

THE EFFECT OF HAVING A HIGHER PERCENTAGE OF BETTER- EDUCATED NURSES AT A BSN-PREPARED
EDUCATIONAL LEVEL OR HIGHER IN ANY CLINICAL SETTING TO IMPROVE PATIENT OUTCOMES

A Scholarly Project

Submitted to the

Faculty of Liberty University

In partial fulfillment of

The requirements for the degree

Of Doctor of Nursing Practice

By

Olusegun Nutayi

Liberty University

Lynchburg, VA

March 2024

**THE EFFECT OF HAVING A HIGHER PERCENTAGE OF BETTER- EDUCATED NURSES AT A BSN-
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Scholarly Project Chair Approval:

Dr. Kristene Diggins, DNP, MBA, FAANP

Dedication

To my beloved parents, Mr. Michael Koku Nutayi and Mrs. Paulina Omolara Nutayi, in your loving memories I dedicate this project. To my family for their support, I dedicate this. How can I ever forget you, Kristie Kwak? Today I also dedicate this to you. To you, my Aburos, (my siblings), and to everyone who supported me along the way—that includes all my teachers right from when I started learning how to read and write. Thank you to all of you.

Acknowledgments

My special appreciation goes to you, God Almighty. I would like to acknowledge my chair, Dr. Kristene Diggins, for your mentorship and guidance in accomplishing this project. To Liberty University for making this dream of mine come true.

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Abstract

An understanding of the complexity of today's healthcare system is important for providing the best evidence-based practice care in any clinical setting. Nursing care is paramount in today's healthcare setting, including nursing education and the nursing skills, knowledge, and productivity that can enhance overall patient care. This scholarly project examines the effects of having vibrant and productive nursing care that will improve patient outcomes. It focuses on linking nursing education to better patient outcomes in any clinical setting as well as looking into the understanding of nursing staffing and the work environment associated with patient outcomes. This scholarly project intends to examine the effect of having a higher percentage of better-educated nurses at a BSN-prepared educational level or higher in any clinical setting to improve patient outcomes. The overall conclusion from the evidence-based article review is that better-educated nurses improve patient outcomes. Highly-educated nurses provide better patient care.

Keywords: nursing education, advancing nursing education, BSN completion, nursing staffing, patient-to-nurse ratio, patient outcome, nurses' workload, and highly-educated nursing workforce.

List of Abbreviations

American Nurses Credentialing Center (ANCC)

Doctor of Nursing Practice (DNP)

Institutional Review Board (IRB)

Institute of Medicine (IOM)

SECTION ONE: INTRODUCTION

The purpose of this scholarly project is to provide evidence-based research on the nursing profession's contribution to today's complex healthcare system. In 2010, the Institute of Medicine (IOM) issued a report on *The Future of Nursing: Leading Change, Advancing Health* (Institute of Medicine, 2010a) (Gerardi et al., 2018). This report informs and highlights the need for change in nursing education to meet the challenging complexity of patient care in healthcare. As part of the IOM recommendations, the nursing profession is required to increase the number of highly-educated nurses to meet the challenges of the complexity of patient care in the healthcare system. The complexity of patient care requires nursing education to transition from skill-based competencies to those that improve health policy, system improvement, research, and evidence-based practice. This report further added that BSN-prepared nurses are better prepared to manage these increasing demands of patient complexity of care. In addition, the American Nurses Credentialing Center (ANCC) recognized the importance and contribution of nursing education in its Magnet Recognition Program. This project will provide evidence-based practice research for improving patient care by utilizing better-educated nurses in all clinical settings.

This scholarly project includes an overview of the phenomena leading to the need for utilizing highly-prepared nurses in any clinical setting. It analyzes the outcomes of the research that better-prepared nurses are highly efficient in improving patient outcomes that reduce failure to rescue and mortality. The first paragraph of the scholarly project proposal introduces the problem/phenomenon that this project addresses and a statement of the purpose of the project.

Defining Concepts and Variables (Level 2 Heading)

Understanding variables is also important. In this project, the independent variable is the various nurses' educational levels, which include whether the nurse credential is a licensed practical nurse (LPN), associate registered nurse (ADN), and baccalaureate-prepared nurse (BSN), or higher. The dependent variable is patient outcomes, which include lowering of mortality and failure-to-rescue in any clinical setting.

Rationale for Conducting the Review

The 2010 Institute of Medicine (IOM) report was one of the most comprehensive types of research that linked nursing education and patient outcomes (Hewlett et al., 2020). This report provides the background for the integrative review that links nursing education to better patient outcomes in all clinical settings. In addition, the American Nurses Credentialing Center's (ANCC) goal for a magnetic recognition program for hospitals provided a foundation for this project so that better-prepared nurses can meet today's complex healthcare challenges. This means that better patient outcomes are supported by evidence-based research that highly-educated nurses provide better patient care (O'Brien et al., 2018, p. E2). Patients and families want the best possible outcome for their health. Improving the possible patient outcome requires significant improvement in highly-educated and highly-trained nurses who can provide such care in the healthcare setting. There is substantial evidence that links nurse education and patient outcomes.

