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<u>Walden University</u>

College of Management and Technology

This is to certify that the doctoral study by

Edward Mehdaova

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Walden University
2017

Abstract

Strategies to Overcome the Nursing Shortage

by

Edward Mehdaova

MBA, Indiana Wesleyan University, 2012

BSBA, Indiana Wesleyan University, 2009

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

December 2017

Abstract

Nursing shortage is a growing problem in the healthcare industry as hospital leaders are experiencing difficulties recruiting and retaining nurses. Guided by the PESTEL framework theory, the purpose of this case study was to explore strategies healthcare leaders use to overcome a nursing shortage. Participants were 5 healthcare leaders who have the knowledge and experience in recruitment and retention of registered nurses in a healthcare facility in Seattle, Washington. Data were collected through audio-recorded semistructured interviews and document review of the Hospital Employee Education and Training Program. Data analysis consisted of documenting the data, organizing and categorizing the data, connecting of the data, corroborating and legitimizing the findings, and reporting the findings. After data were transcribed, participants reviewed the transcripts for accuracy. Analysis of the data revealed 5 themes: development of communication programs, increased employee engagement, investments in nursing education, positive work environment, and improving the healthcare system through new policies and regulations. The implications for positive social change include the potential to alleviate pain, reduce deaths rates, and create a healthier community by overcoming nursing shortage.

Strategies to Overcome the Nursing Shortage

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Dedication

First, I want to thank God for the many blessings I am surrounded with. I dedicate this study to my daughter Sadia Maria Mehdaova who brought joy to my life during this journey. You have inspired me in many ways that you will never apprehend. I also dedicate this study to my parents who passed while working on this degree. I believe that I fulfilled their wishes. To my lovely wife who stood beside me and encouraged me along the way. Finally, to my brothers and sister who inspired me to pursue my dream. Thank you all.

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Section 1: Foundation of the Study

The shortage of nurses in the United States has become critical. Monahan (2015) forecasted future nursing supply and demand and projected that there would be a national shortage of 260,000 to 1 million registered nurse (RN) jobs in 2025. The projection of employment of RNs will increase 19% from 2012 to 2022, which is faster than the average for all occupations (United States Department of Labor Bureau of Labor Statistics, 2014).

Mancino and Feeg (2014) explained that nurses are in high demand to educate and to care for patients with various chronic conditions such as arthritis, dementia, diabetes, and obesity. In addition, the number of individuals who have access to healthcare services will increase because of federal health insurance reform, and the demand for nurses will increase to care for patients. Tsai, Orav, and Jha (2015) exposed that the health insurance reform made substantial payment cuts to hospitals, putting pressure on hospitals to reduce costs, potentially by discharging patients early.

Because many older people prefer treatments at home or in residential care facilities, RNs will be in demand in such settings (United States Department of Labor Bureau of Labor Statistics, 2014). The current nursing shortage in the United States created substantial difficulties for the delivery of safe and effective healthcare services for patients across the nation (Fischer, 2016). In this research, I explored the strategies the healthcare leaders use to overcome the nursing shortage.

Background of the Problem

With the growing population, the demand for medical professionals will become a challenge facing the healthcare industry (Kahana & Kahana, 2014). The current nursing shortage duplicates possibilities to create serious challenges for providers and patients and negatively affects the entire U.S. healthcare industry (Fischer, 2016). Gaudette, Tysinger, Cassil, and Goldman (2015) stated that between 2010 and 2030, the growing population and the increase of baby boomers who have been turning 65 and aging into Medicare since 2011, will continue driving Medicare demographic changes, growing the estimated U.S. population aged 65 or older from 39.7 million to 67.0 million. Gaudette et al. identified some of the risks for Medicare sustainability as an impact on healthcare spending. Because of the acceleration of the nursing shortage, the ability to meet the baby boomers' needs is under pressure (Cope, Jones, & Hendricks, 2016). Osingada et al. (2015) explained that assuming the challenges facing healthcare delivery in resource-limited settings, nurses recognize the need for continuous ethics education to transform their attitudes and methods toward the delivery of nursing care in healthcare institutions with high patient demand. The demand affects nurses' performance, attitudes, competence, and self-perception (Figueroa, Bulos, Forges, & Judkins-Cohn, 2013). Nurse managers need to have an understanding of revenue versus cost and expense and other operational efficiency metrics (Muller, 2013). Nursing leaders are the persons required to lead the needed changes in healthcare (Yoder-Wise, Scott, & Sullivan, 2013).

