2020

Evaluating the Impact of Nurse Leader Professional Development

Celeste Rogers Romp
Walden University

Walden University

College of Health Sciences

This is to certify that the doctoral study by

Celeste Romp

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Cassandra Taylor, Committee Chairperson, Nursing Faculty
Dr. Anna Valdez, Committee Member, Nursing Faculty
Dr. Jonas Nguh, University Reviewer, Nursing Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2020

Abstract

Evaluating the Impact of Nurse Leader Professional Development

by

Celeste R. Romp

MSN, University of Louisville, 2009

BSN, University of Louisville, 2000

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

November 2020

Abstract

A health care organization's success is impacted by its leaders' knowledge, confidence, and training. A quality improvement (QI) project was undertaken by a 300-bed acute care medical center to determine the impact of providing nurse leaders with education and training in increasing the leader's knowledge and confidence in their role and in improving nursing satisfaction, catheter-associated urinary tract infection (CAUTI) rates, and fall rates. The FOCUS-PDSA QI model and the nurse manager leadership collaborative learning domain framework were used to guide the QI project and its evaluation. There were four primary sources of evidence. A nurse leader professional development pre- and postsurvey was used to assess the leader's knowledge and confidence in their role. Twenty-four leaders completed both surveys. The National Database of Nursing Quality Indicators (NDNQI) Registered Nurse (RN) Practice Environment Survey (NDNQI) measured nursing satisfaction and was analyzed pre- and postintervention. Over 53% of the nurses in 23 areas participated in the NDNQI RN surveys. CAUTI rates and fall rates were also used as sources of evidence. Descriptive statistics and *t* tests were used to analyze the findings, which showed that leaders increased their knowledge and confidence in their roles in multiple areas. Nursing satisfaction and clinically significant CAUTI and fall rate improvements were also noted. The QI project may have been a contributing factor to improvements in the leader's knowledge and confidence in their role, nursing satisfaction, CAUTI rates, and fall rates. Leader training and its contribution to improved patient outcomes and nursing satisfaction have positive social change implications through improved nursing practice.

Evaluating the Impact of Nurse Leader Professional Development

by

Celeste R. Romp

MSN, University of Louisville, 2009

BSN, University of Louisville, 2000

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

November 2020

Table of Contents

List of Tables iii

Section 1: Nature of the Project 1

Introduction 1

Problem Statement 1

Purpose 2

Nature of the Doctoral Project 3

Significance 4

Summary 6

Section 2: Background and Context 7

Introduction 7

Concepts, Models, and Theories 7

Relevance to Nursing Practice 11

Local Background and Context 17

Role of the DNP Student 18

Role of the QI Project Team 20

Summary 21

Section 3: Collection and Analysis of Evidence 22

Introduction 22

Practice-Focused Question 22

Sources of Evidence 23

Archival and Operational Data. 23

Analysis and Synthesis 25
Summary 26
Section 4: Findings and Recommendations 27
Introduction 27
Findings and Implications 27
First Measure- Nurse Leader Professional Development Survey. 28
Second Measure- NDNQI RN Survey. 42
Third Measure- CAUTI rates. 44
Fourth measure- Fall Rates. 45
Recommendations 47
Contribution of the QI Project Team 48
Strength and Limitations of the Project 49
Section 5: Dissemination Plan 51
Analysis of Self 51
Summary 52
References 54
Appendix A: Nurse Leader Professional Development Survey 61

List of Tables

Table 1. Summary Table: Knowledge and Confidence 12

Table 2. Summary Table: Patient Outcomes 14

Table 3. Summary Table: Nursing Satisfaction 16

Table 4. Years of Experience as a Leader of Nurse Managers and Associate Nurse Managers- Pre- and Postsurvey 29

Table 5. Years of Experience in their Current Role of Nurse Managers and Associate Nurse Managers- Pre- and Postsurvey 30

Table 6. Leadership Professional Development Participation 31

Table 7. Mean Scores and T-test results for Leadership Professional Development Knowledge, Confidence, and Skills 35

Table 8. Mean and Paired *t* test for Leadership Professional Development Knowledge, Confidence, and Skills of Nurse Manager and Associate Nurse Managers Who Completed Both the Pre- and Postsurvey 40

Table 9. NDNQI RN Survey- Nursing Satisfaction; n=23 44

Table 10. CAUTI Rates per 1,000 Catheter Days Pre- and Postproject for Inpatient Areas 45

Table 11. Fall Rates Per 1,000 Patient Days Pre- and Postproject for Inpatient Areas 46

Section 1: Nature of the Project

Introduction

For healthcare organizations to be successful, trained, competent leaders are essential. By providing nurse leaders with training on their role and increasing their knowledge and confidence, the literature suggests that leaders will be more impactful in making improvements in unit-related outcomes (Adams, Djukic, Gregas, & Fryer, 2018; Cummings et al., 2010: Wong, Cummings, & Ducharme, 2013). The quality improvement (QI) evaluation project site was a metropolitan medical center whose leaders identified significant gaps in the nurse leader's knowledge and confidence and chose it as a QI focus. A survey of nurse leaders was completed at the start of the QI project and was repeated after resources were made available and educational interventions have been applied. Unit-based measures such as catheter-associated urinary tract infections (CAUTI), fall rates, and nursing satisfaction was also tracked. This doctoral evaluation project contributes to positive social change and the mission of Walden University by evaluating the level of success and impact of this QI project designed to improve a nurse leader's ability to effectively lead and impact unit-related nursing and patient outcomes.

Problem Statement

Several concerns had been identified or expressed related to leadership development in the QI project's facility. These concerns included a large number of new, untrained leaders recently being hired, existing leaders seeming to lack competence in essential leadership skills and an understanding of evidence-based practice

implementations, and leaders who were reluctant to attempt leadership certifications due to lack of confidence in their knowledge-base. When leaders lack confidence and competence, it can impact patient and nursing outcomes (Adams et al., 2018; Wong et al., 2013). In the QI project's facility, patient outcomes and nurse satisfaction were below the national average on certain measures. Providing leaders with the tools to be successful has been shown to positively impact these patient and nurse outcomes and can improve the overall healthcare environment (Adams et al., 2018; Cummings et al., 2010; Wong et al., 2013). This doctoral evaluation project is intended to evaluate the impact the leadership development QI project had on improving nursing practice at this facility.

Purpose

The QI project was proposed and designed by a team of leaders in the QI project's organization to help address the identified gaps related to leadership training and confidence as well as patient outcomes and nursing outcomes. The QI team identified the following purposes or aims of the QI project:

- Increase the opportunities for and participation in professional development opportunities for nurse leaders.
- Increase leaders' knowledge about and confidence in their roles.
- Ultimately improve unit-based patient outcomes and nurse satisfaction.

The population, intervention, comparison, and outcome (PICO) formatted clinical practice question for this QI project was as follows: In an acute care hospital, does providing nurse leaders with education and training on their role and effective leadership styles increase the leader's knowledge about and confidence in their roles as well as

improve unit-based patient outcomes and nurse satisfaction? The purpose of the doctoral evaluation project was to evaluate the PICO question to determine if providing leaders education and training can increase a leader's knowledge and confidence in their role, improve unit-based outcomes, and nurse satisfaction. This evaluation provides the measurement to see if the educational interventions provided to leaders contribute to decreasing their gap in knowledge and practice related to their roles.

Nature of the Doctoral Project

The QI project team used the QI model: FOCUS-PDSA to help guide the QI project. The acronym is: F= Find a problem, O= Organize a team, C= Clarify the problem, U= Understand a problem, S= Select an intervention, P= Plan, D= Do, S= Study, A= Act (American College of Cardiology, 2013). However, this Doctor of Nursing Practice (DNP) doctoral project focused on the evaluation of this existing QI project using the following data:

A pre- and postsurvey of nurse managers and assistant nurse managers was used to determine their beginning and ending level of knowledge, confidence, and skills related to nursing leadership competencies, as well as their level of participation in professional development activities. The survey asked questions rated on a strongly agree to strongly disagree 5-point Likert scale that were based upon the American Organization of Nurse Executives (AONE) Nurse Manager Competencies (AONE, 2015). Another area of the survey identified their level of participation in professional development activities, such as advancing their degree, leadership certification, memberships in professional nursing organizations, and subscriptions to nursing journals. The last portion

of the survey asked, in open response sections, what topics they would like more information on, any barriers they have to professional development, and suggestions for orientation development for new leaders (see Appendix A).

In addition, based on the literature review, the senior leaders were also interested in if this QI project may be a contributing factor for improved CAUTI rates, fall rates, and nursing satisfaction through several questions on the annual Nursing Database of Nursing Quality Indicators (NDNQI) Registered Nurse (RN) Survey. All these patient and nurse-sensitive measures were already collected, readily available, and reported widely in summarized format by the hospital for the purpose of QI. Although multiple processes were in place and were being developed to improve these measures, the senior leaders and QI project team were interested in knowing if improvements in these measures coincide with or were noted after the leaders were provided with the QI project interventions that were primarily educational in nature. Descriptive statistics were used to describe the difference between the pre- and post-QI project results, and *t* tests were also used, where appropriate. These analyses help determine if the aims of the QI project were met and if the gaps in the leaders' knowledge and confidence were lessened.

Significance

There were multiple stakeholders in this evaluation of this organization's QI project. The first stakeholder was the nurse leaders themselves. These nurse leaders were asked to participate in training designed to increase their knowledge and confidence in their role. They were interested in knowing if the time spent in the training was effective in meeting those goals. Another stakeholder group was the nurses for whom these leaders

were responsible. Providing training to a leader should help their leaders obtain skills and knowledge to more appropriately manage their nursing teams and improve their nurse's satisfaction. A third group of stakeholders was the organization's patients. If the training provided to leaders improves patient outcomes, patients benefit from the QI project. Lastly, the final stakeholder was the organization itself. Patient outcomes are used in the calculation of value-based payments to the organization. If this QI project meets the project aims, the QI project could provide financial benefits to the organization from improved outcomes and, subsequently, through increased value-based payments to the organization.

The evaluation of this QI project also contributes to nursing practice in acute care settings, providing the rationale for implementing the QI project in other, similar practice areas, and identifying the potential impact the QI project had in making positive social change. Many times, in acute care settings, leaders can get bogged down in being task-oriented and forget about the more important roles that a leader has in directing his or her staff in a positive manner (Cummings et al., 2010). If effective, this QI project can help improve the nursing practice of both the leaders and the staff that they manage. It is also reasonable to consider that providing training to leaders in other departments in an acute care organization may have a similar effect. The transferability of the QI project and its doctoral evaluation to other departments in the hospital would be feasible and should be considered. This doctoral evaluation could also help identify if the organization's QI project made a positive social change. If the QI project were effective, the evaluation could provide the internally obtained rationale for financially supporting additional

leadership development opportunities. Continuing to provide educational opportunities for leaders would be a change in practice for this organization and could potentially provide the indicated positive social changes for all the stakeholders.