Purpose and/or Review Question(s)

Purpose of the Project

The goal of this project is to evaluate nursing responsibility to deliver safe and best quality patient care that helps increase the best patient outcomes through nursing education, and the nursing workforce environment.

Problem Statement

Lowering patient mortality and failure to rescue demands an understanding of the patient-to-nurse ratio, nursing staffing, and nursing education as related to best patient outcomes.

The Clinical Question

The PICOT question utilized for this project is: Does having BSN-prepared nurses decrease patient morbidity and mortality?

Formulate Inclusion and Exclusion Criteria

A literature search was conducted, and more than 17 articles were reviewed initially. The literature search followed a comprehensive synthesis search. Eleven core articles met the synthesis criteria initially. Articles that supported higher educational levels for nurses and improving the quality of care were included. In addition, article publication of less than five years with supporting evidence-based practice met the inclusion criteria.

Conceptual Framework/Model

The IOWA model was utilized to align evidence from the core articles to focus on the evidence-based project. There are several evidence-based project tools, and the IOWA Model tool was preferred. It is a reliable tool to vet evidence that is aligned with evidence-based practice projects (Iowa Model Collaborative, 2017). Nonetheless, to better meet the challenges and complexity of patient health care needs, the nursing profession should be committed to nursing education that can meet these challenges and complexity of patient care.

SECTION TWO: LITERATURE REVIEW

A literature search was conducted, and more than 17 articles were reviewed initially. The literature search follows a comprehensive synthesis search. Eleven core articles met the synthesis criteria initially. There were five databases utilized to conduct the literature search. The databases that were used are CINAHL PLUS with Full Text, EBSCO Host, Nursing & Allied Health Database (ProQuest), Nursing Education, and PubMed Central. The literature articles' publication date range utilized was less than five years, which is from 2018 to 2023. In addition, the Melnyk levels of evidence system was used for the levels of evidence. All 11 core articles were reviewed to identify study purposes, whether the use of the evidence would support a change of practice, and sample characteristics, which include demographics, method of study, and study limitations. The idea of reviewing the core articles in this manner was to align the focus of the evidence levels from the core articles with the clinical question. The evidence from the core articles supports that better-prepared nurses can improve patient outcomes in today's complex healthcare system. In addition to the IOM report, the ANCC also recommends that hospitals hoping to earn or maintain their magnet status must provide proof of plans to increase the number of BSN-prepared nurses workforce to 80% by 2020 (McCaughey et al., 2020).

SECTION THREE: MANAGING THE COLLECTED DATA

Search Strategy

Evidence from the articles aligned with the clinical question and provided interventions that are necessary for a practice change. The first paragraph of the systemic review of most of the article reveals that recent evidence suggests that an increase in baccalaureate-educated nurses leads to a better quality of care in hospitals. In the light of evidence collected from the 11 core articles, there is substantial evidence that a higher percentage of better-educated nurses at the BSN-prepared level or higher in any clinical setting improves patient outcomes and lowers mortality rates including reducing failure to rescue. Keywords used for the search included nursing education, advancing nursing education, BSN completion, nursing staffing, patient-to-nurse ratio, patient outcome, nurses' workload, and highly-educated nursing workforce. There were five databases utilized to conduct the literature search. The databases that were used are CINAHL PLUS with Full Text, EBSCO Host, Nursing & Allied Health Database (ProQuest), Nursing Education, and PubMed Central. The literature articles' publication date range utilized was less than five years, which is from 2018 to 2023.

Hospital results increase by 10% with BSN-prepared nurses and increase hospital results with 24% greater odds of the patient surviving after discharge (Harrison, 2019). In addition, institutional ranking is connected to better patient outcomes. Therefore, earning a baccalaureate degree from a top-tier institution seems to increase the odds of nurse productivity and patient outcomes.

Critical Appraisal

The evidence is guided by the articles reviewed. Based on this evidence of the articles, the methodology, results, limitations, and conclusions of individual articles are provided in the literature matrix (Appendix A).

Summary

The evidence from the research is a recommendation that is supposed to guide best clinical practice to improve patient care in any clinical setting. Nurses are the backbone of the healthcare system; therefore, in this evolving healthcare system, nursing education, nursing staffing, nursing leadership, and more are needed to manage the complexities. For nurses to be a partner to other professionals in the healthcare system, the quality of nursing education is important to sustain patient care. Having a better-prepared nurse at a BSN level has been shown to improve patient care and reduce mortality and

mobility in any clinical setting.

