Nurses’ Patient Safety Competencies in Korea

Haena Jang, MSN, RN
Nam-Ju Lee, DNSc, RN
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Introduction

- “To Err is Human: Building a Safer Health System” (Institute of Medicine, 2000)
- A sustained renovation of healthcare field to enhance patient safety
- Growing Importance of healthcare profession’s patient safety competency
Introduction (con’t)

“How should nurses prepare for patient safety?”

No definitive answer in Korea
Purpose

- Investigate nurses’ patient safety competencies in Korea
Methods - samples

- 346 nurses
- Three high-level general hospitals, in Metropolitan area, South Korea
Methods - instrument

- Patient Safety Competency Self Evaluation Tool
  - Originally developed for nursing students by Lee (2012)¹
  - Self-report questionnaires (5-points Likert scale)
  - Attitude, Skill, Knowledge
  - Cronbach’s alpha .90 (Lee, 2013)² → .95 in this study

1) Lee, N. J. (2012). Development of questionnaires to measure baccalaureate nursing students’ patient safety competencies. The 11th International Congress on Nursing Informatics, Montreal, Quebec, Canada.
Methods - instrument (con’t)

- Content Validity with four experts
  - 3 team leaders in quality improvement departments
  - 1 professor in college of nursing

- Construct Validity
  - Experimental Factor Analysis
    (principal component analysis, varimax rotation)
Methods - instrument (con’t)

- Patient Safety Competency Self Evaluation Tool

<table>
<thead>
<tr>
<th>Categories</th>
<th>Original Study</th>
<th>Current Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>45 items (Cronbach’s alpha .90)</td>
<td>41 items (Cronbach’s alpha .95)</td>
</tr>
<tr>
<td>Attitude</td>
<td>18 items</td>
<td>14 items (except for no. 1, 10, 11, 12)</td>
</tr>
<tr>
<td>Skill</td>
<td>21 items</td>
<td>21 items</td>
</tr>
<tr>
<td>Knowledge</td>
<td>6 items</td>
<td>6 items</td>
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</tbody>
</table>
Methods - instrument (con’t)

- 7 factors (the results of EFA)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Factor</th>
</tr>
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<tbody>
<tr>
<td>Attitude</td>
<td>• Patient safety culture</td>
</tr>
<tr>
<td></td>
<td>• Denying response for errors</td>
</tr>
<tr>
<td></td>
<td>• a Standard system utilization &amp; voluntariness</td>
</tr>
<tr>
<td>Skill</td>
<td>• Communication &amp; coping with an error</td>
</tr>
<tr>
<td></td>
<td>• Resource utilization</td>
</tr>
<tr>
<td></td>
<td>• Practice based on guidelines</td>
</tr>
<tr>
<td>Knowledge</td>
<td>• Patient safety concepts</td>
</tr>
</tbody>
</table>
Methods – hypothesis test

- Based on Benner’s model of skill acquisition

“Nurses’ patient safety competencies would differ by their length of clinical career and working units.”
Methods - data collection & analysis

- **Pilot survey** (11 nurses), **Main survey** (346 nurses)

- **Analysis**
  - Descriptive statistics
  - t-test
  - One way ANOVA
  - Chi-squared test
Results – general characteristics (N=346)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>M (SD)</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>A</td>
<td></td>
<td>50 (14.5)</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td></td>
<td>100 (28.9)</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td></td>
<td>196 (56.6)</td>
</tr>
<tr>
<td>Sex</td>
<td>Male</td>
<td></td>
<td>6 (1.7)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td></td>
<td>340 (98.3)</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td>27.72</td>
<td>(4.98)</td>
</tr>
</tbody>
</table>
Results - general characteristics (con’t)

- Educational level

- BSN: 78.3%
- Diploma: 17.9%
- MSN: 3.5%
- DSN: 0.3%
Results - general characteristics (con’t)

- Units

- ER: 5.8%
- ICU: 21.1%
- OR: 14.5%
- Ward: 58.7%
Results - general characteristics (con’t)

- Total career: $M (SD) = 54.38 (61.26)$ months

![Pie chart showing distribution of career stages: Proficient (≥73 mos., 25.1%), Competent (37~72 mos., 19.4%), Novice (1~12 mos., 30.3%), Advanced beginner (13~36 mos., 25.1%)]
# Results - PS competency

(N=346)

<table>
<thead>
<tr>
<th>Score Type</th>
<th>Mean (SD)</th>
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<tbody>
<tr>
<td>Total</td>
<td>3.93 (0.41)</td>
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<tr>
<td>Attitude</td>
<td>4.36 (0.37)</td>
</tr>
<tr>
<td>Skill</td>
<td>3.82 (0.52)</td>
</tr>
<tr>
<td>Knowledge</td>
<td>3.30 (0.67)</td>
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</tbody>
</table>
Results - PS competency (con’t)

- Variables related to PS competency
  - Patient safety education
  - Patient safety related role
  - Length of clinical career
  - Working units
  - Hospital
Results - by total career

(N=346)

- Total: *p=.000
- Attitude: *p=.009
- Skill: *p=.000
- Knowledge: *p=.000

![Bar Chart](chart.png)
Results - by working units

<table>
<thead>
<tr>
<th></th>
<th>Ward</th>
<th>OR</th>
<th>ICU</th>
<th>ER</th>
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</thead>
<tbody>
<tr>
<td>Total</td>
<td>3.93</td>
<td>3.95</td>
<td>3.86</td>
<td>4.18</td>
</tr>
<tr>
<td>p</td>
<td>.024</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>4.35</td>
<td>4.46</td>
<td>4.31</td>
<td>4.43</td>
</tr>
<tr>
<td>p</td>
<td>.131</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skill</td>
<td>3.83</td>
<td>3.76</td>
<td>3.76</td>
<td>4.17</td>
</tr>
<tr>
<td>* p</td>
<td>.012</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>3.29</td>
<td>3.41</td>
<td>3.16</td>
<td>3.60</td>
</tr>
<tr>
<td>* p</td>
<td>.032</td>
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</table>

(N=346)
Conclusion

- Consider the length of clinical career and working units in applying interventions to improve patient safety

- Investigate the factors affecting PS competency differences among working units

- Continuously assess nurses’ patient safety competencies in accordance with clinical career progress

- Fill out the lack of competency thorough development of systematic patient safety curriculum
Thank you for listening 😊

Questions

- E-mail: haena720@snu.ac.kr