Summary

This section has introduced the doctoral evaluation project. The evaluation project was designed to determine if providing educational opportunities for nurse leaders increased the leaders' knowledge and confidence in their role and subsequently coincides with improved patient outcomes. Section 2 will provide additional background information on the organization where the evaluation was completed, theoretical influences related to the evaluation, and the roles of the DNP student.

Section 2: Background and Context

Introduction

The site leaders for the organization that was the focus for this QI project evaluation identified significant gaps in leadership knowledge, confidence, and practice that were felt to be impacting patient outcomes and nursing satisfaction. They proposed a practice-focused PICO-formatted clinical question: In an acute care hospital, does providing nurse leaders with education and training on their role and effective leadership styles increase the leader's knowledge about and confidence in their roles as well as improve unit-based patient outcomes and nurse satisfaction? The purpose of this doctoral evaluation project was to evaluate the PICO question to determine if providing leaders education and training can increase a leader's knowledge and confidence in their role, improve unit-based outcomes, and nurse satisfaction. In this section, I will discuss the applicable models and frameworks used in the evaluation, the evaluation project's relevance to nursing practice, the organizational context for the evaluation project, and the roles of the DNP student.

Concepts, Models, and Theories

There are two primary models or frameworks that were used to inform this doctoral evaluation project: the FOCUS-PDSA QI model and the nurse manager leadership collaborative learning domain framework. The FOCUS-PDSA model is an extension of the PDSA (Plan-Do-Study-Act) model that is commonly used as a model of QI projects. Following this model helps to ensure that essential steps of QI projects are not forgotten or overlooked (American College of Cardiology, 2013). It provided a guide,

not only for the development of the QI project itself by the organization, but also provided the rationale for the doctoral project QI evaluation. The "study" or evaluation stage of the model was the focus of this doctoral project. The primary purpose of the study phase of the model was to analyze the data, compare them to the objectives of the QI project, and to summarize the implications for practice (American College of Cardiology, 2013). The information gained in this evaluation phase of the model helped determine if the intervention was effective and should be continued, changed, or discontinued (American College of Cardiology, 2013).

The FOCUS-PDSA was developed in stages. The PDSA cycle evolved over time through the work of Deming (Moen, 2009; The W. Edwards Deming Institute, 2019a). It started as the Shewhart Cycle in 1939, which was based on the scientific method. It then transitioned into the Deming Wheel in the1950s and then became the PDSA cycle between 1986 to 1993 (Moen, 2009). Deming emphasized the circular pattern of the process as important for continuous QI (Moen, 2009). The PDSA cycle is also sometimes called a PDCA cycle, with the third phase being a "check" phase. This appears to have originated from a Japanese version of the cycle, but Deming emphasized that S for Study was a more appropriate translation of the phase in the English language as "check" means "to hold back" (Moen, 2009; Moen & Norman, 2010). Although the PDSA portion of the model was initially developed for use in the automobile industry, the FOCUS portion of the model was added by the healthcare industry (McLaughlin, Johnson, & Sollecito, 2012; the W. Edward Deming Institute, 2019b). The Hospital Corporation of America added the FOCUS to the PDSA portion of the model in the late 1980s (McLaughlin et al.,

2012). The FOCUS helps to identify the process improvement topic, understand it better, and decide on a solution to trial before implementing the PDSA cycle.

A framework was also an important part of both the QI and the evaluation project. The nurse manager leadership collaborative learning domain framework was developed through a collaboration with the American Association of Critical-Care Nurses (AACN), the American Organization for Nursing Leadership (AONL; previously known as the American Organization of Nurse Executives [AONE]), and the Association of peri-Operative Registered Nurses (AORN; American Organization of Nurse Executives, 2015). In 2004, these organizations formed the Nurse Manager Leadership Collaborative "to identify and organize the skills required to perform the job of the nurse manager" (American Organization of Nurse Executives, 2015, p. 3). This work was continued in 2006 when AACN and AONL came together to form the Nurse Manager Leadership Partnership. It is from this work that the Nurse Manager Leadership Collaborative Learning Domain Framework was developed (American Organization of Nurse Executives, 2015). The framework has three smaller overlapping circles inside one larger circle titled the Nurse Manager. The first of the circles is titled "The Science: Managing the Business" and entails seven primary focuses: financial management, human resource management, performance improvement, foundational thinking skills, technology, strategic management, and clinical practice knowledge (American Organization of Nurse Executives, 2015). The second circle is titled "The Art: Leading the People" and involves four items: human resource leadership skills, relationship management and influencing behaviors, diversity, and shared decision making (American Organization of Nurse

Executives, 2015). The last circle is titled “The Leader Within: Creating the Leader in Yourself” and has four more primary skills in which to learn: personal and professional accountability, career planning, personal journey disciplines, and optimizing the leader within (American Organization of Nurse Executives, 2015).

The nurse manager learning domain framework was used to develop the list of nurse manager competencies (American Organization of Nurse Executives, 2015). These competencies are designed to identify the knowledge, skills, and abilities that are needed to become a successful leader (American Organization of Nurse Executives, 2015). These competencies matched the purpose of this organization’s QI project so were ideal for use for this QI project. Regular job analysis/role delineation studies established the reliability and validity of the competencies and was last completed in 2014 with the National Practice Analysis Study of the Nurse Manager and Leader (American Organization of Nurse Executives, 2015). This framework and these competencies have also been used in other projects and studies designed to analyze the impact of nurse manager training (Baxter & Warshawsky, 2014; Deyo, Swartwout, & Drenkard, 2017; Fennimore & Wolf, 2017; Ponti, 2009; Sherman & Pross, 2010; Titzer, Phillips, Tooley, Hall, & Shirey, 2013). These competencies, developed from the nurse manager learning domain framework, were the focus of the survey that was used before and after the QI project interventions and guided the doctoral project’s evaluation of the leaders’ perceptions of their knowledge and confidence.

Relevance to Nursing Practice

The existing literature on the development of leaders and leadership styles provides guidance to the overall QI project and indicates how others have addressed the leadership gap. In 2008, two studies supported that education supported leader improvements. Sutherland and Dodd's (2008) study was a qualitative analysis that showed that clinical leadership program using action and reflective learning strategies increased the knowledge and confidence of its participants. A study by Graham and Jack (2008) demonstrated that leader knowledge could be improved by an educational program. In 2010, a systematic review was undertaken by Cummings et al. (2010) which showed, among other conclusions, that leadership can be developed through specific educational activities and by modeling and practicing leadership competencies. Two more studies by Mackoff, Glassman, and Budin (2013) and Baxter and Warshawsky (2014) showed that providing leaders with training provided positive results in leader competence. Lastly, Flatekval and Corbo (2019) found a highly positive relationship between leadership development and improved self-reported competency levels. Table 1 summarizes the studies that indicate that providing leaders with education can improve their knowledge and confidence in their role.

Table 1

Summary Table: Knowledge and Confidence

Citation	Research Method	Main Finding	Level of Evidence
Cummings et al., 2010	Systematic review of non-randomized studies	Leadership can be developed through specific educational activities, and by modeling and practicing leadership competencies.	V
Mackoff et al., 2013	1-year participatory action research study, qualitative and quantitative analysis	Analysis of a Leadership Laboratory training program that included classroom sessions, peer-to-peer coaching, and the lived experiences of leaders found consistent and significantly positive results.	VI
Weston et al., 2008	Descriptive, pre-post design	Analysis of a leadership education program demonstrated improvements in all areas of competency, with negotiating, managing conflict, and dealing with difficult people being the areas of greatest growth.	VI
Sutherland & Dodd, 2008	Qualitative	Clinical leadership program using action and reflective learning strategies increased the knowledge and confidence of its participants.	VI
Flatekval & Corbo, 2019	Descriptive, pre-post design	Study found a highly positive relationship between leadership development and improved self-reported competency levels.	VI
Graham & Jack, 2008	Descriptive, pre-post design	The leadership educational program showed improvement in leader knowledge in the qualitative open-response areas of the analysis.	VI
Baxter, & Warshawsky 2014	Case study analysis	Leadership coaching improves nurse leader competence.	VI
Vitello-Cicciu, Glass, Weatherford, Seymour-Route, & Gemme, 2014	Qualitative	Leadership program provided increased self-awareness and knowledge and abilities with leader competencies.	VI

Note: Studies and review were analyzed using the scale and abbreviated methods noted by Fineout-Overholt, Melnyk, Stillwell, and Williamson (2010a; 2010b).

A relationship has also been found between the quality of a nurse leader and their ability to impact patient outcomes. Squires, Tourangeau, Laschinger, and Doran (2010) found that the quality of the leader-nurse relationship affected the quality of the work environment and safety climate. In 2011, Laschinger, Wong, Grau, Read, and Stam showed that leadership practices of senior nurses empower middle- and first-line nurse managers leading to increased perceptions of quality care. A systematic review was completed by Wong et al. (2013) and demonstrated a positive relationship between leadership and patient outcomes, including hospital-acquired infections. Bogaert et al. (2014) found that nurse management at the unit level was a predictor of patient safety and quality variables, and in 2015, Merrill found that a transformational leadership style was a contributor to a safety climate. Two other studies in 2018 showed similar results. Boamah, Laschinger, Wong, and Clarke (2018) found that positive leadership behaviors decreases nurse-assessed frequency of adverse patient outcomes, including falls and hospital-acquired infections, and Adams, et al. (2018) showed that their CAUTI rate was negatively and significantly associated with leadership characteristics of authority, access to resources, and expectations of the staff. A leader's expectations of staff also negatively correlated with falls with injury rate (Adams et al., 2018). Table 2 summarizes these studies and that leaders can impact patient outcomes such as those evaluated in this project (patient falls and CAUTI rates).

Table 2

Summary Table: Patient Outcomes

Citation	Research Method	Main Finding	Level of Evidence
Wong et al., 2013	Systematic review of non-randomized studies	Demonstrated a positive relationship between leadership and patient outcomes, including hospital-acquired infections.	V
Boamah et al., 2018	Descriptive survey	Leadership behaviors decreases nurse-assessed frequency of adverse patient outcomes, including falls and hospital-acquired infections.	VI
Laschinger et al., 2011	Descriptive survey	Leadership practices of senior nurses empower middle- and first-line nurse managers, leading to increased perceptions of quality care.	VI
Adams et al., 2018	Cross-sectional correlational survey	CAUTI rate was negatively and significantly associated with leadership characteristics of authority, access to resources, and expectations of the staff. A leader's expectations of staff also negatively correlated with falls with injury rate.	VI
Merrill, 2015	Descriptive correlational survey	transformational leadership style was identified as a contributor to safety climate,	VI
Bogaert et al., 2014	Cross-sectional survey	Nurse management at the unit level is a predictor of patient safety and quality variables.	VI
Squires et al., 2010	Cross-sectional survey	The quality of the leader–nurse relationship affected the quality of the work environment and safety climate.	VI

Note: Studies and review were analyzed using the scale and abbreviated methods noted by Fineout-Overholt et al. (2010a; 2010b).

