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Senior and Graduate Nursing Students Educating Junior Learners Utilizing Mid-fidelity Simulation: Implementing and Testing of the CJMM Theoretical Framework

Sterling Roberts

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Faculty Grant Report

Project Title: Senior and Graduate Nursing Students Educating Junior Learners Utilizing Mid-fidelity Simulation: Implementing and Testing of the CJMM Theoretical Framework

Name: Sterling Roberts

Department: School of Nursing

Job Title: Assistant Professor

Awarded funding: \$5,000

I. Project Abstract (250 words or fewer)

Novice registered nurses often struggle with performing an accurate focused physical assessment due to increasing patient complexities. Research indicates, novice registered nurses have great difficulty with processing various contributing health factors and discerning what clinical situation needs immediate attention (Egilsdottir et al., 2019). Communication on multi-levels (peer-to-peer and inter-professional) is another major issue for healthcare providers. The Joint Commission identified communication errors as being one of the top root causes of sentinel events among healthcare providers (Sentinel Event Alert 58: Inadequate hand-off communication, 2017). The nursing clinical judgment research conducted by the National Council of State Boards of Nursing resulted in the creation of the Clinical Judgment Measurement Model (CJMM). The CJMM was designed to explore new ways of testing clinical judgment in the nursing profession as part of the licensure examination. Subsequently, an action model to incorporate specific concepts of the CJMM is required to close the gap between what is measured on the exam and what is taught in clinical nursing education.

The proposed grant would allow the researcher to implement and test the CJMM of teaching that would offer students' opportunities to develop physical assessment and communication skills by supporting students' learning through various simulated patient scenarios. The potential funding opportunity provided by this grant, would afford the research faculty with the necessary financial support to pay for senior level students to support the learning of junior level nursing students in the School of Nursing (SON) lab during Phase I of this three phase project.

II. Project Description

Specific Aims/Objectives (350 words or fewer)

Provide a detailed description of your work, including how/why you approached the research question(s).

The aim of this project was to test the use of the CJMM Theoretical Framework within the context of clinical setting using a patient simulator. The project had two additional aims: 1) to teach first semester nursing students how to accurately complete a focused physical shift assessment by recognizing/analyzing cues and forming hypotheses. 2). properly communicate assessment findings to healthcare professionals by correctly evaluating assessment findings.

Clinical Questions

1. For first semester nursing students, what percentage of students are able to accurately complete a focused assessment? (NRS 3140 - Focused Health Assessment Checklist)
2. For first semester nursing students, what percentage of students are able to recognize at least one abnormal assessment findings? (NRS 3140 - Focused Health Assessment Checklist)
3. For first semester nursing students, what percentage of students are able to formulate a hypothesis based on the abnormal assessment findings? (NRS 3140 - Focused Health Assessment Checklist)
4. Are first semester nursing students, able to deliver appropriate communication to graduate assistants, based on students' physical assessment findings from a simulated scenario? (Identify, Situation, Background, Assessment, and Recommendation Tool)
5. What is first semester nursing students' self-confidence after obtaining instruction from senior undergraduate and graduate nursing students through a simulated scenario to teach physical assessment skills? (National League of Nursing Survey)
6. What is first semester nursing students' satisfaction after obtaining instruction from senior undergraduate and graduate nursing students through a simulated scenario to teach physical assessment skills? (National League of Nursing Survey)

Research Methodology (250 words or fewer)

Describe your research methodology being sure to describe the materials and methods used.

The project is a descriptive research design. Senior level nursing students and graduate assistants (GA) received training by the SON faculty skills lab coordinator on how to operate the pre-programmed simulation scenarios and patient simulator, located in the GC nursing lab. NRS 3140 - Health Assessment (junior) students were taught how to complete a focused physical assessment and accurately give a verbal report using the ISBAR method by course faculty during fall 2020 semester. Junior students practiced focused assessments and ISBAR skills using the mid-fidelity simulator with senior level nursing student workers prior to their end of semester physical assessment skills check-off with a GA (practicing registered nurse) using the NRS 3140 Focused Shift Assessment Checklist. After completing the focused assessment, students were to identify assessment abnormalities and communicated their findings to the GA. The GA evaluated the student's communication skills using the ISBAR Communication Tool. The GA entered students' focused physical assessment and ISBAR rubric data into a Qualtrics. Participants anonymously completed the National League Nursing Student Satisfaction and Self-Confidence in Learning Scale (NLN -SSSCL) through a qualtrics link after the check-off is complete. Data will be analyzed using SPSS statistical analysis software. GC Institutional Review Board approval was obtained.

Impact of Project (200 words or fewer)

Please tell us what you accomplished and the impacts of the project. How did the results of your research help the advancement of the discipline, your professional development, and/or course curriculum?

The preliminary results of the project indicate that two cohorts of nursing students continuously performed above benchmark with 90% accuracy or greater in all physical assessment areas (neurological, cardiac, respiratory, gastrointestinal, genitourinary, skin, and musculoskeletal). Students were also able to accurately communicate the current patient situation, background information, assessment findings, and their recommendations for care to the graduate nursing student. Lastly, students indicated an increased level in their self-confidence and satisfaction in their learning experiences on the NLN-SSSCL. In addition, the core competencies of the GC Leadership program tie directly into the CJMM theoretical concepts of prioritizing hypotheses, generating solutions, taking actions, and evaluating outcomes. Thus, the project supported the leadership development of nursing students in the following core competencies areas; effective communication, collaboration, valuing differences, demonstration of self-reflection, managing complex problems, and gaining confidence and trust in their capabilities. Ultimately, the project was able to illustrate a new way to support and test students' assessment and communication skills through the use of senior and graduate nursing students using simulation technology.

III. Next Steps

Dissemination of Results (100 words or fewer)

Describe how you have or plan to share the results of your project, within and/or outside of the GC community.

Once completed, the primary investigator will seek publication in a peer-reviewed nursing education journals and state and/or national level presentations. Possible journals for publication submission include: Journal of Nurse Education, Nurse Education Today, Nursing Education Perspectives, Nurse Education in Practice, and Simulation in Healthcare. Project findings will also be shared with the Faculty Research Grant Committee and SON faculty.

Efforts of project leading to outside funding

Indicate outside sources from whom funding has been requested for future development or expansion of this project. If none, please describe steps you will take to request additional funding for your project.

Search for outside funding is ongoing at this time.