METHODOLOGY

Design

The main purpose of this project is to search for evidence that correlates with the effect of having a higher percentage of better-educated nurses at BSN-prepared educational level or higher in any clinical setting associated with the patient outcome with lowering mortality and failure-to-rescue.

The stepwise utilization of the Iowa model and the understanding of the theoretical framework provided the needed approach to developing a relevant methodology. The Iowa model assisted the purpose of this project to search and develop evidence that correlates better patient outcomes to better-educated nurses. During the literature search, more than 17 pieces of literature were reviewed, and 11 core articles were selected that meet the requirements. The literature matrix provides a list of the articles which meet the criteria of evidence (see Appendix A).

Besides, Melnyk's classification system assisted in the understanding of how to consider evidence from these studies for a practice change (Melnyk & Fineout-Overholt, 2019)

Measurable Outcomes

Understanding variables is also important. In this project, the independent variable is the various nurses' educational levels, which include whether the nurse credential is a licensed practical nurse, associate registered nurse, and baccalaureate-prepared nurse or higher. Nursing education plays a key role in improving patient outcomes. Testing this outcome provided some of the key findings that higher nursing educational levels are paramount for improving patient quality of life. However, in most studies reviewed, nursing education still varies within the healthcare settings.

The dependent variable is patient outcomes which include lowering of mortality and failure-to-rescue in any clinical setting. In most of the studies reviewed, nursing education is significant in improving patient outcomes in lowering mortality and failure-to rescue in any clinical setting.

Settings

Settings involve patient care environments both in the United States and other countries. Settings of a study reviewed were reviewed in adult non-federal acute care hospitals in four states (California, Florida, New Jersey, and Pennsylvania).

The study surveys Registered Nurses (RNs) from the four states using the Penn Multi-State Nursing Care and Patient Safety Survey. It uses a large email- based study of a random sample of RNs.

Population

The project utilizes patients care settings, patients, and nurses providing care in a variety of settings. Inclusion criteria involve genders, occupations, patients of all ages, and nurses' educational levels. Some of the studies involve cohort studies, longitudinal studies, and descriptive studies.

Ethical Consideration

The Doctor of Nursing Practice (DNP) project team completed research ethics training under the Institutional Review Board (IRB) to ensure the protection of human subjects. This scholarly project was submitted to and approved by the IRB. A copy of the IRB approval is provided in Appendix C. In addition, a copy of the student's Collaborative Institutional Training Initiative (CITI) Certificate is provided in Appendix D.

SECTION FOUR: QUALITY APPRAISAL

Appraisal Tools

The literature matrix in Appendix A is an appraisal tool utilized to vet evidence from the reviewed articles. Tools used in several reviewed articles are provided in the literature matrix in Appendix A. These tools include a questionnaire, RN4CAST-US survey, Penn Multi-State Nursing Care and Patient Safety Survey, National Database of Nursing Quality Indicators (NDNQI), AHA survey, and patient-level clinical data from GWTG-R. The RN4CAST-US survey is linked to hospital data from the AHA survey and patient-level clinical data from GWTG-R. An analytic sample study of 36 hospitals in the United States, which measures hospital level of nurse education and staffing was derived from the RN4CAST-US survey and linked to hospital data from the AHA survey and patient-level clinical data from GWTG-R. The result of the RN4CAST study found that there is a 10% increase in the hospital results when nurses with a BSN were associated with 24% greater odds of surviving after discharge for patients who experience in-hospital cardiac arrest.

SECTION FIVE: DATA ANALYSIS AND SYNTHESIS

Data Analysis

The proportion of BSN-prepared nurses in acute care hospitals increased from 44% in 2004 to 57% in 2013. This is a 30% increase, thus based on this data 64% of BSN nurses working in acute care hospitals will increase by 2020. This will increase patient and organizational outcomes. The study found that there is a 10% increase in the hospital results with nurses with a BSN associated with 24% greater odds of surviving after discharge for patients who experience in-hospital cardiac arrest (Harrison, 2019). In one of the studies a convenience sample of nurses holding a baccalaureate degree or higher in an acute care hospital unit increased. The sample includes 12,914 unit-years from 2.126 units of six cohorts in 377 U.S. acute care hospitals. Hence, increasing the proportion of BSN-prepared nurses enhances the potential for improved patient outcomes and improved hospital patient experiences of hospital care.

Synthesis

The steps to the understanding of this evidence-based practice project begin with the awareness of problem statements, how to develop a clinical question, and conducting comprehensive research that is focused on the clinical question. Evidence from the articles suggests that increasing the education of nurses to at least baccalaureate-educated leads to a better quality of care in any setting.