Lastly, the quality of nursing leadership has also been associated with increased nursing satisfaction. Failla and Stichler (2008) found a positive correlation between a nurse manager's transformational leadership style and nurse job satisfaction. The systematic review by Cummings et al. (2010) also found that leadership that was focused on people and relationships were associated with higher nurse job satisfaction. Since then, several other studies continue to support their conclusions. Negussie and Demissie (2013) identified that a transformational leadership style was statistically significant and correlated with both intrinsic and extrinsic nursing job satisfaction. In addition, Trybou, De Pourcq, Paeshuyse, and Gemmel (2014) demonstrated that the quality of the leader-member exchange was strongly related to job satisfaction, and Roberts-Turner et al. (2014) showed that leadership characteristics of autonomy and distributive justice had significant positive effects on RN job satisfaction. Also, Bormann and Abrahamson's (2010) study showed that the leadership of nurse managers was positively related to staff nurse overall job satisfaction. In 2016, Asamani, Naab, and Ofei found that supportive, participative, and achievement-oriented leadership style of the nurse managers was positively correlated with the staff job satisfaction. Finally, Boamah et al. (2018) study found that positive leadership behaviors increased nurses' job satisfaction. Table 3 summarizes the literature examples demonstrating that leadership quality improvements are associated with increases in satisfaction, making satisfaction an appropriate method to measure the original QI intervention's effectiveness.

Table 3

Summary Table: Nursing Satisfaction

Citation	Research Method	Main Finding	Level of Evidence
Cummings et al., 2010	Systematic Review of non-randomized studies.	Leadership focused on people and relationships were associated with higher nurse job satisfaction.	V
Boamah et al., 2018	Descriptive survey	Positive leadership behaviors increased nurses' job satisfaction.	VI
Bormann & Abrahamson, 2014	Descriptive correlational survey	Leadership of nurse managers was positively related to staff nurse overall job satisfaction.	VI
Asamani et al., 2016	Cross-sectional survey	Supportive, participative, and achievement-oriented leadership style of the nurse managers was positively correlated with the staff job satisfaction.	VI
Roberts-Turner et al., 2014	Descriptive survey	Leadership characteristics of autonomy and distributive justice had significant positive effects on RN job satisfaction.	VI
Trybou et al., 2014	Cross-sectional survey	The quality of the leader-member exchange was strongly related to job satisfaction.	VI
Negussie & Demissie, 2013	Descriptive correlational survey	Transformational leadership style was statistically significant and correlated with both intrinsic and extrinsic job satisfaction.	VI
Failla & Stichler, 2008	Descriptive correlational survey	A positive correlation was found between nurse manager transformational leadership style and nurse job satisfaction.	VI

Note: Studies and review were analyzed using the scale and abbreviated methods noted by Fineout-Overholt et al. (2010a; 2010b).

As researchers studied nurse leaders, the relationship between the leader education, the quality of a leader, patient outcomes, and nurse satisfaction was discovered. Each area has a systematic review and multiple studies to provide sufficient evidence to implement the changes in the project organization. However, data from one's own organization often provides strong support for continuing with project changes. The leadership education at the project organization would not only fill the existing gap related to insufficient leadership training, but the evaluation of the project would provide additional backing to support continued training for nurse leaders in the project's organization.

Local Background and Context

The setting for this QI evaluation was a 300-bed acute care metropolitan medical center. Several concerns had been identified or expressed related to leadership development in the QI project's facility. As external, experienced nurse leaders were hired, their experience with leadership orientation and development at other organizations identified a potential gap in the training and professional development opportunities provided to the leaders in the acute care organization. A recent change in unit leadership design also increased the hiring of multiple Assistant Nurse Managers (ANM) into that role within a short period of time, and their leaders verbalized concern with the lack of a structured program for the ANMs orientation. Each unit had its own ANM orientation plan that varied tremendously in its length and quality. Leaders from the quality department also felt there was a knowledge gap with existing unit-based nurse managers and ANMs as it related to leadership competencies (such as change management and

performance improvement) due to the unit-based leader's lack of ability to successfully implement change designed to improve outcomes. Also, Directors of Nursing expressed concerns with the unit-based leader's abilities to effectively implement evidence-based practices (EBP) in their area, noting a lack of success in implement evidence-based practice guidelines in their areas. Lastly, even though leadership certification had been encouraged, some leaders delayed testing as they indicated that they felt ill-prepared to be successful on the exams. All of these factors identified issues with the training and confidence of the nurse leaders at the facility.

This organization was also below the national average for similar organizations for CAUTI, fall rates, and direct care nurses' perceived nurse manager ability, leadership, and support of nurses per the NDNQI database and RN Survey. These factors drove the interest in the QI project and in the desire to evaluate its impact.

Role of the DNP Student

I was an employee of the facility for which the QI project took place and where the doctoral project evaluation was completed. I was also involved in the QI project since its inception. When I was looking for a DNP project, the leadership of the facility were describing interventions that they intended to put into place to improve on their perceived gaps in leadership knowledge and confidence. The analysis of the success of these interventions was suggested as a DNP project for me. A pre-survey was designed by the QI project team. An Institutional Review Board (IRB) QI protocol was also written and submitted by the QI project team members for IRB consideration. The QI project was confirmed to not be research and to not need further review by the IRB. One of my roles

on the QI project team was to set the survey up in the Survey Monkey platform to be distributed to all leaders in a HealthStream e-learning module. After survey closure, I helped to obtain resources for the leaders to fill in any identified gaps in knowledge and skills. Leaders were sent e-mails to sign up for classes such as New Leader's Pathway or a certified nurse leader manager certification review courses and were sent handouts that would be helpful, such as one with finance tips for nurse leaders and another with a just culture algorithm for performance management. I also made them aware of other continuing education e-learning courses that were available to meet their needs. Leaders were provided access to, information about, and an introductory course about the Advisory Board. The Advisory Board a database of best practices and tools that serves to arm nurse leaders with market insights and guidance to help them achieve their organizational and leadership goals. It has a plethora of leadership information that can aid in developing their skill sets. I forwarded several tools available from the Advisory Board to the leaders, including one on Helpful Hints for Delivering Effective Feedback. I also provided leaders with information on professional nursing organizations and leadership journals. Lastly, I researched, created, and validated an educational activity on budgets and productivity for unit-based leaders. In addition, the QI project team scheduled in-person leadership training opportunities for the nurse managers that contained information intended to fill the identified gaps (such as change management, evidence-based practice implementations, leader rounding, and finance). These trainings were scheduled bi-monthly during the intervention period. I sent out the post-QI project survey to the leaders to assess the impact of the interventions and then compared and

evaluated pre- and post-QI project survey responses, as well as analyzed if there were any concurrent changes in patient satisfaction or nursing satisfaction for which the QI project interventions may have been a contributing factor.

I considered multiple QI projects in various stages in the organization to determine one that would best fit the needs of the doctoral evaluation project. This nursing leadership development QI project was determined to be a good fit as it did not require a rapid turnaround to analyze the data and would provide additional knowledge about leadership roles that was felt to be a gap in my skill set.

From a bias perspective, having been involved in the QI project since its inception, I could want and hope to see positive results. However, any responsible, accountable, doctoral-prepared nurse should be able to put potential biases aside and analyze and report QI project results objectively and ethically. This would be a personal and professional expectation of mine for this doctoral project evaluation. The project evaluation was also shared with the organization's leaders and stakeholders.

Role of the QI Project Team

There was a small group of team members involved in the development and implementation of the QI project, but the evaluation phase of the project was completed by me. My direct supervisor, the director of nursing, and the chief nursing officer at the time gave permission and approval for me to have access to the required data and to use it for my doctoral project. These data were easily accessed and were reviewed after given approval by Walden University to do so. The results of the QI project were also shared with senior leaders as well as the many nurse managers and associate nurse managers

(ANM) who were participants in the QI project themselves. This sharing is essential for understanding successes, opportunities, and next steps in the QI process.

Summary

This section helped to define the facility's gap in practice that led to the need for both the QI and evaluation projects, my role, and the QI project team. Section three more thoroughly describes the date and its collection and the methods used to analyze the data for the project evaluation.

Section 3: Collection and Analysis of Evidence

Introduction

Nursing leaders in the organization felt that there were significant gaps in leadership knowledge, confidence, and practice, so interventions were implemented to help alleviate those gaps. The purpose of this doctoral project was to evaluate this QI project to determine if providing leaders education and training can increase a leader's knowledge and confidence in their role and improve unit-based outcomes and nurse satisfaction. This next section discusses the data that were used to determine the results of the organizational QI project, including what specific data were used, how they were collected, how they were protected, and how they were analyzed.

Practice-Focused Question

The QI project was designed to alleviate gaps in practice that were felt to exist in leadership training and confidence. The QI project's clinical question was: *In an acute care hospital, does providing nurse leaders with education and training on their role and effective leadership styles increase the leader's knowledge about and confidence in their roles as well as improve unit-based patient outcomes and nurse satisfaction*? The purpose of the QI project was to increase the opportunities for and participation in professional development opportunities for nurse leaders, to develop and provide a template for nurse leader orientation, to increase leader's knowledge about and confidence in their roles, and to ultimately improve unit-based patient outcomes and nurse satisfaction. The doctoral evaluation determined the impact the project interventions had on these project aims.

Sources of Evidence

There were several sources of evidence that were analyzed in this QI project evaluation. These sources of evidence were approved through the Walden University IRB prior to obtaining access to and analyzing the data (IRB# 04-03-20-0967050). The first source of evidence is the pre- and post-QI project nursing leadership development survey that was provided to the leaders to determine their knowledge and confidence with leadership skills. CAUTI rates and fall rates were analyzed as well to determine the project's potential impact on these patient outcomes. Satisfaction was reviewed, too, both for nursing satisfaction through several questions on the annual NDNQI RN Survey. All data were collected by the facility and were provided by the facility in an aggregated, anonymous form. I also ensured that the data provided were kept secure in an encrypted file on a password-protected computer. The data were not stored in a cloud-type storage area, and if printed copies were made, they were stored in a locked file when not in use and destroyed when no longer needed. Although data encryption for transportation was discussed (e-mail, portable storage device, etc.), it was not needed since it was not transported during the project. Each of the evidence sources was kept secure and directly related to the practice-focused questions and QI project aims.

Archival and Operational Data.

The first source of data for the doctoral project evaluation was the Nurse Leader Professional Development pre- and postsurvey (see Appendix A). This survey was developed by the QI project team, sent to nurse managers and ANMs via an e-learning platform, and collected through the secure Survey Monkey platform. It included 14

demographic-type questions related to role, degrees earned, years of experience, academic and certification plans, memberships in professional organizations, journal subscriptions, and participation in professional development opportunities. These questions were either a multiple-choice or fill-in-the-blank type of question. The survey then had two sections of Likert scale questions that were rated on a one to five scale from strongly disagree to strongly agree. These questions were based upon the AONE Nurse Manager Competencies (AONE, 2015). The last portion of the survey asked, in open response sections, what topics they would like more information on, any barriers they have to professional development and suggestions for orientation development for new. The QI project team reviewed and confirmed applicability of the survey questions to project aims and for impactability by project interventions prior to its use. Although the survey itself was not anonymous so that individualized educational opportunities could be provided by the organization's QI project team, for the purpose of the doctoral evaluation, only de-identified data was provided to me.