Problem Statement

By 2030, there will be a critical shortage of RNs in the United States (Auerbach, Buerhaus, & Staiger, 2016). By 2020 in the United States alone, the loss of RNs is projected to be 500,000 to 1 million individuals (Auerbach, Staiger, Muench, & Buerhaus, 2013). The general business problem was that by 2025, the nursing shortage may affect the national healthcare system. The specific business problem was that some healthcare leaders might not be aware of strategies to overcome the nursing shortage.

Purpose Statement

The purpose of this qualitative single case study was to explore the strategies healthcare leaders use to overcome a nursing shortage. I conducted open-ended interviews with healthcare administrators and healthcare managers who successfully used strategies to overcome a nursing shortage in a major hospital in the Seattle metropolitan area in the State of Washington. The study may contribute to social change by improving healthcare quality through greater awareness of strategies that could enable healthcare leaders overcome a nursing shortage today. Nurse leaders who find ways to address the negative impacts of a nursing shortage can reduce costs and increase revenues. Nursing leaders are the persons required to lead the needed changes in healthcare (Yoder-Wise et al., 2013). More efficient and effective hospitals provide better services to their customers, and because the main service of hospitals is curing patients, better services to patients imply healthier community.

Nature of the Study

The three research methods include qualitative, quantitative, and mixed methods (Mertens, 2014). I selected the qualitative method to use open-ended questions. Qualitative researchers use open-ended questions to discover facts about what is occurring or has occurred (Eriksson & Kovalainen, 2015). The data collection process is intended to collect reliable and valid data from interviewing participants with open-ended questions and through the use of recordings, journals, and review of documentation (Marshall & Rossman, 2014). In contrast, quantitative researchers use closed-ended questions to test hypotheses and analyze the data collected statistically (Mertler, 2016). Quantitative researchers create hypotheses and theories as they pertain to a specific phenomenon and use numerical data to support or refute the claims (Mertler, 2016). Mixed method research is an approach that combines quantitative and qualitative research methods in the same research inquiry (Venkatesh, Brown, & Bala, 2013). To explore the strategies healthcare leaders use to overcome nursing shortage, I did not test hypotheses, which is part of a quantitative study or the quantitative portion of a mixed methods study.

I considered four research designs for a qualitative study on strategies that healthcare leaders use to overcome a nursing shortage in healthcare institutions: (a) case study, (b) phenomenological, (c) ethnographic, and (d) narrative. A case study approach enabled me to explore the strategies. Case study was the best fit for the study because I was interested in an in-depth exploration of a case. Researchers conducting a case study develop an in-depth description and analysis of a case or of multiple cases (Yin, 2014).

Other qualitative designs such as phenomenological approach did not fit the purpose of the study because it involves a return to an experience to obtain a comprehensive description that provides the basis for a reflective structural analysis and portrays the essence of the experience (Manen, 2016). The narrative approach did not serve the purpose of the study because it is an approach in which the researcher uncovers stories that reveal information about phenomena. Researchers use a narrative approach to understand sociological questions about groups or communities through lived experiences, which could miss events or facts in the narration of stories (Marshall & Rossman, 2014). The ethnographic design did not fit the purpose of the study because the main reason for conducting an ethnographic study is exploratory. The ethnographic method is part of the broader category of qualitative methodologies in which researchers explore cultural practices, human beliefs and behaviors, and sociocultural changes over time (Dwyer, Gill, & Seetaram, 2014).

Research Question

The central research question of the study was:

RQ: What strategies do healthcare leaders use to overcome a nursing shortage?

Interview Questions

To narrow the scope of the central research question, the following interview questions assisted in gaining insight into the issue addressed:

1. What effective strategies do you use to prevent nursing shortage in your healthcare organization?

2. What strategies have worked best for your healthcare organization to prevent nursing shortage in your healthcare organization?
3. How do you implement a strategy to address the nursing shortage in your healthcare organization?
4. How do you assess the effectiveness of these strategies?
5. What are the principal barriers to implementing strategies to prevent nursing shortage in your healthcare organization?
6. How do you address the principal barriers to implementing strategies to prevent nursing shortage in your healthcare organization?
7. What other information, including company documents, that you consider relevant to this research would you like to share with me?

Conceptual Framework

The conceptual framework that I used is the PESTEL (political, economic, sociocultural, technological, environment, and legal) analysis framework. In 1967, Aguilar conceived the original form of PESTEL as ETPS (economic, technical, political, and social), the four environments to analyze when searching for analytical surroundings before judging strategic plans. Subsequently, members of the Arnold Brown Institute of Life Insurance reorganized ETPS as STEP for use in strategic evaluation of trends. Later, members of the Arnold Brown Institute modified the PESTEL framework to address macroanalysis of the external environment or scanning for environmental change, and defined this as STEPE (Yüksel, 2012).