SECTION SIX: DISCUSSION

Intervention

The intervention that is applicable for this project is increasing the percentage of BSN-prepared nurses to improve patient care in all clinical settings. Nursing faculties must improve nursing education to ensure that graduating nurses are better prepared to manage the high complexity of patient care. Nurse executives should ensure that there are mentorship programs that will serve to guide nurses in such programs that will increase recruitment, retention, appropriate staffing ratio, and more baccalaureate-prepared nurses. Nursing executives who are committed to having more baccalaureate-prepared nurses improve patient care outcomes (Nelson-Brantley, et al., 2018)

Implications for Practice

The implication for practice for adopting some of the evidence from the research articles is to better improve patient overall outcomes. Nevertheless, findings from these research studies can be translated and disseminated into healthcare practice to better improve a patient's quality of life and outcomes. The U.S. healthcare system depends on the nursing workforce to improve patient outcomes right from its minimum entry-level of education to meet the challenges and complexity of patient healthcare needs. To help meet these challenges and complexity of patient healthcare needs the nursing profession should be committed to nursing education that can meet these challenges and complexities of patient care.

The fundamental step starts by evaluating the level of nursing education which improves patient outcomes. For this purpose, there is substantial research evidence supporting that nursing education at a baccalaureate level is capable of improving patient outcomes in all clinical settings.

The implication for practice is for all stakeholders, such as nursing executives, managers of health care facilities, policymakers, nursing educators, nursing schools, faculties, nursing professional organization bodies, and the public to rally around to help improve nursing education, which will benefit patients' outcomes. There is no further advocacy, commitment, and investment needed to improve patient outcomes than those that encourage a higher level of nursing education to meet the challenges of patient complexity of care. Nurses compose the largest healthcare workforce in the world, particularly in the United States. Thus, patient quality of care and patient outcomes hang upon nursing care, which begins when a nurse decides to enroll in the school of nursing.

Dissemination

The dissemination of this project was conducted using systematically extensive external research to answer clinical questions. The understanding of this evidence-based project can be utilized to improve patient outcomes in clinical settings. This will assist nursing leaders and all stakeholders willing to adopt some of the research findings: the goal is that adopting some of these research findings will improve organizational and patient outcomes. This research is done to provide substantial evidence that creates awareness of evidence necessary to lower patient mortality and failure-to-rescue in clinical settings. Evidence suggests that the findings from this research can be applied to healthcare settings.

Nursing faculties must improve nursing education to ensure that graduating nurses are better prepared to manage the high complexity of patient care. Nurse executives should ensure that there are mentorship programs that will serve to guide nurses in such programs that will increase recruitment, retention, appropriate staffing ratio, and more baccalaureate-prepared nurses. Nursing executives who are committed to having more baccalaureate-prepared nurses improve patient care outcomes (Nelson-Brantley et al., 2018). The Penn Multi-State Nursing Care and Patient Safety Survey study shows that nurse-physician teamwork, nursing education level, and nursing staffing ratio are linked to 30-day mortality and failure-to-rescue for surgical patients. The impact of nursing education level with a higher percentage of nurses with BSNs on nurse-physician teamwork is significant in decreasing mortality and failure to rescue, contrary to a previous study that found no significant relationship between nurse-physician teamwork associated with educational preparation of nursing staff.

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O'Brien, D., Knowlton, M., & Whichello, R. (2018). Attention health care leaders: Literature review deems

baccalaureate nurses improve patient outcomes. *Nursing Education Perspectives*, 39(4), E2-E6.

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Appendix A

Evidence Table

Name: Literature Matrix

Clinical Question: Does having BSN prepared nurses decrease patient morbidity and mortality?

Article	Study	Sample	Methods	Results	Level of Evidence	Study Limitations	Would Use as Evidence to Support a Change?

<p>Article 1</p> <p>Nelson-Brantley, H. V., Ford, D. J., Miller, K. L., & Bott, M. J. (2018). Nurse executives leading change to improve critical access hospital outcomes: A literature review with research informed recommendations. <i>Online Journal of Rural Nursing & Health Care</i>, 18(1), 148–179. https://doi.org/10.14574/ojrnhc.v18i1.510</p>	<p>To synthesize challenges faced by nurse executives for leading change to achieve higher percentage of better educated nurses to achieve magnet standards in a critical access</p>	<p>A review of the literature search was conducted to understand the historical development of CAHs. Also, this review includes literature search to identify challenges faced by CAHs nurse executives</p>	<p>A non-experimental descriptive study of a review of literature conducted from 2007 to 2016</p>	<p>CAH nurse executives face significant challenges to ensuring their hospitals are providing high quality care due to several factors such as recruitment, retention, appropriate staffing ratios</p>	<p>Level 5: systematic review of descriptive & qualitative studies</p>	<p>The search was limited to articles published in English between 2007 and 2016. The sample size was only from data sources of 34 articles which included in the final analysis</p>	<p>Yes, CAH nurse executives committed to the purpose of improving staff and patient outcomes to achieve magnet status uses BSN-prepared nurses to improve</p>

