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Genetics/Genomic Nursing Competency of Korean Students Enrolled in a US-Based Post-Licensure Nursing Program

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Purpose: The increasing trend of the need for genetics/genomics care in nursing practice has potential implications for baccalaureate-prepared nurses to have the necessary genetics/genomics competencies (Camak, 2016; Jenkins, et. al., 2015; National Institutes of Health, 2017). Several organizations have provided support for incorporation of the principles of genetics/genomics care into nursing education and practice: The American Nurses Association, The American Association of Colleges of Nursing, The National Coalition for Health Professional Education in Genetics, and The International Society of Nurses in Genetics. However, research has shown that nurses in clinical practice settings have not demonstrated these essential genetics/genomics nursing competencies (Calzone et al., 2016; Camak, 2016). Although nursing education in the United States acknowledges that baccalaureate-prepared nurses have the essential competencies in genetics and genomics, researchers have not explored global implications of the impact of U.S.-based nursing education on post-licensure international nursing students' perceived self-efficacy in these competencies. This research study is conducted to determine whether Korean students taking a stand-alone genetics nursing course in a U.S.-based post-licensure baccalaureate program have higher perceived self-efficacy in genetics/genomics nursing competencies compared to those who have not taken the course.

Methods: The study is conducted using a quantitative, pre-experimental, two-group post-test only design. Study participants are Korean students enrolled in a U.S.-based post-licensure baccalaureate education program located in the Midwest. The participants will be recruited using purposive sampling. Students will be placed into two groups: those who have taken the stand-alone genetics nursing course and those who have not. Data collection will be gathered electronically and will include demographic information (gender, age, years in nursing practice, and current nursing practice areas). Perceived self-efficacy will be assessed through the online administration of the Genetics and Genomics in Nursing Practice Survey (GGNPS) (mean $\kappa = 0.41$; Calzone et al., 2016). Descriptive statistics will be used to describe the demographics of the study participants. With the assistance of the SPSS 19 statistics software, the dependent t-test ($a = 0.05$) will be used to conduct data analysis of GGNPS group means.

Results: Results will include presentation of the statistical findings from the GGNPS scores between the two groups, along with the demographic description of the study participants.

Conclusion: Findings from this study can provide insight on what teaching-learning strategies in the stand-alone nursing genetics/genomics course are effective in promoting development of genetics/genomics competencies, as well as ways to enhance/improve the stand-alone course. Furthermore, the study findings will be used to discuss nursing implications at the global level with regards to: (a) how nurse educators can enhance nursing education curricula to ensure that graduates have the essential genetics/genomics competencies expected in nursing practice and (b) how clinical nurse educators and administrators can establish models for educational programming, experience-based learning, and competency assessment that support ongoing development of genetics/genomics nursing self-efficacy in nurses from various clinical practice areas. Limitations of the study will be discussed, along with recommendations for further research studies on the topic.

Title:

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Keywords:
Genetics/Genomics Nursing Competencies, Post-Licensure Baccalaureate Education and Self- Efficacy

References:

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Abstract Summary:
Discussion of findings from a quantitative research study that explored genetics/genomics nursing competencies in post-licensure Korean students who have taken standalone genetics course in a U.S.-based RN-BSN program.

Content Outline:
I. Purpose of Study

A. Determine whether Korean students taking a stand-alone genetics nursing course in a U.S.-based post-licensure baccalaureate program have higher perceived self-efficacy in genetics/genomics nursing competencies compared to those who have not taken the course

II. Problem Background & Significance

A. Nursing competency in genetics/genomics care can impact health care delivery and quality of patient outcomes *(National Institutes of Health, 2017)*

B. Nurses are not demonstrating required competencies (Calzone et al., 2016; Camak, 2016)

C. Impact of genetics/genomics nursing competencies have not been examined from a global/international perspective, specifically in international students who are obtaining baccalaureate education in U.S.-based nursing programs

D. Findings from the study can provide nursing educators and administrators additional insight into effective strategies to develop genetics/genomics nursing competencies self-efficacy in baccalaureate-prepared nurses

III. Theoretical Framework

A. Bandura's Self-Efficacy Model (Bandura, 1977)

IV. Methodology

A. Research Design:

1. Quantitative, pre-experimental

2. Two-group post-test only

B. Setting:

1. U.S.-based online post-licensure nursing program located in the Midwest

C. Population & Sample:

1. Purposive sampling

2. Korean students enrolled in the post-licensure nursing program

D. Data Collection:

1. Online administration of the Genetics and Genomics in Nursing Practice Survey Instrument (mean κ = 0.41; Calzone et al., 2016);

2. Participant demographics: age, gender, years in nursing practice, clinical practice areas/nursing specialty

E. Data Analysis:

1. Dependent t-test of GGNPS mean scores using SPSS 19

2. Descriptive statistics of participant demographics

V. Findings & Conclusions

A. Statistical significance of GGNPS group score means (at $p = 0.05$; To be determined)

B. Describe what teaching-learning strategies in the stand-alone course were effective in promoting development of genetics/genomics competencies

C. Discuss implications of findings on enhancing/improving the stand-alone course

D. Limitations of the study

VI. Nursing Implications & Further Research Recommendations

A. Impact on nursing education curriculum

1. Post-Licensure and Pre-licensure

B. Determine what key factors influence development of self-efficacy in genetics/genomics competencies

1. Education - Learning Activities and Assessments

2. Clinical Practice - Application of Learning and Experiences

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Professional Experience: Dr. Gail Baumlein has been a nurse for over 35 years, and taught nursing for over 25 years. She was an early adopter of online instruction in nursing, and has numerous publications and presentations on the use of technology in nursing education. She holds a doctorate in education, with a focus on instructional technology and design, as well as a master's degree in nursing education. She has developed several nursing colleges and programs.
Author Summary: Dr. Gail Baumlein is well known for innovations in teaching and online instruction. With over 100 presentations on the use of technology in education, active teaching strategies, and online instruction, she has expertise in the topic of this research. She has acted as a consultant to numerous programs on program development, accreditation, and regulatory processes.