Another source of data that was approved for me to use for the purposes of this evaluation was the CAUTI rates per 1,000 patient days. These data were provided to me in a unit-based summary format with no individual identifying information on it. This information was collected and summarized by the certified infection prevention personnel from urinary cultures and chart review by using the criteria determined in the National Healthcare Safety Network guidelines.

Fall rates per 1,000 patient days was also used as a source of data. These rates were already collected by the hospital for organizational purposes. This information was

collected in a confidential patent safety reporting database and reviewed for accuracy by the organization's risk manager. Both CAUTI and fall rates were provided to me in a summarized unit-based format de-identified of any protected health information.

Lastly, nursing satisfaction data is annually assessed during the NDNQI RN Survey with Practice Environment Scales. The survey has been tested and determined to have high levels of reliability and validity (Choi & Boyle, 2014; Lake, 2002). This survey measured scales and questions related to direct care nurses' perceptions about their practice environment, quality of care, nurse manager ability, leadership and support of nurses, RN to RN interactions, collegial nurse-physician relationships, job enjoyment, respect, and recognition. Questions that directly pertained to nurses' perceived nurse manager ability, leadership, and support of nurses were used for this evaluation project. NDNQI collects these data through a secure survey site and reports them as a mean score for all responses (Press Ganey Associates, Inc., 2018). Only summarized data are provided to the organization. The mean scores by unit for those questions were provided to me by the NDNQI site coordinator for the pre- and post-QI project analysis.

Analysis and Synthesis

The data regarding participation in professional development activities were analyzed using Microsoft excel to count and calculate descriptive statistics such as numbers and percents on the responses as a whole and in the different leadership groups (nurse managers and ANMs). In the Likert-scale questions, there were seven questions that directly ask about the leader's knowledge or understanding and twelve questions that measure leader confidence. These questions were the basis for determining if the

knowledge and confidence of the leaders were improved. The Likert scale questions were also analyzed with descriptive statistics such as measures of central tendency (mean and median) and measures of variability (minimum, maximum, and standard deviations). T-tests were also completed on the Likert-scale questions to determine if a statistically significant difference was noted in the responses as a whole and in each of the leadership groups. Using the parametric *t*-test procedure for Likert-scale responses has been shown to provide valid data analysis, particularly when the sample size between the two groups is similar (Joost, de Winter, & Dodou, 2012).

The other project outcome measures were analyzed similarly. For the patient outcomes, the CAUTI and fall rates in acute care units were compared pre- and postproject to determine if a clinically significant improvement was noted. For nursing satisfaction, the pre- and postintervention mean scores on the NDNQI survey questions were compared by unit for improvement, and a *t* test was used on the mean scores of each question to determine if any change was statistically significant.

Summary

The proposed data analysis was sufficient to answer the practice-focused question and determine if the aims of the QI project were achieved. The next section will share the findings and implications of the evaluation, recommendations from the findings, and plan for dissemination of the evaluation project results.

Section 4: Findings and Recommendations

Introduction

The QI project organization had identified issues with its leaders' knowledge, confidence, and skills in the leader role. They wanted to know if, in an acute care hospital, providing nurse leaders with education and training on their role and effective leadership styles increase the leader's knowledge about and confidence in their roles as well as improve unit-based patient outcomes and nurse satisfaction. The purpose of the doctoral evaluation project was to evaluate the project results to determine if providing leaders education and training can increase a leader's knowledge and confidence in their role, improve unit-based outcomes, and nurse satisfaction. A pre- and postintervention survey was implemented to measure knowledge and confidence and pre- and post-CAUTI rates, fall rates, and nursing satisfaction was also analyzed. The data for the evaluation was collected by the QI project organization and was provided to me for the evaluation in de-identified form.

The QI project spanned a little over a year in time. Specific time frames for each measure are noted in the analysis below. It is important to also note that during that year, the organization was sold and went through an acquisition. In addition, before the postleadership development survey was able to be collected, the coronavirus and its subsequent changes had begun impacting the organization and the roles of nurse leaders throughout the facility.

Findings and Implications

There were four pre- and postmeasures identified for analysis in this project:

- The Nurse Leader Professional Development Survey
- The NDNQI RN survey
- CAUTI rates
- Fall rates

First Measure- Nurse Leader Professional Development Survey.

The first measure was the pre- and postleader professional development survey. The primary interventions for the QI project occurred from May 2019 through October 2019, and there was approximately one year between the pre- and postsurveys from the spring of 2019 to the spring of 2020. The evaluation of this survey measure was completed in two ways. The first method was with a comparison of all respondents in the pre- and postsurvey. This is most beneficial to the organization as it shows the change in perceptions overall between the pregroup and the current group at the end of the project and can be helpful in understanding the next steps needed for leadership professional development for its current leaders. The second method of evaluation of the survey was with only those participants who completed both the pre- and postsurvey. This allowed for a paired analysis of respondents that had been in a leadership role for the entire intervention period and provided a more direct analysis of the impact of the interventions.

Nurse Leader Professional Development Survey- All Respondents. In the presurvey, 91% of the leaders completed the survey. There were 53 respondents. Twenty-two nurse managers or above and 31 ANMs participated in the survey. The mean years of experience as a leader was 9.97, and their mean years in their current role was 4.83. There were zero participants that had diplomas, 15% of the participants that held

associate degrees, 72% that held bachelor's degrees, 11% held a master's degree, and 2% held a doctorate. In the postsurvey, 68% of nurse managers and ANMs completed the survey. There were 30 respondents. Nineteen nurse managers and 11 associate nurse managers participated in the survey. The mean years of experience as a leader was 8.03, and their mean years in their current role was 4.10. There were 3% of participants that had diplomas, 17% of the participants that held associate degrees, 67% that held bachelor's degrees, 13% held a master's degree, and 0% held a doctorate. There was no significant difference between the pre- and postgroups in the mean years of experience as a leader (see Table 4) or mean years of experience in the current role (see Table 5).

Table 4

Years of Experience as a Leader of Nurse Managers and Associate Nurse Managers- Pre- and Postsurvey

	Pre-NM & ANM	Post-NM & ANM	*p* value	Pre-NM	Post-NM	*p* value	Pre- ANM	Post-ANM	*p* value
Number	53	30		22	19		31	11	
Mean (*SD*)	9.97 (7.26)	8.03 (6.31)	0.953	10.18 (6.78)	8.84 (6.40)	0.519	9.29 (7.27)	6.64 (6.19)	0.885
Median	6.5	6.5		8.5	8		3.5	5	
Min (Max)	1(28)	1(25)		1(25)	2(25)		1(28)	1(22)	

Note: NM- nurse manager, ANM- Associate nurse manager, SD- Standard Deviation, Min- Minimum, Max- Maximum

Table 5

Years of Experience in their Current Role of Nurse Managers and Associate Nurse Managers- Pre- and Postsurvey

	Pre-NM & ANM	Post-NM & ANM	*p* value	Pre-NM	Post-NM	*p* value	Pre- ANM	Post-ANM	*p* value
Number	53	30		22	19		31	11	
Mean (*SD*)	4.83 (4.34)	4.10 (5.03)	0.754	5.14 (5.77)	4.32 (5.87)	0.655	3.86 (2.64)	3.73 (3.35)	0.407
Median	2	2		3	2		1	1	
Min (Max)	1(20)	1(25)		1(20)	1(25)		1(10)	1(9)	

Note: NM- nurse manager, ANM- Associate nurse manager, SD- Standard Deviation, Min- Minimum, Max- Maximum

Various leader development of the respondents was also analyzed (see Table 6). Leaders expressed that they are now more likely to have plans to go back to school to advance their degree and to have plans to obtain a leadership certification soon. Also, although several of the leadership learning opportunities were not offered in the last six months (like the AACN Essentials of Nurse manager orientation, corporate college, and supervisory skills), the classes that were offered did see increased participation on the whole (see Table 6).

Table 6

Leadership Professional Development Participation

	Pre-NM/ANM	Post-NM/ANM	Pre-NM	Post-NM	Pre-ANM	Post-ANM
Number of participants	53	30	22	19	31	11
Advancing their degree:						
a. I am currently attending a nursing program to advance my degree.	13%	17%*	9%	26%*	16%	0%
b. I have plans to advance my degree soon.	21%	27%*	14%	16%*	26%	45%*
c. I would like information about possible options to advance my degree.	21%	20%	14%	21%*	26%	18%
d. I am not interested in advancing my degree at this time.	55%	37%	68%	37%	45%	36%
Certification:						
a. I am not interested in obtaining a national leadership certification (CNML, NE-BC, etc...) at this time.	19%	20%	18%	16%	19%	27%
b. I would like information about possible leadership certifications.	45%	37%	27%	32%*	58%	45%
c. I have plans to obtain a national leadership certification soon.	15%	27%*	18%	32%*	13%	18%*
d. I already hold a national nursing leadership certification. It is:	19%	17%	36%	21%	6%	9%
Professional nursing organizations and journal subscriptions:						
Membership in a professional nursing organizations	40%	37%	55%	47%	29%	18%
Subscribe to a nursing journals or periodicals	34%	23%	45%	26%	26%	18%
Participated in during your career:						
a. Human Resource's New Leader Pathways course	40%	53%*	32%	58%*	45%	45%
b. AACN's Essentials of Nurse Manager Orientation (ENMO) on-line training	9%	3%	18%	5%	3%	0%

(*table continues*)

	Pre-NM/ANM	Post-NM/ANM	Pre-NM	Post-NM	Pre-ANM	Post-ANM
c. A nursing leadership certification review course (CNML, NE-BC, etc...)	23%	37%*	50%	47%	3%	18%*
d. A nursing leadership conference (AONE, KONL, Magnet, etc...)	17%	13%	27%	11%	10%	18%*
e. Previously offered: Corporate College Course	11%	7%	14%	11%	10%	0%
f. Previously offered: Supervisory Skills Course	17%	17%	18%	21%	16%	9%
Participated in during the last six months:						
a. Human Resource's New Leader Pathways course	17%	20%*	14%	21%*	19%	18%
b. AACN's Essentials of Nurse Manager Orientation (ENMO) on-line training	4%	3%	9%	5%	0%	0%
c. A nursing leadership certification review course (CNML, NE-BC, etc...)	6%	13%*	14%	16%*	0%	9%*
d. A nursing leadership conference (AONE, KONL, Magnet, etc...)	4%	3%	5%	5%	3%	0%
e. Other leadership courses or continuing education found on-line	15%	20%*	27%	21%	6%	18%*
f. Other live/in-person courses or conferences on leadership skills or training.	15%	27%*	18%	32%*	13%	18%*
g. I am currently in school to advance my nursing degree	11%	10%	9%	16%*	13%	0%
h. New Organization's Manager Course		47%*		68%*		9%*

*showed improvement

The nurse manager and ANM knowledge, confidence, and skill levels were also assessed pre- and postproject implementation (see Table 7). Although small improvements were noted in many of the questions, access to the advisory board content was the only question that showed statistically significant improvement for the nurse managers and ANM group as a whole (p=0.00). Completion of leader training in the last six months also showed meaningful improvement for the group as a whole (p=0.055). Also, although nurse managers showed a statistically significant improvement in completing leader patient rounding on 80% of patients (p=0.02), ANMs showed a statistically significant decrease in their likelihood to assist with leader patient rounding (p=0.01). There were slight decreases in recognizing and celebrating staff and successes as well as the leader's confidence in dealing with patient and employee concerns. Lastly, there was a decrease in the leader's knowledge and confidence related to financial topics, including budgets and productivity.

