Evidence-Based Practice Knowledge and Beliefs Among Associate Degree Nursing Students: A National, Multisite Study

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Conflicts of Interest and Disclosures

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• The presenters have no real or perceived vested interests or conflicts of interest related to this presentation.
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Objectives

• Describe EBP knowledge and beliefs of Associate Degree Nursing (ADN/ASN) students

• Describe implications for academe, practice, and research
Institute of Medicine (2001) Goal
– 90% of all clinical decisions will be based on best evidence by 2020

Great focus on teaching EBP to Baccalaureate Nursing (BSN) students

– American Association of Colleges of Nursing (AACN)
  • The Essentials of Baccalaureate Education for Professional Nursing Practice (AACN, 2008)
– Quality and Safety Education for Nurses (QSEN)
  • Pre-licensure Competencies (Cronenwett et al., 2007)
Less focus on ADN/ASN Programs

– These programs also prepare nurses for the generalist role
EBP KNOWLEDGE AND BELIEFS OF ADN/ASN STUDENTS
Sample

A total of 149 subjects recruited from 5 programs in the Midwest and Northeast regions of the United States.

Subjects were:

- Female ($n=122, 81.9\%$)
- Caucasian/White ($n=124, 83.2\%$)
- English speaking ($n=142, 95.3\%$)
- Mean age=$30.3$ years ($SD=8.98$, range 19-58 years)
Study Instruments

• Objective Assessment
  – Evidence-based Practice Knowledge Assessment in Nursing (EKAN; Spurlock & Wonder, 2015)

• Subjective Assessment
  – Evidence-Based Practice Questionnaire (EBPQ; Upton & Upton, 2006)
Mean EKAN Sum Score

$M=8.77$

$SD=2.09$, Range 3-13
<table>
<thead>
<tr>
<th>Area of EBP Knowledge</th>
<th>ADN/ASN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose of Regression</td>
<td>2.7%</td>
</tr>
<tr>
<td>Sampling and Study Design</td>
<td>48.3%</td>
</tr>
<tr>
<td>Purpose of IRB</td>
<td>38.9%</td>
</tr>
<tr>
<td>Measures of Central Tendency</td>
<td>45.0%</td>
</tr>
<tr>
<td>Validity, Reliability, and Generalizability</td>
<td>56.4%</td>
</tr>
<tr>
<td>Proper Use of Pre-appraised Evidence</td>
<td>65.1%</td>
</tr>
<tr>
<td>Role of Judgment in EBP Decision Making</td>
<td>50.3%</td>
</tr>
<tr>
<td>EBP Process Steps</td>
<td>91.9%</td>
</tr>
<tr>
<td>Facilitating EBP in Practice Setting</td>
<td>16.1%</td>
</tr>
<tr>
<td>Interpreting Odds Ratios</td>
<td>45.6%</td>
</tr>
<tr>
<td>Understanding Credibility and Bias</td>
<td>39.6%</td>
</tr>
<tr>
<td>Plan-Do-Study-Act Cycle</td>
<td>45.6%</td>
</tr>
<tr>
<td>Priority of Evidence, Patient Values, &amp; Clinical Judgment in EBP Decision Making</td>
<td>20.1%</td>
</tr>
<tr>
<td>Distinguishing Causation From Correlation in Regression</td>
<td>57.7%</td>
</tr>
<tr>
<td>Ranking of Evidence Quality (Hierarchy)</td>
<td>26.2%</td>
</tr>
<tr>
<td>Strength of Measurement Approaches</td>
<td>62.4%</td>
</tr>
<tr>
<td>PICOT (Population, Intervention, Comparison, Outcome, Time) Format for Search</td>
<td>50.3%</td>
</tr>
<tr>
<td>Nurse-sensitive Quality Indicators</td>
<td>77.9%</td>
</tr>
<tr>
<td>Understanding Effect Sizes</td>
<td>23.5%</td>
</tr>
<tr>
<td>Statistical versus Clinical Significance</td>
<td>12.8%</td>
</tr>
</tbody>
</table>
Students’ Beliefs

• Knowledge/Skill
• Practice/Use
• Attitude

Growing body of evidence shows the lack of correlation between subjective and objective measures when evaluating objective constructs, such as knowledge (Baxter & Norman, 2011; Davis et al., 2006; Wonder et al., 2017; Zell & Krizan, 2014).
“I am sure I can deliver evidence-based care.”

- 61% Agree
- 24% Strongly Agree
- 13% Neither Agree/Disagree
- 1% Disagree
- 1% Strongly Disagree
Mean EBPQ Scores of ADN/ASN Students

- Knowledge/Skill: 4.91
- Attitude: 5.54
- Practice/Use: 4.77

Range 0-7
## Correlations in ADN/ASN Students

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. EKAN</td>
<td>8.77 (2.09)</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. EBPQ Knowledge</td>
<td>4.91 (0.98)</td>
<td>-0.020</td>
<td></td>
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<tr>
<td>3. EBPQ Attitudes</td>
<td>5.54 (1.13)</td>
<td>0.008</td>
<td>0.369*</td>
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<tr>
<td>4. EBPQ Practice/Use</td>
<td>4.77 (1.47)</td>
<td>0.098</td>
<td>0.680*</td>
<td>0.392*</td>
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</tr>
<tr>
<td>5. “I am sure I can deliver evidence-based care.”</td>
<td>4.06 (0.70)</td>
<td>0.037</td>
<td>0.359*</td>
<td>0.094</td>
<td>0.347*</td>
</tr>
</tbody>
</table>

* = p < 0.01
IMPLICATIONS FOR ACADEME, PRACTICE, & RESEARCH
Develop a more inclusive approach to prepare all nursing students who may work in the generalist role
• Teaching
  – Exposure effects
    • Content
    • Teaching strategies
• Curriculum
  – Progressive knowledge development
• Faculty Development
Practice

• Education
  – Programs
    • New nurses transitioning to practice
    • Experienced nurses
• Structures to support EBP
  – Mentoring
  – Support for BSN and advanced degrees
Research

• Consistent, rigorous research to elevate EBP knowledge of all nurses
  – Teaching strategies
  – Curriculum
  – Focused Education

• Results that enable usable resources for
  – Nursing Education
  – Practice
Summary

• Teach EBP across levels of nursing education
• Objectively evaluate EBP knowledge to inform decisions on:
  – teaching and curriculum in academe
  – focused education in practice
• Develop faculty
• Collaborate across levels of nursing education
References


Questions

Additional Information

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EKAN

http://nursingmeasure.org/