Assessment and Curricular Framework Development of Undergraduate Research in the School of Nursing

Flor Culpa-Bondal, PhD, RN

Debbie Greene, PhD, RN

Josie Doss, MSN, RN

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Purpose

Present results of assessment of faculty practices and student EBP competencies and the development of a curricular framework for infusing EBP in an undergraduate BSN program.

Objectives

1. Discuss results of assessment of students' EBP competencies and faculty teaching practices in undergraduate courses.
    a. Discuss student and faculty survey results
    b. Present barriers and school of nursing's resources and capacities for EBP implementation
2. Understand the curricular framework developed for EBP implementation and assessment.
    a. Discuss the development process of the EBP curricular framework
    b. Present the final framework and how it is mapped out in the undergraduate curriculum
    c. Discuss future challenges in the implementation of the framework.

Background

- No framework to guide faculty in course designs to infuse nursing research

- No clear vehicle to mentor and guide students to actively engage in research

- Part of an assessment planning grant to infuse undergraduate research in the BSN curriculum

Student Survey

- **EBP Competency Questionnaire (EBPCOQ)***
  - 25 items 5-point Likert Scale
  - Explores the EBP attitudes (13-item), skills (6-item) and knowledge (6-item) of nursing students.
- **Online survey using EBP COQ**
  - 152 accessed; 141 consented and 136 completed
  - Total EBPCOQ score M=84.56 (SD=11.22), range: 50-125
  - Total EBP attitude M=48.73(SD=6.53), range: 29-65
  - Total EBP skills M=19.97(SD=3.77), range: 9-30
  - Total EBP knowledge M=15.86(SD=3.97), range: 6-30.
- **Bivariate correlations**
  - Total EBP skills and total EBP attitude (r=.478, p=<.001)
  - Total EBP skills and total EBP knowledge (r=.528, p=<.001)
  - Total EBP attitude and total EBP knowledge (r=.27, p=<.001)

* Used with permission
Ruzafa-Martinez, M., Lopez-Iborra, L., Moreno-Casbas, T. & Madrigal-Torres, M. (2013). Development and validation of the competence in evidence based practice questionnaire (EBP-COQ) among nursing students. *BMC Medical Education*, 13:19. Available in: http://www.biomedcentral.com/1472-6920/13/19

EBP-COQ Scores by Cohorts

N=136	Total EBP COQ M (SD)	Total EBP Attitude M (SD)	Total EBP Skills M (SD)	Total EBP Knowledge M (SD)
1st n=52	83.33 (11.45)	49.13 (6.08)	19.38 (3.77)	14.81 (4.58)
2nd n=49	83.99 (10.48)	48.37 (6.61)	19.96 (3.70)	15.65 (3.40)
3rd n=12	81.25 (12.17)	46.83 (7.87)	18.00 (2.80)	16.42 (3.40)
4th n=23	90.30 (10.49)*	49.56 (7.00)	22.35 (3.40)*	18.39 (2.79)*
Total	84.56 (11.22)*	48.73 (6.53)	19.97 (3.77)*	15.86 (3.97)*

*$p = \leq 0.05$

Effects of the Research Course

	Had Research Course M(*SD*) *n*=30	No Research Course M(*SD*) *n*=106	*t*-test
Total EBP COQ Score	89.23 (11.22)	83.24 (10.92)	*t*(134)=2.64*
EBP Attitude	49.57 (7.15)	48.49 (6.36)	*t*(134)=.80
EBP Skills	21.60 (3.43)	19.51 (3.75)	*t*(134)=2.75*
EBP Knowledge	18.07 (3.10)	15.24 (3.98)	*t*(134) =3.59**

*p= $\leq$ 0.05
**p=<.001

Faculty Semi-structured Interviews

- 9 Faculty Participated in the interviews
- Results:
  - Faculty value EBP, it is identified as a core concept for the program
  - Inability to identify where EBP is introduced to student
  - Introduction of EBP occurs in the 3rd semester
  - Scattered projects during the first two semesters utilize EBP skills without focused content on EBP to inform these assignments.
- Time and curriculum were clear barriers to EBP

EBP ASSESSMENT

- Based on the 2015-2016 assessment
  - No differences in students' EBP attitude; skills and knowledge mostly differ in cohorts and between lower 4th semester students
- Unable to identify where EBP is introduced in and developed throughout the curriculum

Curricular EBP Framework Project Overview

- Curricular revisions and faculty support

- Sustainable structure for EBP to include progressive content, EBP projects, & evaluation of student EBP competencies

- Undergraduate research mentors for students interested in pursuing more in-depth involvement. Structured mentor/mentee program will include an online portal, mentor training, and mentor/mentee award recognition.

Curricular Framework

- Proposed Curricular Framework based on AACN BSN Essentials

- Progression from Novice to Intermediate to Mastery

- Semester plans for each current course (Flood, L. S., Gasiewicz, N., & Delpier, T., 2010)

  - subject to revision if course changes

Mentored Undergraduate Research & Creative Endeavors (MURACE) Implementation Grant
Figure 1: Proposed Curricular Framework

AACN BSN Essential 3: Evidence Based Practice Outcomes (AACN, 2008)	Semester 1	Semester 2	Semester 3	Semester 4
1. Explain the interrelationship among theory, practice and research.	Novice	Intermediate	Mastery	Mastery
2. Evaluate the credibility of sources of information, including but not limited to databases and Internet resources.	Novice	Intermediate	Mastery	Mastery
3. Demonstrate an understanding of the basic elements of the research process and models for applying evidence to clinical practice.		Novice	Intermediate	Mastery
4. Advocate for the protection of human subjects in the conduct of research.		Novice	Intermediate	Mastery
5. Acquire an understanding of the process for how nursing and related healthcare quality and safety measures are developed, validated and endorsed.	Novice	Intermediate	Intermediate	Mastery
6. Participate in the process of retrieval, appraisal, and synthesis of evidence in collaboration with other members of the healthcare team to improve patient outcomes.	Novice	Intermediate	Intermediate	Mastery
7. Integrate evidence, clinical judgment; inter professional perspectives, and patient preferences in planning, implementing and evaluating outcomes of care.		Novice	Intermediate	Mastery
8. Collaborate in the collection, documentation and dissemination of evidence.			Novice	Intermediate/ Mastery
9. Describe mechanisms to resolve identified practice discrepancies between identified standards and practice that may adversely impact patient outcomes.		Novice	Intermediate	Mastery

Future Challenges

- Create the mentor-mentee structure
  - Training
  - Faculty buy-in
  - Award and recognition
- Creation of a research portal
- Assessment and and re-evaluation of the framework

Summary

- Identified EBP competencies and barriers
- Presented a framework for infusing EBP in the curriculum
- Discussed future challenges in infusing EBP in the undergraduate program

Questions?

References

American Association of colleges of Nursing (2008). The essentials of baccalaureate education for professional nursing gpractice. Retrieved June 4, 2017, from http://www.aacn.nche.edu/education-resources/BaccEssentials08.pdf

Flood, L. S., Gasiewicz, N., & Delpier, T. (2010). Integrating information literacy across a BSN Curriculum. *Journal of Nursing Education, 49*(2), 1001-1-4. Doi 10.39/28/01484834-20091023-01

Ruzafa-Martinez, M., Lopez-Iborra, L., Moreno-Casbas, T. & Madrigal-Torres, M. (2013). Development and validation of the competence in evidence based practice questionnaire (EBP-COQ) among nursing students. *BMC Medical Education,* 13:19. Available in: http://www.biomedcentral.com/1472-6920/13/19