The decrease in ANM leader rounding was felt to be due to a change in the ANM role, which puts them in staffing as a charge nurse for 36 of the 40 hours per week and limits their time spent in leadership duties. The decrease in the leader's confidence in dealing with patient and employee concerns may be related to the change in the organization's senior leadership and ownership, which has different and possibly still unknown expectations and policies related to patient and employee issues. Although a budget and productivity training was provided to staff, only a few of the leaders participated in the activity. Plus, the way budgets and productivity are calculated changed

after the purchase of the organization, so it could have impacted the leader's perception of their knowledge and confidence of this topic (see Table 7).

Table 7

Mean Scores and T-test results for Leadership Professional Development Knowledge, Confidence, and Skills

	Pre-NM & ANM	Post-NM & ANM	*p* value	Pre-NM	Post-NM	*p* value	Pre-ANM	Post-ANM	*p* value
Number of participants	53	30		22	19		31	11	
a. I obtained sufficient orientation to my role and its responsibilities when I started my current leadership role.	3.19	3.20	0.96	3.05	3.16*	0.54	3.29	3.27	0.95
b. I obtained sufficient leadership training when I started in my current role.	3.06	3.17*	0.61	2.91	3.26*	0.24	3.16	3.00	0.60
c. I have a copy of my job description and know what it says my job purpose and essential functions are.	3.79	3.87*	0.75	4.09	3.89	0.51	3.58	3.82*	0.49
d. I have access to the Advisory Board content and receive regular e-mail updates from them.	3.38	4.10*	0.00**	3.71	4.16*	0.10	3.16	4.00*	0.02**
e. I feel confident that I have the knowledge to be a successful leader.	3.83	3.93*	0.50	4.10	4.06	0.82	3.65	3.73*	0.74
f. I have completed leadership professional development opportunities in the last six months (i.e. a certification review course, continuing education courses, etc...).	3.13	3.60*	0.05**	3.36	3.89*	0.09	2.97	3.09*	0.75
g. I know what leadership training opportunities are available to me at this time.	2.94	3.27*	0.16	3.32	3.53*	0.49	2.67	2.82*	0.69
a. I know what questions are to be asked when completing the leader patient rounding.	4.02	4.07*	0.81	4.32	4.42*	0.58	3.80	3.45	0.31
b. I complete (or assist with completing) the leader patient rounding on at least 80% of patients in our unit.	3.25	3.34*	0.73	3.32	4.00*	0.02**	3.20	2.27	0.01**

(*table continues*)

	Pre-NM & ANM	Post-NM & ANM	*p* value	Pre-NM	Post-NM	*p* value	Pre-ANM	Post-ANM	*p* value
c. I know what should be asked or discussed during the leader employee rounding.	4.06	4.03	0.90	4.38	4.47*	0.60	3.83	3.27	0.10
b. I complete (or assist with completing) the official employee rounding on all (or at least 30) employees in my unit per month.	3.23	3.20	0.91	3.50	3.58*	0.81	3.03	2.55	0.24
c. I recognize staff members for personal achievements and successes.	4.23	4.17	0.66	4.32	4.32	0.99	4.17	3.91	0.30
d. I celebrate unit-based achievements and successes.	4.25	4.17	0.60	4.36	4.32	0.82	4.17	3.91	0.31
e. I make it a priority to build relationships with all staff members in my area.	4.52	4.37	0.25	4.41	4.42	0.95	4.60	4.27	0.15
f. I am confident I can effectively deal with patient or family issues or concerns.	4.27	4.14	0.35	4.45	4.33	0.45	4.13	3.82	0.17
g I am confident I can effectively deal with employee issues or concerns.	4.25	4.11	0.27	4.45	4.29	0.32	4.10	3.82	0.18
h. I am confident in my ability to effectively coach and mentor my staff members.	4.10	4.23*	0.24	4.14	4.37*	0.13	4.07	4.00	0.69
i. I am familiar with how to use the Just Culture/Performance Management Decision Guide for determining if corrective action is needed.	3.60	3.93*	0.13	4.14	4.21*	0.78	3.20	3.45*	0.44
j. I am confident in my ability to effectively apply corrective action when indicated.	3.90	4.03*	0.45	4.32	4.32	0.99	3.60	3.55	0.84
k. I am confident in my interviewing, hiring, and on-boarding skills for new staff members.	3.83	3.93*	0.57	4.05	4.22	0.46	3.67	3.45	0.46

(*table continues*)

	Pre-NM & ANM	Post-NM & ANM	*p* value	Pre-NM	Post-NM	*p* value	Pre-ANM	Post-ANM	*p* value
l. I am confident in my knowledge of Quality Improvement (QI) and Evidence-based practice (EBP) project processes and models.	3.63	3.69*	0.74	3.91	3.89	0.92	3.43	3.36	0.79
m. I feel confident in my ability to lead effective continuous QI in my area.	3.73	3.80*	0.68	3.95	4.00*	0.81	3.57	3.45	0.70
n. I feel confident in my ability to implement new evidence-based practices in my area.	3.90	3.93*	0.84	4.18	4.11	0.69	3.70	3.64	0.74
o. I am able to effectively coach staff and remove barriers in order to gain staff buy-in and engagement for EBP changes in my area.	3.67	3.87*	0.21	3.91	4.11*	0.25	3.50	3.45	0.86
p. I am familiar with change models and theories that can assist with implementing proposed change in my area.	3.50	3.53*	0.86	3.77	3.63	0.59	3.30	3.36*	0.83
q. I am confident in working with unit-level finances and budgeting.	2.92	2.90	0.93	3.45	3.21	0.46	2.52	2.36	0.61
r. I am confident in my ability to calculate the number of full-time equivalents (FTE) required for the average daily census (ADC) of my unit.	3.33	3.20	0.60	3.73	3.37	0.23	3.03	2.91	0.77
s. I am confident in my ability to evaluate and justify equipment and/or capital expenditures required for my unit.	3.17	3.13	0.87	3.86	3.37	0.11	2.67	2.73	0.87
t. I have a firm understanding of how my unit/department's productivity is calculated.	3.31	3.03	0.27	3.77	3.21	0.13	2.97	2.73	0.47
u. I have a firm understanding of how productivity is impacted by staffing decisions.	3.88	3.63	0.24	4.23	3.79	0.14	3.63	3.36	0.36

*improvement noted
**statistically significant at the .05 level

Lastly, in the open response section of the postsurvey, of the 19 responses obtained to the questions as to what the leaders would like to learn more about, 14 of them mentioned that they would like to learn more about the financial aspects of their role like budgeting, productivity, and calculating full-time equivalents. This information can be useful in planning additional learning activities and strategies for the current nurse managers and ANMs.

Nurse Leader Professional Development Survey- Paired Surveys Only.

Analysis of all leader responses is helpful for the organization with a continuous QI mindset, as it shows where the organization's new baseline is and where the continued gaps remain. However, since there were a large number of respondents that did not respond to both surveys, it was felt that also analyzing the data for just the leaders that were present and completed both the pre- and postintervention leadership professional development survey would be helpful to determine the impact of the interventions. I was provided with de-identified paired data of the pre- and postsurvey responses for the 24 leaders that were in either a nurse manager or ANM role for the entire project period and took both the pre- and postsurvey.

Many of the questions in this paired group showed improvement as well. This paired group also showed statistically significant improvement in having access to the Advisory Board (p=0.025), just as the all respondents group did. However, there were other statistically significant changes that should be noted. This group did have a positive and significantly significant change in whether they had participated in continuing education in the past six months (p=0.036), as well as that they were familiar with the

just culture philosophy (p=0.047). This group also had a meaningful improvement in whether they had an understanding of how productivity is calculated (p=0.088). The larger group had not seen improvement in this question at all. It is also important to note several decreases. This paired group identified that they were less confident in their interviewing, hiring, and on-boarding skills (p=0.029), and less likely to know what training opportunities were available to them (p=0.096) (see Table 8).

Table 8

Mean and Paired T-Test for Leadership Professional Development Knowledge, Confidence, and Skills of Nurse Manager and Associate Nurse Managers Who Completed Both the Pre- and Post- Survey

	Pre- NM & ANM	Post- NM & ANM	Paired *p* value
Number of participants	24	24	
a. I obtained sufficient orientation to my role and its responsibilities when I started my current leadership role.	3.17	3.22*	0.824
b. I obtained sufficient leadership training when I started in my current role.	2.96	2.96	0.405
c. I have a copy of my job description and know what it says my job purpose and essential functions are.	3.88	4.04*	0.888
d. I have access to the Advisory Board content and receive regular e-mail updates from them.	3.43	3.55*	0.025**
e. I feel confident that I have the knowledge to be a successful leader.	3.83	3.89*	0.135
f. I have completed leadership professional development opportunities in the last six months (i.e. a certification review course, continuing education courses, etc...).	3.13	3.34*	0.036**
g. I know what leadership training opportunities are available to me at this time.	3.00	2.96	0.096
a. I know what questions are to be asked when completing the leader patient rounding.	4.17	4.16	1.000
b. I complete (or assist with completing) the leader patient rounding on at least 80% of patients in our unit.	3.29	3.28	0.775
c. I know what should be asked or discussed during the leader employee rounding.	4.17	4.21*	0.492
b. I complete (or assist with completing) the official employee rounding on all (or at least 30) employees in my unit per month.	3.08	3.21*	0.862
c. I recognize staff members for personal achievements and successes.	4.42	4.58*	0.135
d. I celebrate unit-based achievements and successes.	4.38	4.48*	0.096
e. I make it a priority to build relationships with all staff members in my area.	4.50	4.54*	0.213
f. I am confident I can effectively deal with patient or family issues or concerns.	4.33	4.37*	0.103

(*table continues*)