	hospital (CAH)	es. The literature review uses databases to search for relevant peer reviewed studies and expert commentary published in English from 2007 to 2016. The databases utilized are CINAHL, PubMed, and the Rural Health Information Hub. A convenient sample of 34 articles were		and fewer baccalaureate-prepared nurses. Also, limited educational opportunities in rural areas possess challenge to increase number of BSN-prepared nurses.			patient outcomes.
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		synthesized.					
<p>Article 2</p> <p>Ma, C., Garrard, L., & He, J. (2018). Recent trends in baccalaureate-prepared registered nurses in U.S. acute care hospital units, 2004–2013: A longitudinal study. <i>Journal of Nursing Scholarship, 50</i>(1), 83-91. http://dx.doi.org.ezproxy.liberty.edu/10.1111/jnu.12347</p>	<p>A study to examine the trends in BSN-prepared nurses in U.S acute care hospital and to estimate the increase in the number of BSN-prepared nurses by 2020.</p>	<p>A convenient sample of nurses holding a baccalaureate degree or higher in an acute care hospitals unit. Sample includes 12, 914 unit-years from 2.126 units of six cohorts in 377 U.S. acute care hospitals .</p>	<p>An experimental longitudinal study with variable analysis using the Registered Nurse Education indicators data from 2004 to 2013 from the national database of nursing quality indicators.</p>	<p>The proportion of BSN-prepared nurses in acute care hospital increased from 44% in 2004 to 57% in 2013. This is a 30% increase, thus based on this data 64% of nurses working in acute care hospitals will increase to 64% by 2020. This increase will increase patient and organizational</p>	<p>Level 4: Cohort study</p>	<p>A significant limitation is participation of hospitals in NDNQI database is voluntary . Even though a large sample were utilized for this study, hospitals with certain characteristics may be overrepresented or underrepresented. Furthermore, hospitals affiliated to the NDNQI were used, it is</p>	<p>Yes, the strategy to increase patient quality of care is in the commitment to preparing a competent nursing workforce. This strategy is to increase the nursing workforce by advancing nurse education, particularly promoting the number of</p>

				outcome s.		important to caution that the finding from this research may not be generaliz ed to other hospitals or health care settings.	BSN- prepare d nurses. Increas e eviden ce has demon strated that higher nurse educati on is associa ted with better quality of patient care outcom e.
<p>Article 3</p> <p>Harrison, J. M., Aiken, L. H., Sloane, D. M., Carthon, J. M., Merchant, R. M., Berg, R. A., & McHugh, M. D. (2019). In hospitals with more nurses who have baccalaureate degrees, better outcomes for patients after cardiac arrest. <i>Health Affairs</i>, 38(7), 1087-1094,A1-A8. http://dx.doi.org.ezproxy.liberty.edu/10.1377/hlt.haff.2018.05064</p>	<p>The study examined hospitals with higher proportions of nurses with a BSN and lower patient-to-</p>	<p>An analytic sample study of thirty-six hospitals in United States which measures hospital level of nurse education</p>	<p>An observational study of a cross-sectional study using correlated data from three source</p>	<p>The study found that there is 10%-point increase in the hospital result with nurses with a BSN was</p>	<p>Level 5: A systematic descriptive study</p>	<p>The cross-sectional design limited establishing a causal relationship between nurse education, nurse staffing, and</p>	<p>Yes, study provides result that can enhance practice change as evidence pointed toward</p>

