisions about health care (Melnik, Fineout-Overholt, Stillwell, & Williamson, 2009). Although there are various definitions of EBP, the common elements include integrating the best available evidence, clinician expertise, and patient preferences and values in making decisions about health care with the goal of achieving high-quality, cost-effective care (Institute of Medicine [IOM], 2012; Schmidt & Brown, 2012).

## EVIDENCE-BASED PRACTICE IN UNDERGRADUATE NURSING CURRICULA

Forces within and outside the discipline of nursing provide an impetus for teaching EBP in undergraduate nursing curricula. The *Essentials for Baccalaureate Education* (American Association of Colleges of Nursing, 2008) states that graduates of baccalaureate programs are expected to be able to appraise and integrate evidence in practice. The IOM recommended evidence-based decision-making as one of the five core competencies for healthcare professionals (IOM, 2001) and later recommended that education programs teach healthcare professionals ways of accessing, managing, and applying evidence in providing patient care (IOM, 2012). Consequently, nurse educators are faced with the challenge of teaching undergraduate students to appraise evidence and consider how the evidence might be applied in clinical practice.

### The Challenge of Identifying Article Type

Typically, the undergraduate research course in a curriculum is charged with teaching students to appraise evidence. Although undergraduate research courses place emphasis on appraisal of research studies, the evidence pyramid includes other types

of articles, such as expert opinion, practice guidelines, and editorials. Thus, students need to be able to recognize the type of article being appraised. Undergraduate students often find identifying the type of article a difficult task even after receiving an orientation to database searching by a librarian and participating in class discussion about the types of articles (Meeker, Jones, & Flanagan, 2008). Furthermore, faculty teaching clinical courses comment that students who have completed an undergraduate research course have difficulty identifying the type of article selected for clinical conference discussion.

## The “What Type of Article Is It?” Grid

This chapter describes the use of a grid titled “What Type of Article Is It?” to help junior-level nursing students recognize the type of article being appraised. The grid (Table 10.1) was provided to 59 students enrolled in an undergraduate research course during the first class session. Students were told that the grid would be used in class for journal club discussions, and they were encouraged to use the grid in appraising articles for their evidence-based project. The common cues for each type of article were listed in the columns below the article type. For instance, the cues in Table 10.1 for a qualitative study include the use of research headings (aims, methods, sample, findings), the collection of words/narrative data, a sample from one study, the use of observation or semistructured interviews to collect data, and direct quotes from study participants. A copy of the grid was available to students throughout the course on the online course management system.

As the course progressed, the types of articles discussed in the journal clubs during class moved up the evidence pyramid from expert opinion and single qualitative studies to correlational studies, experimental, and randomized controlled trials. The question (“What type of article is it?”) was posed for each journal club discussion, and cues to article type were identified. For the final class project, groups of five to seven students worked together to appraise evidence about strategies to reduce medication errors in patients who were hospitalized. Each group completed a table that included the citation for each student’s article, purpose of the study, type of article, level of evidence, method, results, and recommendations. In addition, each group gave an oral presentation summarizing the article types, levels of evidence, similarities and differences in findings, and their evaluation of the relevance of the findings for clinical practice. The majority of students (95 percent) in the research course accurately identified the type of article for their projects. In contrast, only 70 percent of students in the previous semester accurately identified the type of article without using the “What Type of Article Is It?” grid. Moreover, 52 of the 59 students enrolled in the research course were simultaneously enrolled in a course on the essentials of gerontological nursing, which required students to select and appraise a research report on delirium, dementia, or depression. This was an end-of-course assignment with an expectation that students would apply what they had learned in the research course about appraising studies in completing this assignment. The majority of students (97 percent) accurately identified the type of article. Two students, who were not successful in accurately identifying the article type, did not use the grid in appraising their article because they thought that the grid should only apply to the research course.

**TABLE 10.1**

**What Type of Article Is It?**

<b>Literature Reviews</b>				<b>Quantitative Studies</b>			
<b>Expert Opinion</b>	<b>Integrative</b>	<b>Meta-synthesis</b>	<b>Meta-analysis</b>	<b>Descriptive</b>	<b>Correlational or Comparative</b>	<b>Experiment</b>	<b>Qualitative Studies</b>
Absence of research headings	Absence of research headings	Research headings (i.e., aim, methods, sample, findings, discussion)	Research headings (i.e., aim, methods, sample, findings, discussion)	Research headings (i.e., aim, methods, sample, findings, discussion)	Research headings (i.e., aim, methods, sample, findings, discussion)	Research headings (i.e., aim, methods, sample, findings, discussion)	Research headings (i.e., aim, methods, sample, findings, discussion)
Often written in first person (e.g., "I" or "we")	Often written in third person	Word data	Numeric data	Numeric data	Numeric data	Numeric data Describes intervention or manipulation of IV	Words or narrative data
Absence of sample	Focused topic Reviews theories and/or research papers	Sample consists of number of qualitative studies with similar focus	Sample consists of number of quantitative studies with similar variables	Sample for one study	Sample for one study	Sample for one study	Sample for one study

(continued)

**TABLE 10.1**

**What Type of Article Is It? (Continued)**

Expert Opinion	Literature Reviews			Quantitative Studies			
	Integrative	Meta-synthesis	Meta-analysis	Descriptive	Correlational or Comparative	Experiment	Qualitative Studies
Absence of data collection	Published works	Number of articles retrieved Published and unpublished	Number of articles retrieved Published and unpublished	Data collection instruments (e.g., scales, numbers)	Data collection instruments (e.g., scales, numbers)	Data collection instruments (e.g., scales, numbers)	Description of semistructured interview or observation (e.g., "Tell me what it is like...")
Summary of ideas or topic	Summary of knowledge on topic	Synthesize findings in words	Statistics Estimate effect	Descriptive statistics such as frequencies	Inferential statistics such as correlations, regression	Inferential statistics comparing groups (e.g., t-test)	Verbatim exemplars
Absence of tables with data	Absence of table listing articles	Tables list articles	Tables list articles	Tables of numeric findings	Tables of numeric findings	Tables of numeric findings	Tables with exemplars

## CONCLUSION

In summary, undergraduate students need guidance in learning to identify the type of article they are appraising and in applying knowledge acquired in a research course to clinically focused courses. The use of the "What Type of Article Is It?" grid contributed to students' ability to accurately identify the types of articles used in the final class project for the research course and for an assignment in a gerontological nursing course.

## References

- American Association of Colleges of Nursing. (2008). *The essentials of baccalaureate education for professional nursing*. Washington, DC: Author.
- Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: National Academies Press.
- Institute of Medicine. (2012). *Best care at lower cost*. Washington, DC: National Academies Press.
- Meeker, M., Jones, J. M., & Flanagan, N. A. (2008). Teaching undergraduate nursing research from an evidence-based practice perspective. *Journal of Nursing Education, 47*(8), 376-379.
- Melnik, B., Fineout-Overholt, E., Stillwell, S., & Williamson, K. M. (2009). Igniting a spirit of inquiry: An essential foundation to evidence-based practice. *American Journal of Nursing, 109*(11), 49-52.
- Schmidt, N. A., & Brown, J. M. (2012). *Evidence-based practice for nurses: Appraisal and application of research*. Sudbury, MA: Jones & Bartlett Learning.