	Pre- NM & ANM	Post- NM & ANM	Paired *p* value
g. I am confident I can effectively deal with employee issues or concerns.	4.29	4.32*	0.186
h. I am confident in my ability to effectively coach and mentor my staff members.	4.04	4.11*	0.213
i. I am familiar with how to use the Just Culture/Performance Management Decision Guide for determining if corrective action is needed.	3.75	3.93*	0.047**
j. I am confident in my ability to effectively apply corrective action when indicated.	3.96	3.95	0.170
k. I am confident in my interviewing, hiring, and on-boarding skills for new staff members.	3.71	3.68	0.029***
l. I am confident in my knowledge of Quality Improvement (QI) and Evidence-based practice (EBP) project processes and models.	3.67	3.62	1.000
m. I feel confident in my ability to lead effective continuous QI in my area.	3.83	3.83	0.802
n. I feel confident in my ability to implement new evidence-based practices in my area.	4.04	4.05	0.417
o. I am able to effectively coach staff and remove barriers in order to gain staff buy-in and engagement for EBP changes in my area.	3.67	3.63	0.203
p. I am familiar with change models and theories that can assist with implementing proposed change in my area.	3.58	3.66*	0.575
q. I am confident in working with unit-level finances and budgeting.	3.00	2.99	0.840
r. I am confident in my ability to calculate the number of full-time equivalents (FTE) required for the average daily census (ADC) of my unit.	3.46	3.48*	0.423
s. I am confident in my ability to evaluate and justify equipment and/or capital expenditures required for my unit.	3.25	3.37*	0.612
t. I have a firm understanding of how my unit/department's productivity is calculated.	3.29	3.52*	0.088
u. I have a firm understanding of how productivity is impacted by staffing decisions.	3.96	4.03*	0.107

*improvement noted
**positively statistically significant at the .05 level
***negatively statistically significant at the .05 level

The paired group's increased likelihood of having participated in continuing education in the previous six months was thought to have been because they had been in their role during more of the distribution of the resources and were more likely to have taken advantage of the educational opportunities provided. Both of the decreases in confidence in the interviewing, hiring, and on-boarding skills and in knowing what training opportunities were available to them were thought to be related to the ownership transition of the organization. The new policies surrounding interviewing, hiring, and on-boarding were just being introduced to the leaders during the time of the postsurvey. Also, although educational opportunities for the leaders were provided prior to the sale of the organization, the opportunities in the new organization had not yet been shared with the leaders prior to the postsurvey. This paired analysis has potential to demonstrate a more direct impact of the leadership education and training interventions but was also affected by outside influences like changes related to the sale of the organization.

Second Measure- NDNQI RN Survey.

The next measure studied was nursing satisfaction per the NDNQI RN Survey. The primary interventions for the QI project occurred from May 2019 through October 2019, and the NDNQI RN pre- and postsurveys were completed in October of 2018 and October of 2019. Twenty-three of 26 nursing areas had both pre- and postintervention survey responses. Three units were excluded due to not having enough (at least five) responses to be provided with unit-level responses from the survey provider in either the pre- or postsurvey. The average response rate for the presurvey was 53%, and the average for the postsurvey was 58%. There were 12 inpatient units, including three critical care

units, five stepdown units, three medical-surgical units, and one blended acuity unit. There were also 11 other areas including, the emergency room, pre- and postanesthesia areas, operating rooms, cath lab, radiology, endoscopy, dialysis, IV therapy, and the resource team. The overall satisfaction as measured by the mean practice environment scale score increased from 2.72 to 2.81. In addition, the overall nurse manager ability, leadership, and support of nurses' scale score increased from 2.92 to 3.03. All five of the individual measures within the scale all improved slightly, as well (See Table 9).

The primary change that occurred between the pre- and post-NDNQI RN Survey was the leader education and QI project interventions. The postsurvey results were obtained just before the sale of the organization, so were likely impacted less by that factor than the leadership professional development survey had been. The literature supports that leadership training can positively impact nursing satisfaction, and increased nursing satisfaction has been associated with a decrease in adverse events (Perry, Richter, & Beauvais, 2018). Improvements in nursing satisfaction can provide a clinically significant change in patient outcomes. The leader education and training interventions provided during the QI project intervention period may have been a contributing factor to improved nursing satisfaction with their leaders in all of the leader-focused measures of the NDNQI RN Survey and may also provide clinical significance to patient outcome improvement.

Table 9

NDNQI RN Survey- Nursing Satisfaction; n=23

Measure	Pre-Survey Mean(*SD*)	Post-Survey Mean(*SD*)	*p* value	Pre(Post) Median	Presurvey Min(Max)	Postsurvey Min(Max)
Unit Response Rates	53%(0.20)	58%(0.25)	0.440	50%(56%)	16%(83%)	15%(100%)
Mean Practice Environment Scale Score	2.72(0.20)	2.81(0.18)	0.098*	2.75(2.83)	2.41(3.04)	2.38 (3.22)
Nurse Manager Ability, Leadership, and Support of Nurses Scale	2.92 (0.37)	3.03(0.38)	0.343	2.94(3.06)	2.23(3.60)	1.98(3.54)
A supervisory staff that is supportive of the nurses	2.99(0.33)	3.04(0.39)	0.622	3.07(3.08)	2.47(3.76)	2.20(3.71)
Supervisors use mistakes as learning opportunities, not criticism	2.96(0.34)	3.04(0.34)	0.474	3.00(3.00)	2.21(3.54)	2.00(3.68)
A nurse manager who is a good manager and leader	3.02(0.56)	3.15(0.54)	0.443	3.00(3.33)	2.11(3.92)	1.67(3.91)
Praise and recognition for a job well done	2.59(0.34)	2.78(0.33)	0.058	2.68(2.73)	1.96(3.03)	1.89(3.30)
A nurse manager who backs up the nursing staff in decision-making, even if the conflict is with a physician	3.02(0.49)	3.13(0.44)	0.445	3.13(3.20)	2.21(3.88)	2.00(3.70)

Third Measure- CAUTI rates.

The next measure was the CAUTI rates per 1,000 catheter days. The primary interventions for the QI project occurred from May 2019 through October 2019. The results and rates of all 13 inpatient areas were compared for all three months of the fourth quarters of both 2018 and 2019. There were four CAUTIs noted in both periods, but the number of catheter days increased from 2497 in the preintervention period to 2735 catheter days in the postintervention period. Due to this, the organization's CAUTI rate per 1,000 catheter days decreased from 1.60 to 1.46 during the intervention period. Any decrease in CAUTI rates, though, has clinical significance as it shows a reduction of

patient risk of infection. Leader education and the subsequent increase in nursing satisfaction with their leaders may have been a contributing factor to the improvement. The organization was still below the 50th percentile of comparable high case-mix organizations nationally, so additional change is still needed (see Table 10).

Table 10

CAUDI Rates Per 1,000 Catheter Days Pre- and Postproject for Inpatient Areas

	Preproject Mean Rate	Postproject Mean Rate	p value
CAUTI Rate	1.60	1.46	0.43

Fourth measure- Fall Rates.

The third measure was the fall rates per 1,000 patient days. The results and rates of 12 of 13 inpatient areas were compared for all three months of the fourth quarters of both 2018 and 2019. The fall data for one unit had not been available. There were 91 falls preintervention and 67 falls postintervention. The patient days decreased from 20,529 in the preperiod to 17,875 in the postperiod. The organization's fall rates per 1,000 patient days did decrease from 4.43 to 3.75. Any decrease in fall rates, though, has clinical significance as it shows a reduction of patient risk of injury. Although falls are impacted by variables not measured in this QI project, there was a 0.68 decrease in the fall rate during the leader education intervention period. The leader education and increase in nursing satisfaction with their leaders may have been a contributing factor to its improvement. However, the organization was still below the 50th percentile of comparable high case-mix organizations nationally, so additional change is still needed in this measure as well (see Table 11).

Table 11

Fall Rates Per 1,000 Patient Days Pre- and Postproject for Inpatient Areas

	Preproject Mean Rate	Postproject Mean Rate	*p* value
Fall Rate	4.43	3.75	0.24

Overall, there were several unanticipated limitations to the results and evaluation. During the period of evaluation of the results of the project, the organization was purchased by another facility. This not only, in some instances, decreased the confidence of the leaders in relation to what the expectations and new procedures were, but also delayed the collection of the postsurvey results by a few months as an e-learning platform used to distribute the survey was not immediately available. Also, although education was distributed and made available, much of it was optional, and some leaders took more advantage of it than others. Plus, leadership roles went through more transitions after the sale of the organization. Some associate nurse managers became nurse managers, and a third of the participating associate nurse managers had been either a charge nurse or a direct care nurse in the previous year. Also, as noted in a pre- and postassessment of the Budget and Productivity learning activity, it was only after education that some of the leaders identified how much they did not know, and their confidence may have actually been decreased after the training. Lastly, the postsurvey was being collected during the coronavirus pandemic. The realization of a healthcare leader's responsibilities in this unprecedented time in the world's history may have also impacted some of the results.

There are several implications of the analysis of the findings of these four areas: the leadership development survey, the NDNQI RN survey, CAUTI rates, and fall rates.

First, the project was able to increase the individual leader's interest in and participation in educational opportunities, in general. Although some measures showed an increase in knowledge and confidence and some did not, not all areas had the same number of learning opportunities provided. There was a clinically significant improvement in both the CAUTI and fall rates, so the project may have been a contributing factor to a slight increase in the safety of the organization's patient community. Lastly, the organization and system can use the results of the study to identify the current learning needs of their newly acquired leaders.

With slight decreases in CAUTI and fall rates and slight increases in nursing satisfaction, the education provided was likely a contributing factor clinically significant change and positive social change. Increasing interventions in the future could potentially provide additional positive social change. It is feasible that increasing the education, knowledge, and confidence of leaders could have an even bigger impact in the future even with and despite unanticipated limitations of the project and its evaluation.

Recommendations

The literature supports that providing leaders with education and training on their role and effective leadership styles can be a contributing factor to increasing a leader's knowledge about and confidence in their roles as well as improvement in CAUTI rates, fall rates, and nurse satisfaction. There were clinically significant improvements noted in CAUTI rates, fall rates, and nursing satisfaction during the interventional period in this QI project. However, since this project had a QI focus, there were no controls on confounding variables that may have also held a role in the improvements noted. It is

unknown if the project was the cause of the changes noted, but it may have been a contributing factor to the changes.

One of the purposes of QI evaluations, though, is to determine if the interventions should be implemented on a larger scale, modified, or discarded (American College of Cardiology, 2013). There were positive changes seen in the knowledge and confidence of leaders in areas that received more interventions, and those leaders that were present for the entire interventional period showed more improvements in the educational topics than the group as a whole. There are enough clinically significant changes to support the continuation of and potentially increasing training for leaders with some modifications. Needed modification are those that were identified by the lowest-scoring topics noted in the postleadership professional development survey. Current leaders would like more information regarding the new organization's leadership policies regarding interviewing, hiring, and on-boarding, the educational opportunities available to them, and financial training related to their role. It is also recommended that a more formal leadership training and continuing education program be developed to increase the improvements noted. QI projects would also require continued monitoring. Although there were postintervention evaluations for this QI project, as new training opportunities are provided and a formal leadership and continuing education program is developed, it is recommended to continue to monitor the knowledge and confidence of the leaders.

Contribution of the QI Project Team

Although there was a small group of team members that were involved in the implementation of the QI project, the evaluation of the project was completed by me. The

completed data analysis was reviewed with my direct leader, a member of the QI project team, to discuss the results, recommendations, and causes of the noted variations. The dissemination plans were also discussed to determine how best to ensure senior organizational leaders and the participants receive the results and recommend follow-up. The new organization values leadership development and has plans to use the results to educate existing leaders on their identified needs and on the other opportunities for development available to them.