	<p>nurse ratios has positive patient outcomes in cardiac arrest management.</p>	<p>n and staffing were derived from the RN4CAST-US survey and linked to hospital data from the AHA survey and patient-level clinical data from GWTG-R.</p>	<p>s. The sources are from patient data from 2013 to 2018 from the American Heart Association's Get with the Guidelines-Resuscitation (GWTG-R) registry, the 2015-16 RN4CAST-US survey, and the American Hospital Association (AHA) 2015</p>	<p>associated with 24% greater odds of surviving after discharge for patient who experience in-hospital cardiac arrest.</p>		<p>cardiac arrest outcomes. Furthermore, hospitals with higher percentages of nurses with a BSN and lower patient-to-nurse ratios may have additional resources that affect cardiac arrest outcomes.</p>	<p>hospitals with higher percentages of nurses with a BSN and lower patient-to-nurse ratios may have better patient outcomes.</p>
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			Annual Survey				
<p>Article 4</p> <p>Liu, X., Zheng, J., Liu, K., Baggs, J. G., Liu, J., Wu, Y., & You, L. (2019). Associations of Nurse education level and nurse staffing with patient experiences of Hospital care: A cross sectional study in China. <i>Research in Nursing & Health</i>, 43(1), 103–113. https://doi.org/10.1002/nur.22003</p>	<p>To examine the relationships between unit nurse education level, unit nurse staffing, and patient hospital experiences of hospital care.</p>	<p>A convenient sample of 111 nurses and patients in medical and surgical units in 23 hospitals. Patients were 54.3 years old on average and ranged from 18–99 years old. Most of the patients were female. The median length of stay was 7 days. The</p>	<p>A randomized experimental study of a cross-sectional study of nurses and patients from 111 randomly sampled medical and surgical units in 23 hospitals across Guangdong province in southern China</p>	<p>The finding shows increasing proportion of BSN-prepared nurses enhances the potential for improve patient outcomes and improve hospital patient experiences of hospital care.</p>	<p>Level 2: A randomized control trial</p>	<p>Limitation includes inability to determine causality relating to cross-sectional design. The study is unable to regulate variables showing different kinds of diseases, severity of illness, or financial status of patients, that may affect patient outcomes.</p>	<p>Yes, the evidence suggests that improving proportion of nurses at the BSN-prepared level and higher is associated with potentially improving patient experiences and outcomes of hospital care. This study also supported</p>

		average years most of the nurses had worked in nursing was less than 5 years. About forty percent of the nurses had on average baccalaureate and higher degrees	in 2014				previous research findings that found significant associations between higher nurse education level and lower patients' mortality rate.
<p>Article 5</p> <p>Merlino, Missi, MHA, RN-BC,C.N.O.R., C.S.S.M. (2019). creating our future through lifelong learning: The official voice of perioperative nursing. <i>AORN Journal</i>, 110(1), 2-4. http://dx.doi.org.ezproxy.liberty.edu/10.1002/aom.12738</p>	To identify appropriate strategy personally and professionally to improve patient outcomes	A literature search following recommendation from the IOM report.	A non-experimental descriptive study	Better and higher education helps nurses to better care for the	Level 6: Single descriptive study	Fewer literature reviewed with small sample size.	Yes, provide foundation for identifying appropriate strategy personally and professionally to improv

				<p>patient.</p> <p>From the start of a formal nursing education to the pursuit of advanced degrees, continuing education helps nurses better care for their patients.</p>			<p>e patient care in clinical settings</p>
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<p>Article 6</p> <p>Lee, S. E., Lee, M. H., Peters, A. B., & Gwon, S. H. (2020). Assessment of patient safety and cultural competencies among senior</p>	<p>The study examined nursing</p>		<p>An experimental quantitative</p>	<p>Study shows that nursing education</p>	<p>Level 3: Controlled trial with no</p>	<p>The study convenient sample limits the</p>	
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<p>baccalaureate nursing students. <i>International journal of environmental research and public health</i>, 17(12), 4225. https://doi.org/10.3390/ijerph17124225</p>	<p>students' educational experiences on self-reported perceptions of patient safety and cultural competence in terms of curriculum content and learning venues.</p>		<p>study of descriptive analysis, correlational, cross-sectional</p>	<p>n and degree is associated to patient safety and quality of care. Nursing education that builds on the importance of both patient safety and cultural competency in their students can enhance patient outcomes later in the nurses' professional life.</p>	<p>randomization.</p>	<p>generalization of the findings. Although the participants were recruited from three geographically disparate universities. Due to non-randomized selection there is potential for bias in the study. The study's cross-sectional, correlational design limited the ability to draw causal inferences. Finally, all data were collected</p>	
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						using self-report questionnaires, which are inherently subjective.	
<p>Article 7</p> <p>Kang, X. L., Brom, H. M., Lasater, K. B., & McHugh, M. D. (2019). The Association of Nurse–physician teamwork and mortality in surgical patients. <i>Western Journal of Nursing Research</i>, 42(4), 245–253. https://doi.org/10.1177/0193945919856338</p>	<p>The study sought to determine whether there were associations between nurse–physician relationships and patient outcomes (30-day mortality and failure-to-rescue).</p>	<p>The study was performed in adult non-federal acute care hospitals in four states (California, Florida, New Jersey, and Pennsylvania). It surveys RNs from the four states using the Penn Multi-State</p>	<p>This is a retrospective, cross-sectional analysis study</p>	<p>The study shows that Nurse-physician teamwork, nursing education level and nursing staffing ratio are linked to 30-day mortality and failure-to rescue for surgical patients. The impact of nursing education</p>	<p>Level 5: systematic review of descriptive & qualitative studies</p>	<p>The study use of cross-sectional study design limits the study ability to make causal inferences about the nurse-physician teamwork and 30-day mortality and failure-to rescue due to use of data from 2006-2007</p>	<p>Yes, the study presented a convincing argument about the need to improve nursing education to improve patient outcomes.</p>

