Quality and Safety Competencies in Undergraduate Nursing Education: The Student Perspective

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Objectives:
After attending this presentation the attendee will be able to:

- Describe a method for evaluating student perceptions of the extent to which the QSEN competencies are incorporated into their nursing program
- Identify gaps in student learning related to quality improvement competencies
- Discuss the feasibility of replicating this study in their academic environment

Disclosure:
In relation to this presentation, the authors have no conflict of interest that needs to be disclosed.

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Introduction

- The Institute of Medicine (IOM) reported that tens of thousands of Americans die each year as a result of medical errors (IOM, 1999 & 2001).
- These reports incited several initiatives to improve patient outcomes such as Quality and Safety Education for Nurses (QSEN).
- QSEN “addresses the challenge of preparing future nurses with the knowledge, skills, and attitudes (KSAs) necessary to continuously improve the quality and safety of the healthcare systems within which they work (Sullivan, Hirst & Cronenwett, 2009).”
Introduction

- QSEN competencies include: patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement, safety and informatics.
- The initial focus of QSEN was focused on faculty development. Nursing programs across the country were charged with integrating quality and safety content throughout the curriculum.
- Over a period of one academic year, monthly faculty workshops to facilitate integration of the QSEN competencies across the nursing curriculum were held.
Introduction

- The workshops were based on the goals of the QSEN Faculty Development Institute.
- Resources and activities were identified that could be implemented in the classroom, simulation, and clinical settings.
- A post-workshop survey of faculty revealed perceived enhanced incorporation of the six acknowledged competencies across the curriculum (Bryer & Peterson-Graziose, 2014).
- The next logical goal was to evaluate student perceptions of quality and safety content and competencies in their nursing curriculum.
Purpose

The purpose of this study was to determine student perceptions of the extent to which they acquired the knowledge, skills and attitudes associated with the QSEN competencies in their nursing program.
Design & Sample

- A descriptive, cross-sectional design was used to obtain and analyze data from a convenience sample of nursing students enrolled in one of three tracks in a baccalaureate nursing program.

- The tracks consisted of generic, advanced standing transfer (complete program in 3 years), and RN to BS completion students.

- All enrolled students who completed at least one clinical course were eligible to participate in the study.
Instrumentation

- The QSEN Student Evaluation Survey (SES) tool and a demographic questionnaire were administered during a regularly scheduled nursing theory class.
- The SES was developed in 2009 by Sullivan, Hirst, and Cronenwett to measure student perceptions of quality and safety content in nursing curricula, levels of preparedness to perform specific skills, and perceived importance of the QSEN competencies.
- The instrument yielded a reliability coefficient of 0.969 in a previous study by Mennenga, Tschetter, and Sanjaya (2015).
Instrumentation

- Survey questions are organized by knowledge, skills, and attitude scales.
- The knowledge scale includes 19 objectives and requires students to indicate the venue(s) in which content was learned: classroom, course assignments/readings, clinical experiences, lab/simulations, or not covered.
Instrumentation

- Preparedness to perform skills is measured by the 22-item skills scale, scored on a 4-point Likert-type scale. Response options include: 1 = very unprepared, 2 = somewhat unprepared, 3 = somewhat prepared, and 4 = very prepared.

- The attitude scale consists of 22 skill items. Students were asked to rate the importance of these skills as 1 = very unimportant, 2 = somewhat unimportant, 3 = somewhat important, and 4 = very important.

- The SES was found to demonstrate high reliability in this study ($\alpha = 0.942$).
## Results

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Number</th>
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<tbody>
<tr>
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<tr>
<td>RN to BS Completion Track</td>
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<td>15</td>
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</table>
Knowledge: Student Perceptions of Quality and Safety Curriculum Content

- Competency most frequently included in curriculum – Patient-Centered Care (90.4%)
- Competency least frequently included in curriculum – Quality Improvement (45.8%) and Evidence-based practice (31.5%)
- Competency reported as not covered Quality Improvement (22.2%)
- Venue where knowledge was learned:
  - Classroom – 90.4%
  - Assignments/Readings – 81.7%
  - Clinical Setting – 79.5%
  - Lab – 67.1%
Skills: Student Perception of Preparation to Perform Actions and Skills

- Higher scores indicated a perception of being better prepared in those areas.
- The overall mean of skill items was 3.22 indicating that students perceived they were somewhat prepared to very prepared to perform these skills.
- The patient-centered care competency had the overall highest mean score (3.38), and the highest overall individual item mean skill score was for “assessing the presence and extent of pain and suffering” (3.60).
- The overall lowest mean competency score was in the quality improvement category (3.01), with the overall lowest scoring skill item identified as “evaluating the effect of practice changes using quality improvement methods and measures” (2.94).
Skills: Student Perception of Preparation to Perform Actions and Skills

- Preparedness by program track (Overall mean preparedness scores)
  - Generic, Advanced Standing, RN to BS Completion
    - Most prepared in skills and actions related to Patient Centered Care
    - Least prepared in skills and actions related to Quality Improvement

- Statistically significant difference between Generic and RN to BS Completion
  - Patient-Centered Care ($p = .042$)
  - Quality Improvement ($p = .006$)
  - Informatics ($p = .020$)
  - Teamwork and Collaboration ($p = .006$)
Attitudes: Perceived Importance of Quality and Safety Competencies

- Anticipated importance of 22 skills for nurses within their first year of practice based on the QSEN competencies.
- Among all students, the mean of items measuring importance of skills was 3.71, and a range of 3.53 to 3.83 for the six individual competency categories.
- Overall, patient-centered care skills were rated most important (3.83) and skills in the quality improvement category were rated least important (3.53).
- Among the individual skill items, “assess presence and extent of pain and suffering” received the highest mean score (3.88).
- The skill item with the lowest mean score was “use quality improvement tools such as flow charts, cause/effect diagrams” (3.46).
Limitations

- Conducted at one suburban college in the northeastern United States
- Small sample size
- Students at various levels and different tracks within the program were asked to participate in this study
- Overrepresentation of advanced placement transfer students
Conclusions/Implications

- Gaps remain in student learning, particularly in the area of Quality Improvement.
- An assessment of faculty knowledge of current quality improvement practices may be necessary.
- Focusing faculty education on teaching strategies that address the QI competency would be beneficial.
- Student participation in unit based quality improvement projects may narrow the gap in knowledge, skills and attitudes regarding quality improvement.
- Faculty analysis identifying where in the curriculum quality improvement teaching takes place and where it can be added may increase student perceptions of content in this competency area.
Success in Achieving QSEN Competencies

- Curriculum
- Clinical Partners
- Faculty Development
- Student Engagement