Strength and Limitations of the Project

This QI evaluation project had several strengths and limitations. One strength of the evaluation project was that it provided the organization with data to show where improvements had been made in leadership knowledge and confidence in the last year and where additional emphasis should be placed in the future. QI projects, guided by the cyclic PDSA QI model, should be in a continuous improvement process (American College of Cardiology, 2013). This evaluation provides the organization with additional direction for future training focuses. This evaluation also evaluated multiple measures to determine if there were clinically significant changes that occurred during the intervention period. Using four different measures added to the project's strength.

The project did have several limitations, though. With the change in ownership of the project organization prior to the completion of the project, there were multiple changes in leadership roles and anxiety related to unknown policies and available education. The ownership change also cut the intervention period short as planned interventions were canceled. Leadership development takes time. Continued monitoring

would be needed to further connect interventions to the outcomes. Another limitation is that the coronavirus was a factor towards the end of the project period and could have also impacted the knowledge and confidence of the leaders. Completing future projects as a research study, instead of as a QI project, could also provide controls for the potential extraneous confounding factors and would increase the confidence of and ability to connect the interventions with the results seen.

Section 5: Dissemination Plan

After a discussion with a senior member of the QI project team, I provided the organization with a short summary of the project results that was disseminated to senior leaders, the nurse managers, and associate nurse managers. The team agreed to ensure follow-up on the results and to find and provide the requested education to its leaders. Another potential venue for dissemination is via local, regional, or national symposiums that accept QI projects. Abstracts for poster presentations may also be considered.

Analysis of Self

This project allowed me to use existing skills to help alleviate gaps in my existing knowledge and experiences. I am certified in nursing professional development and have had many years of experience in both education and in data analysis of QI projects, evidence-based practice projects, and even research studies. That being said, I have minimal experience in a formal leadership role. Participation as a QI project team member and subsequently using the evaluation of the project for my doctoral scholarly project has helped me to gain knowledge about leaders and leadership. In searching the literature about leadership roles, styles, and education, I learned about what research shows can increase the effectiveness of nurse leaders. In finding, disseminating, and creating resources, tools, and education for the nurse leaders during the interventional period, I simultaneously learned the information myself. A doctoral-prepared nurse has the ideal credential to take leadership roles in an organization. However, to be effective, it is essential that DNP nurses receive leadership training if it is not part of their previous experiences. The DNP credential in and of itself does not ensure they will be a good

leader. Since I do see myself taking a leadership role in the future, this project has allowed me to develop knowledge and confidence as a nurse leader, just as the participants had. Although factors outside of the project's control may have negatively impacted some of the results of the project, that does not minimize the fact that other results did improve and that providing training to nurse leaders is supported in the literature. I have also learned, as a future leader, that even when extenuating circumstances exist, leaders push through. Leaders must be able to continue to focus on implementing best practice, as best they can, in whatever way is available, despite on-going changes. This project has not only made me a better leader, but it has also successfully prepared me to positively exemplify the DNP credential.

Summary

This QI project evaluation provided the organization with its new starting point and foci for continued education to improve nurse leader's knowledge and confidence. Although the confounding variables limited the strength of the conclusions about the project's impact, providing nurse managers and associate nurse managers with education and training on their role and leadership styles may have been a contributing factor to increased knowledge and confidence of leaders and improved nursing satisfaction, CAUTI rates, and fall rates. It is recommended that the training be formalized and provided to both new and experienced leaders and that monitoring of their gaps in knowledge and confidence be continued. Although external factors such as ownership transitions and pandemics can negatively impact a leader's knowledge and confidence in some areas, assessment and evaluation of the impact aids in focusing the training needed

for the leaders to gain or regain the information needed to be a successful leader that has the ability to affect patient and nursing outcomes.

References

Adams, J. M., Djukic, M., Gregas, M., & Fryer, A. (2018). Influence of nurse leader practice characteristics on patient outcomes: Results from a multi-state study. *Nursing Economic$, 36*(6), 259–267. Retrieved from http://www.nursingeconomics.net/necfiles/2018/ND18/259.pdf

American College of Cardiology. (2013). Introduction to quality improvement and the FOCUS-PDSA model. Quality improvement: An ACC clinical toolkit. Retrieved from https://cvquality.acc.org/docs/default-source/qi-toolkit/01_introtoqiandthefocus_pdsamodel_12-10-13new.pdf?sfvrsn=44478fbf_2

American Organization of Nurse Executives. (2015). Nurse manager competencies. Retrieved from https://www.aonl.org/sites/default/files/aone/nurse-manager-competencies.pdf

Asamani, J. A., Naab, F., & Ofei, A. M. A. (2016). Leadership styles in nursing management: Implications for staff outcomes. *Journal of Health Sciences, 6*(1), 23-36. doi:10.17532/jhsci.2016.266

Baxter, C., & Warshawsky, N. (2014). Exploring the acquisition of nurse manager competence. *Nurse Leader, 12*(1), 46-59. doi:10.1016/j.mnl.2013.10.008

Boamah, S. A., Spence Laschinger, H. K., Wong, C., & Clarke, S. (2018). Effect of transformational leadership on job satisfaction and patient safety outcomes. *Nursing Outlook, 66*(2), 180–189. doi:10.1016/j.outlook.2017.10.004

Bogaert, P. V., Timmermans, O., Weeks, S. M., Heusden, D. V., Wouters, K., & Franck,

E. (2014). Nursing unit teams matter: Impact of unit-level nurse practice environment, nurse work characteristics, and burnout on nurse reported job outcomes, and quality of care, and patient adverse events- A cross-sectional survey. *International Journal of Nursing Studies*, *51*(8), 1123–1134. doi:10.1016/j.ijnurstu.2013.12.009

Bormann, L., & Abrahamson, K. (2014). Do staff nurse perceptions of nurse leadership behaviors influence staff nurse job satisfaction? The case of a hospital applying for Magnet® designation. *Journal of Nursing Administration, 44*(4), 219–225. doi:10.1097/NNA.0000000000000053

Choi, J., & Boyle, D. K. (2014). Differences in nursing practice environment among US acute care unit types: A descriptive study. *International Journal of Nursing Studies, 51*(11), 1441-1449. https://doi.org/10.1016/j.ijnurstu.2014.03.001.

Cummings, G. G., MacGregor, T., Davey, M., Lee, H., Wong, C. A., Lo, E., … Stafford, E. (2010). Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. *International Journal of Nursing Studies, 47*(3), 363-385. doi:10.1016/j.ijnurstu.2009.08.006

Deyo, P., Swartwout, E., & Drenkard, K. (2017). Nurse manager competencies supporting patient engagement. *Journal of Nursing Administration, 47*(10 Suppl), S59–S66. doi:10.1097/NNA.0000000000000318

Failla, K. R., & Stichler, J. F. (2008). Manager and staff perceptions of the manager's leadership style. *Journal of Nursing Administration, 38*(11), 480-487. doi:10.1097/01.NNA.0000339472.19725.31

Fennimore, L., & Wolf, G. (2017). Nurse manager leadership development: Leveraging the evidence and system-level support. (2017). *Journal of Nursing Administration, 47*(10 Suppl), S20–S26. doi:10.1097/NNA.0b013e3182171aff

Fineout-Overholt, E., Melnyk, B., Stillwell, S., & Williamson, K. (2010a). Critical appraisal of the evidence: Part I an introduction to gathering, evaluating, and recording the evidence. *American Journal of Nursing, 110*(7), 47-52. doi:10.1097/01.NAJ.0000383935.22721.9c

Fineout-Overholt, E., Melnyk, B., Stillwell, S., & Williamson, K. (2010b). Critical appraisal of the evidence: Part III the process of synthesis: Seeing similarities and differences across the body of evidence. *American Journal of Nursing, 110*(11), 43-51. doi:10.1097/01.NAJ.0000390523.99066.b5

Flatekval, A. M., & Corbo, S. A. (2019). Nurse manager self-reported competency levels. *Nursing Management, 50*(2), 28-33. doi:10.1097/01.NUMA.0000552739.87072.a5

Graham, I. W., & Jack, E. (2008). Promoting leadership: The development of a nurse executive team in an acute hospital trust. *Journal of Nursing Management, 16*(8), 955-963. https://doi.org/10.1111/j.1365-2834.2008.00915.x.

Joost, C. F., de Winter, J. C. F., & Dodou, D. (2012). Five-point Likert items: t test versus Mann-Whitney-Wilcoxon. *Practical Assessment, Research & Evaluation, 15*(11), 1-16. https://doi.org/10.7275/bj1p-ts64

Lake, E. T. (2002). Development of the Practice Environment Scale of the Nursing Work Index. *Research in Nursing and Health, 25*(3), 176-188. doi:10.1002/nur.10032

Laschinger, H. K. S., Wong, C. A., Grau, A. L., Read, E. A., & Stam, L. M. P. (2011). The influence of leadership practices and empowerment on Canadian nurse manager outcomes. *Journal of Nursing Management, 20*(7), 877-888. doi:10.1111/j.1365-2834.2011.01307.x

Mackoff, B. L., Glassman, K., & Budin, W. (2013). Developing a leadership laboratory for nurse managers based on lived experiences a participatory action research model for leadership development. *Journal of Nursing Administration, 43*(9), 447-454. doi:10.1097/NNA.0b013e3182a23bc1

McLaughlin, C., Johnson, J., & Sollecito, W. (2012). *Implementing continuous quality improvement in healthcare: A global casebook.* Jones and Bartlett Learning, LLC: Sudbury, MA.