		<p>Nursing Care and Patient Safety Survey. It uses a large mail-based study of random sample of RNs</p>		<p>n level with higher percentage of nurses with BSNs on nurse-physician teamwork is significant to decrease mortality and failure to rescue. In contrary to a previous study that found no significant relationship between nurse-physician teamwork associate with educational preparation of</p>			
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				nursing staff.			
<p>Article 8</p> <p>Reese, C. E., Ruppel, K. J., Matulis, B., & Wendler, M. C. (2018). "I am surprised at the change in me": What is it like for nurses to be in the process of completing a baccalaureate degree in nursing? <i>The Journal of Continuing Education in Nursing, 49</i>(7), 307-314. http://dx.doi.org.ezproxy.liberty.edu/10.3928/00220124-20180613-06</p>	<p>To determine and identify reasons for returning to working ADN nurses obtaining their BSN degree.</p>	<p>A sample size of 16 RN-to-BSN students were interviewed. The interview uses a naturalistic question process to obtain an understanding of what it is like for students during an RN-to-BSN program. The average age of participants was about 40 years. The participants were 12 women and four</p>	<p>A qualitative descriptive study</p>	<p>The study found that there is some evidence about an increase in professionalism and patient quality of care when associate degree nurses (ADN) complete a BSN.</p>	<p>Level 6: A single descriptive or qualitative study</p>	<p>The sample size is too small to generalize the result of the findings in all clinical setting</p>	<p>The result from the study provides a rich description of working nurses' returning to school. It also provides some relationship for ample evidence that BSN nurses provide better patient care compared to their counterparts with an ADN degree.</p>

		men. Most are Caucasian, 75% were married and approximately two thirds were parents.					
<p>Article 9</p> <p>Ma, C., Ghazal, L., Chou, S., Ea, E., & Squires, A. (2020). Unit Utilization of Internationally Educated Nurses and Collaboration in U.S. Hospitals. <i>Nursing Economics</i>, 38(1), 33-40,50. https://go.openathens.net/redirector/liberty.edu?url=https://www.proquest.com/scholarly-journals/unit-utilization-internationally-educated-nurses/docview/2354888913/se-2</p>	<p>This study examined the relationship between unit utilization of employing internationally educated nurses (IENs) and collaboration in U.S. hospitals.</p>	<p>The study used data from NDNQI, a U.S. national data repository for comparisons of nursing care and nursing-sensitive outcomes at the patient care unit level. Two NDNQI data sets collected</p>	<p>This is a cross-sectional, observational study</p>	<p>The presence of IENs significantly influenced unit nursing characteristics, such as education attainment and unit tenure.</p>	<p>Level 5: systematic review of descriptive study</p>	<p>The findings are correlational, not causal due to the use of observational, cross-sectional design.</p>	<p>Yes, the study findings suggest that the presence of IENs can contribute to a more educated and stable nursing workforce in patient care units.</p>

		<p>in 2013 were used to address the research questions, including the registered nurse (RN) survey and hospital administrative data. The study used reports of 24,034 nurses, of which 2,126 were IENs. The average number of respondents on a unit was 31 nurses. Final analyses were conducted</p>					
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		d among 958 units from 168 acute care hospitals in the United States.					
<p>Article 10</p> <p>O'Brien, D., Knowlton, M., & Whichello, R. (2018). Attention health care leaders: Literature review deems baccalaureate nurses improve patient outcomes. <i>Nursing Education Perspectives</i>, 39(4), E2-E6. http://dx.doi.org.ezproxy.liberty.edu/10.1097/01.NEP.00000000000000303</p>	<p>To show current evidence associated between an increased ratio of BSN-prepared nursing staff and improved patient outcomes</p>	<p>A literature search that includes a five-year period following the initial release of the IOM report. The five-year span literature search was from 2011 to 2016. This is a sample of a convenient 13 studies which were utilized.</p>	<p>A descriptive study</p>	<p>The IOM recommendation call for a higher proportion of BSNs provide high level of evidence that linked higher percentage of nurses with BSN degree to improve patient outcome This current research has linked</p>	<p>Level 5: systematic review of descriptive study</p>	<p>The 13 studies provided a significant level of evidence that BSN-prepared nurses improve patient outcomes . However not all patient outcomes were measured in every study. There is a need to utilize larger study</p>	<p>Yes, the current state of the evidence reveals improved patient outcomes when nursing care is provided by BSN-educated nursing staff.</p>

