

Sigma's 30th International Nursing Research Congress

Integrating a Cystic Fibrosis Scenario to Enhance Pre-Licensure Educational Genomic Understanding

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Purpose: To explore the genomic component integration in a Cystic Fibrosis (CF) simulation scenario of pre-licensure baccalaureate nursing students' self-perceived ability to integrate genomics into their knowledge base of nursing and nursing care. Utilizing the concept of a simplified critical incident technique, this one question naturalistic inquiry asked participants to explore how this CF scenario enhanced their overall ability to integrate genomics into their knowledge base.

Methods: One open-ended question explored how the CF simulation scenario enhanced their overall ability to integrate genomics, which was part of a larger quantitative analysis study of students' genomic knowledge that utilized a pre/post assessment of their simulation experience. Thematic interpretation of commonalities emerged with theme clustering according to conceptual similarities. Data was managed in an objective and systematic approach leading to the construction of correlating suppositions. Initially, several clusters were identified, and these were eventually collapsed into the four expounding themes, each with three separate sub-themes.

Results: Twenty-four pre-licensure third year [junior level] nursing students shared their perspective of CF and nursing. Four super-ordinate themes emerged pertaining to genomic integration into simulation: genomics and nursing; patient education; teamwork exercise and patient-nurse relationship. Each major theme had three sub-themes identified, ranging from experience, confidence, applying patient-centered care and education, teaching and communication to group interaction, advocacy and empathy.

All the participants expressed how integration of genomics into a simulation was beneficial to their overall learning enhancement while improving their nursing skills, gaining confidence and learned how to confidentially speak about genomics in the nursing field. Participants expressed the importance of patient education which facilitates patient outcomes. Simulation provides opportunities for students to learn collaborative patient care teamwork while enhancing their communicative skills as professionals. Finally, simulation experiences can instill the concept of advocacy for their patients by obtaining the resources and needed information for the patient and their family.

Conclusions: An effective and innovative teaching strategy is the integration of a simulated hospitalized patient with Cystic Fibrosis requiring patient care and genetic education, immersing pre-licensure baccalaureate undergraduate students in a realistic clinical situation, promoting critical thinking and patient education while augmenting students perceived genomic knowledge. Adapting simulation scenarios to meet student educational outcomes requires nurse educators to be creative and innovative in their approach to the inclusion of required competencies, while ensuring optimal health outcomes.

Title:

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Keywords:

Genomic knowledge, Nursing Education and Simulation

References:

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Abstract Summary:

How a genetic component in a Cystic Fibrosis simulation scenario enhanced pre-licensure baccalaureate nursing students' self-perceived ability to integrate genomics into their knowledge base of nursing and nursing care. Four major themes emerged pertaining to genomic integration into simulation: genomics and nursing; patient education; teamwork exercise and patient-nurse relationship.

Content Outline:

Introduction:

As part of a larger study, this presentation will explore the findings of one open-ended critical incident report question that explored how a simulation scenario in Cystic Fibrosis (CF) enhanced pre-licensure

baccalaureate nursing students' self-perceived ability to integrate genomics into their knowledge base of nursing and nursing care.

A: Four super-ordinate themes emerged: genomics and nursing; patient education; teamwork exercise and patient-nurse relationship.

B: Each super-ordinate theme had 3 sub-themes identified: experience; confidence; nurse education; applying patient-centered care and education; understanding and explaining; teaching and communication; group interaction, pre & post conference experience; advocacy and empathy.

Main Points:

1. Simulation and Nursing
 1. Innovative and Creative Simulation Scenario Integrating Genomic Component
 2. Brief overview of integrating genomics into nursing curricula
2. Simulation Case Scenario with Genomic Component
 1. Discussion of Cystic Fibrosis simulation scenario
3. Findings of Student Perception
 1. Discussion of study exploring students' perception of simulation with genomic component
 2. Discussion on qualitative aspect of study's findings
4. Future integration possibilities

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Author Summary: Dr. Leighsa Sharoff is an Associate Professor and Simulation Coordinator at Hunter College in New York City. She has presented nationally and internationally on integrating concepts of holistic nursing, simulation, technology and genetics in nursing curricula, from baccalaureate to doctoral programs.