Merrill, K. C. (2015). Leadership style and patient safety: Implications for nurse managers. *Journal of Nursing Administration, 45*(6), 319-324. doi:10.1097/NNA.0000000000000207

Moen, R. (2009). Foundation and history of the PDSA cycle. Retrieved from https://deming.org/uploads/paper/PDSA_History_Ron_Moen.pdf

Moen, R., & Norman, C. (2010). Circling back: Clearing up myths about the Deming cycle and seeing how it keeps evolving. Associates in Process Improvement. Retrieved from http://www.apiweb.org/circling-back.pdf

Negussie, N. & Demissie, A. (2013). Relationship between leadership styles of nurse managers and nurses' job satisfaction in Jimma University Specialized Hospital. *Ethiopian Journal of Health Sciences, 23*(1), 49–58. Retrieved from

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3613815/pdf/EJHS2301-0049.pdf

Perry, S. J., Richter, J. P., & Beauvais, B. (2018). The effects of nursing satisfaction and turnover cognitions on patient attitudes and outcomes: A three-level multisource study. *Health Serv Res., 53*(6), 4943-4969. doi:10.1111/1475-6773.12997

Ponti, M. (2009). Transition from leadership development to succession management. *Nursing Administration Quarterly, 33*(2), 125-141. doi:10.1097/naq.0b013e3181a10cc6

Press Ganey Associates, Inc. (2018). 2018 NDNQI RN Survey with Practice Environment Scale©. Retrieved from https://www.upstate.edu/nursing/documents/ndnqi_rn_survey_with_pratice_environment_scale.pdf

Roberts-Turner, R., Hinds, P. S., Nelson, J., Pryor, J., Robinson, N. C., & Wang, J. (2014). Effects of leadership characteristics on pediatric registered nurses' job satisfaction. *Pediatric Nursing, 40*(5), 236-256. Retrieved from https://www.researchgate.net/profile/John_Nelson5/publication/275666139_Effects_of_leadership_characteristics_on_pediatric_registered_nurses'_job_satisfaction/links/5581dbca08ae1b14a0a1018c/Effects-of-leadership-characteristics-on-pediatric-registered-nurses-job-satisfaction.pdf

Sherman, R., & Pross, E. (2010). Growing future nurse leaders to build and sustain healthy work environments at the unit level. *Online Journal of Issues in Nursing, 15*(1), 4. doi:10.3912/OJIN.Vol15No01Man01

Squires, M., Tourangeau, A., Laschinger, H. K. S. & Doran, D. (2010). The link between leadership and safety outcomes in hospitals. *Journal of Nursing Management, 18*(8), 914-925. doi:10.1111/j.1365-2834.2010.01181.x

Sutherland, A. M., & Dodd, F. (2008). NHS Lanarkshire's leadership development programme' impact on clinical practice. *International Journal of Health Care Quality Assurance, 21*(6), 569-584. doi:10.1108/09526860810900727

The W. Edwards Deming Institute. (2019a). PDSA cycle. Retrieved from https://www.deming.org/explore/p-d-s-a

The W. Edwards Deming Institute. (2019b). Deming the man. Retrieved from https://www.deming.org/deming/deming-the-man

Titzer, J., Phillips, T., Tooley, S., Hall, N., & Shirey, M. (2013). Nurse manager succession planning: Synthesis of the evidence. *Journal of Nursing Management, 21*(7), 971-977. doi:10.1111/jonm.12179

Trybou, J., De Pourcq, K., Paeshuyse, M., & Gemmel, P. (2014). The importance of social exchange to nurses and nurse assistants: Impact on retention factors. *Journal of Nursing Management, 22*(5), 563-571. doi:10.1111/jonm.12039

Vitello-Cicciu, J. M., Weatherford, B., Gemme, D., Glass, B., & Seymour-Route, P. (2014). The effectiveness of a leadership development program on self-awareness in practice. *Journal of Nursing Administration, 44*(3), 170-174. doi:10.1097/NNA.0000000000000046

Weston, M. J, Falter, B., Lamb, G. S., Mahon, G., Malloch, K., Provan, K. G, … Werbylo, L. (2008). Health care leadership academy: A statewide collaboration to

enhance nursing leadership competencies. *Journal of Continuing Education in Nursing, 39*(10), 468–472. doi:10.3928/00220124-20081001-09

Wong, C. A., Cummings, G. G., & Ducharme, L. (2013). The relationship between nursing leadership and patient outcomes: A systematic review update. *Journal of Nursing Management, 21*(5), 709-724. doi:10.1111/jonm.12116

Appendix A: Nurse Leader Professional Development Survey

Note: Identifying information has been redacted.

Nurse Leader Professional Development Survey

The literature supports that providing Nurse Leaders with training on their role can improve patient outcomes, patient satisfaction, and nurse satisfaction (Adams et al., 2018; Bormann & Abrahamson, 2014; Wong et al., 2013). Your leaders and I want to know what we can do to help you become a better, more confident, and more knowledgeable leader. This survey is not anonymous, but please know that the responses to the rating scale questions (#15 and 16) will be kept confidential. We will use the information about your class attendance to help meet your specific learning needs and preferences, but only summarized information on the rating scale questions will be shared with your leaders to help identify and support the needs of the group as a whole.

1. Facility:

- a. [redacted]
- b. [redacted]
- c. Other Facility not listed (please specify)

2. What is your last name?:

3. What is your first name?:

4. What is your current role?

- a. Charge Nurse
- b. Assistant Nurse Manager
- c. Nurse Manager
- d. Senior nurse leader, Director level or above

5. Please indicate how many years you have held a nursing leadership position:

6. Please indicate how many years you have been in your current nursing leadership position:

7. What is your highest nursing degree?

- ○ a. Diploma
- ○ b. Associate (ADN/ASN)
- ○ c. Bachelors (BSN)
- ○ d. Masters (MSN)
- ○ e. Doctorate (DNP/PhD)

8. Please indicate other non-nursing degrees you have earned:

9. Please indicate your academic plans: (select those that apply)

- ☐ a. I am currently attending a nursing program to advance my degree.
- ☐ b. I have plans to advance my degree soon.
- ☐ c. I would like information about possible options to advance my degree.
- ☐ d. I am not interested in advancing my degree at this time.

10. Please indicate your leadership certification plans: (select those that apply)

- ☐ a. I am not interested in obtaining a national leadership certification (CNML, NE-BC, etc...) at this time.
- ☐ b. I would like information about possible leadership certifications.
- ☐ c. I have plans to obtain a national leadership certification soon.
- ☐ d. I already hold a national nursing leadership certification. It is:

11. Please indicate in which professional nursing organizations you are currently a member (ie. ANA, KNA, AACN, ENA, AMSN, AONE, KONL, etc,...). Indicate "none" if you are not a member of a professional nursing organization at this time.

12. Please indicate which nursing journals or periodicals you subscribe to or receive as part of a nursing organization's membership (ie. American Journal of Nursing, American Nurse Today, Critical Care Nurse, Nursing Management, Journal of Nursing Administration, etc...). Indicate "none" if you do not currently subscribe to or receive any professional nursing journals.

13. Please indicate which of the following leadership development opportunities you have participated in or attended during your leadership career: (select those that apply)

- [ ] a. Human Resource's New Leader Pathways course
- [ ] b. AACN's Essentials of Nurse Manager Orientation (ENMO) on-line training
- [ ] c. A nursing leadership certification review course (CNML, NE-BC, etc...)
- [ ] d. A nursing leadership conference (AONE, KONL, Magnet, etc...)
- [ ] e. Previously offered: Corporate College Course
- [ ] f. Previously offered: Supervisory Skills Course

14. Please indicate which of the following leadership development opportunities you have participated in or attended during the last 6 months: (select those that apply)

- [ ] a. Human Resource's New Leader Pathways course
- [ ] b. AACN's Essentials of Nurse Manager Orientation (ENMO) on-line training
- [ ] c. A nursing leadership certification review course (CNML, NE-BC, etc...)
- [ ] d. A nursing leadership conference (AONE, KONL, Magnet.etc,...)
- [ ] e. Other leadership courses or continuing education found on-line
- [ ] f. Other live/in-person courses or conferences on leadership skills or training.
- [ ] g. I am currently in school to advance my nursing degree
- [ ] d. Other (Please indicate):

15. Please indicate your level of agreement with the following statements:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. I obtained sufficient orientation to my role and it's responsibilities when I started my current leadership role.	○	○	○	○	○
b. I obtained sufficient leadership training when I started in my current role.	○	○	○	○	○
c. I have a copy of my job description and know what it says my job purpose and essential functions are.	○	○	○	○	○
d. I have access to the Advisory Board content and receive regular e-mail updates from them.	○	○	○	○	○
e. I feel confident that I have the knowledge to be a successful leader.	○	○	○	○	○
f. I have completed leadership professional development opportunities in the last 6 months (ie. a certification review course, continuing education courses, etc...).	○	○	○	○	○
g. I know what leadership training opportunities are available to me at this time.	○	○	○	○	○

16. Please indicate your level of agreement with the following statements:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. I know what questions are to be asked when completing the leader patient rounding.	○	○	○	○	○
b. I complete (or assist with completing) the leader patient rounding on at least 80% of patients in our unit.	○	○	○	○	○
c. I know what should be asked or discussed during the leader employee rounding.	○	○	○	○	○
b. I complete (or assist with completing) the official employee rounding on all (or at least 30) employees in my unit per month.	○	○	○	○	○
c. I recognize staff members for personal achievements and successes.	○	○	○	○	○
d. I celebrate unit-based achievements and successes.	○	○	○	○	○
e. I make it a priority to build relationships with all staff members in my area.	○	○	○	○	○
f. I am confident I can effectively deal with patient or family issues or concerns.	○	○	○	○	○
g I am confident I can effectively deal with employee issues or concerns.	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
h. I am confident in my ability to effectively coach and mentor my staff members.	◯	◯	◯	◯	◯
i. I am familiar with how to use the Just Culture/Performance Management Decision Guide for determining if corrective action is needed.	◯	◯	◯	◯	◯
j. I am confident in my ability to effectively apply corrective action when indicated.	◯	◯	◯	◯	◯
k. I am confident in my interviewing, hiring, and on-boarding skills for new staff members.	◯	◯	◯	◯	◯
l. I am confident in my knowledge of Quality Improvement (QI) and Evidence-based practice (EBP) project processes and models.	◯	◯	◯	◯	◯
m. I feel confident in my ability to lead effective continuous QI in my area.	◯	◯	◯	◯	◯
n. I feel confident in my ability to implement new evidence-based practices in my area.	◯	◯	◯	◯	◯
o. I am able to effectively coach staff and remove barriers in order to gain staff buy-in and engagement for EBP changes in my area.	◯	◯	◯	◯	◯
p. I am familiar with change models and theories that can assist with implementing proposed change in my area.	◯	◯	◯	◯	◯
q. I am confident in working with unit-level finances and budgeting.	◯	◯	◯	◯	◯
r. I am confident in my ability to calculate the number of full-time equivalents (FTE) required for the average daily census (ADC) of my unit.	◯	◯	◯	◯	◯
s. I am confident in my ability to evaluate, and justify, equipment and/or capital expenditures required for my unit.	◯	◯	◯	◯	◯
t. I have a firm understanding of how my unit/department's productivity is calculated.	◯	◯	◯	◯	◯
u. I have a firm understanding of how productivity is impacted by staffing decisions.	◯	◯	◯	◯	◯

17. Please share what you liked about the training or orientation you received when you obtained your current role:

18. Please share what you wished you had been told, learned, or gotten to do when you entered your current role:

19. Please look at the AONE Nurse Manager Competencies provided in the first part of this LEARN module. Please indicate what types of leadership topics or competencies you would like to receive more information or training on now (ie. what do you think would help you in your leadership role the most, at this time):

20. Please indicate any barriers there may be to advancing your personal leadership professional development:

Thank you for your candid responses! We will work to get you the information that you would like to be a more effective and successful leader. Together, we will make a difference!

References:

Adams, J. M., Djukic, M., Gregas, M., & Fryer, A. (2018). Influence of nurse leader practice characteristics on patient outcomes: Results from a multi-state study. *Nursing Economic$*, *36*(6), 259–267.

Bormann, L., & Abrahamson, K. (2014). Do staff nurse perceptions of nurse leadership behaviors influence staff nurse job satisfaction? The case of a hospital applying for Magnet® designation. *The Journal Of Nursing Administration*, *44*(4), 219–225.

Carol A., W., Greta G., C., & Lisa, D. (2013). The relationship between nursing leadership and patient outcomes: A systematic review update. *Journal of Nursing Management*, *21*(5), 709-724.