				<p>data that report that a higher percentage of BSN degree can be key stakeholders in the future of complex quality patient care.</p>			
<p>Article 11 Merrell, M. A., Probst, J. C., Crouch, E., Abshire, D. A., McKinney, S. H., & Haynes, E. E. (2020). A National Survey of RN-to-BSN Programs: Are They Reaching Rural Students? <i>Journal of Nursing Education, 59</i>(10), 557-565. https://doi.org/10.3928/01484834-20200921-04</p>	<p>Increasing the representation of Bachelor of Science in Nursing (BSN)-prepared nurses to improve health and reduce costs while targeting the</p>	<p>The study population comprises 247 surveyed programs. This number represents 32.6 % of survey programs. A survey was mailed to all RN-to-BSN program directors in the United States in 2018,</p>	<p>BSN degree preparation among nurses has been associated with improved outcomes, including reduced patient morbidity, and</p>	<p>There are not enough programs to increase RN-to-BSN programs across the country, especially in rural areas. Primarily BSN programs are housed in public university settings</p>	<p>Level 6: Single descriptive study</p>	<p>This study only targeted lists of program directors that were obtained from the AACN. The strengths of this study included the national scope of the survey and the examination of</p>	<p>Yes, This study suggests efforts to increase the number of BSN-prepared nurses to improve patient outcomes, however, these</p>

	<p>impact of RN-to-BSN programs to provide an opportunity to increase the number of BSN-prepared rural nurses.</p>	<p>using a mailing list of accredited programs obtained from the AACN (N = 758). Descriptive statistics were used to report survey findings.</p>	<p>associated costs</p>	<p>(52.7%), followed by private university settings (37.1%). Other respondents only offer fewer higher degree programs such as traditional BSN programs, Master of Science in Nursing programs, and PhD/Doctor of Nursing Practice programs.</p>		<p>RN-to-BSN programs targeting of rural learners, the latter of which has not been examined in prior literature.</p>	<p>efforts are escalating, despite nursing faculty shortages</p>

*Note: Melnyk's Level of Evidence (LOE) Pyramid is required for appraising the level of evidence. This appendix is formatted in landscape orientation.

Appendix B

Kimberly Jordan - University of Iowa Hospitals and Clinics <survey-bounce@survey.uiowa.edu>

To: Nutayi, Olusegun Michael

Mon 8/21/2023 5:55 PM

You don't often get email from survey-bounce@survey.uiowa.edu. [Learn why this is important](#)

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Reference: Iowa Model Collaborative. (2017). Iowa model of evidence-based practice: Revisions and validation. *Worldviews on Evidence-Based Nursing*, 14(3), 175-182. doi:10.1111/wvn.12223

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Appendix C

Permissions/IRB/CITI Training

November 29, 2023

Olusegun Nutayi
Kris Diggins

Re: IRB Application- IRB-FY23-24-909 The effect of having a higher percentage of better-educated nurses at a BSN-prepared educational level or higher in any clinical setting to improve patient outcomes

Dear Olusegun Nutayi and Kris Diggins,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds that your study does not meet the definition of human subjects research. This means you may begin your project with the data safeguarding methods mentioned in your IRB application.

Decision: No Human Subjects Research

Explanation: Your project is not considered human subjects research because it will not involve the collection of identifiable private information from or about living individuals (45 CFR 46.102).

Please note that this decision only applies to your current application. Any modifications to your protocol must be reported to the Liberty University IRB for verification of continued nonhuman subjects research status. You may report these changes by completing a modification submission through your Cayuse IRB account.

For a PDF of your IRB letter, click on your study number in the My Studies card on your Cayuse dashboard. Next, click the Submissions bar beside the Study Details bar on the Study Details page. Finally, click Initial under Submission Type and choose the Letters tab toward the bottom of the Submission Details page.

If you have any questions about this determination or need assistance in determining whether possible modifications to your protocol would change your application's status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, PhD, CIP
Administrative Chair
Research Ethics Office

Appendix D



Completion Date 03-Sep-2023
Expiration Date 03-Sep-2026
Record ID 57702742

This is to certify that:

Olusegun Nutayi

Has completed the following Citi Program course:

Not valid for renewal of
certification through CME.

Biomedical Research - Basic/Refresher
(Curriculum Group)
Biomedical & Health Science Researchers
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

Liberty University

CITI
Collaborative Institutional Training Initiative

101 NE 3rd Avenue, Suite 320
Fort Lauderdale, FL 33301 US
www.citiprogram.org

Verify at www.citiprogram.org/verify/?wa5ce8864-1698-4a2b-82d2-dadff41f054f-57702742