Business leaders use the PESTEL framework to addresses two basic functions. The first function enables identification of the environment in which the company operates. The second basic function provides data and information that will enable the company to predict situations and circumstances that it might encounter in the future (Yüksel, 2012). As applied to the study, I used the PESTEL framework to explore strategies that healthcare leaders use to overcome nursing shortage. Using the PESTEL framework analysis assisted me in providing a big picture for healthcare institutions on how they operate, which could assist healthcare institutions in taking advantage of opportunities and minimizing risks and threats.

Operational Definitions

Baby boomers: Baby boomers are individuals born between 1946 and 1964 (Silva, 2016).

Job satisfaction: Job satisfaction is an employee's thoughts and emotions towards their job and how they evaluate their job (Alam, 2015).

Nursing shortage: Nursing shortage is the struggle to expand capacity to meet the rising supply and demand for nursing workforce nationally (Mee, 2014).

Registered nurses (RNs): RNs provide and coordinate patient care, educate patients and the public about various health conditions, and provide advice and emotional support to patients and their family members (U.S. Department of Labor Bureau of Labor Statistics, 2014).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions in research are thoughts and ideas the researchers agree to be reasonable and valid; however, evidence of the ideas does not exist (Ellis & Levy, 2010). Leedy and Ormrod (2015) posited that assumptions are rather basic; without assumptions, the research problem could not exist. The assumptions of the research lie at the bottom of respondents' honest answers to the interview questions. I assumed that the respondents provided truthful responses pertaining to strategies they used to overcome a nursing shortage. I also assumed that the participants had better knowledge of the explored strategies.

Limitations

Limitations of the study combine the internal and external components that influence the validity and the legitimacy of the exploration or research (Ellis & Levy, 2010). Because qualitative research occurs in the natural setting, researchers find it difficult to replicate studies (Elo et al., 2014). The limitations that affected the case study involved the participants' behaviors during face-to-face interviews caused by my presence. Some participants paused many times to restate their comments. I assured contributors that my presence should not affect any answers or data they wanted to provide. An additional limitation was the timeline for conducting the research, which the University's policies govern.

Delimitations

Delimitations are the limits of the study or the things that the researcher expects and intends to achieve (Ellis & Levy, 2010). Delimitations in the study included participants who worked in different departments in the hospitals and deal retention and nursing shortage effects. The primary goal for choosing this population was to engage frontline employees that dealt with nursing shortage, retaining nurses, and the process of hiring new nurses in the selected healthcare institution. To achieve an in-depth understanding of the phenomenon under study, I intended to select only one major healthcare institution in the Seattle area that had significance and focus the research on addressing the research question. By selecting the one major healthcare institution in the greater Seattle area, I narrowed the investigation to provide a focused exploration of the strategies used by healthcare leaders to overcome a nursing shortage.

Significance of the Study

This research was necessary to understand the strategies that healthcare leaders used to overcome nursing shortage. Understanding the explored strategies will assist experts in the healthcare industry to improve supply and demand for nurses in terms of reducing costs and educating future generations. The following subsections include the contribution to the business practice and the implication for social change.

Contribution to Business Practice

Conducting the study provided a venue and opportunity for healthcare professionals to express and share the strategies that they used to overcome a nursing shortage. As applied to the practice of business, the benefits of this study included an

increased understanding regarding the different strategies healthcare managers use to reduce risk of nursing shortage. The implication for business practice was that healthcare leaders implement strategies that could have a positive impact on overcoming nursing shortage. Identifying the explored strategies could promote awareness and open opportunities for other healthcare leaders to reduce the possibility of occurrence of nursing shortages or to reduce the impact of those shortages on the healthcare organizations.

Implications for Social Change

After exploring the strategies healthcare leaders use to overcome a nurse shortage and its effects, I shared the results of the study with hospital leaders. Muller (2013) explained that nurse managers should have an understanding of revenue versus cost and expense and other operational efficiency metrics. Consequently, more efficient and effective hospitals will provide better services to their customers since the main service of hospitals is curing patients; better services to patients imply a healthier community.

A Review of the Professional and Academic Literature

This section provides an inclusive overview of the literature review related to the nursing shortage and its effects on hospitals. To search for academic sources for this study, I used Walden Library. I used multiple search engines such as ProQuest, EBSCOhost, and PubMed databases. I searched the databases using a combination of terms such as *nursing shortage, hospital revenues, registered nurses,* and *effects of nursing shortage*. Most articles retrieved were from peer-reviewed journals and were published within the last 5 years. Some articles were older to provide historical

background of the nursing shortage and its effect on hospitals. The total number of sources for the study was 192 references; of these sources, 167 (87%) were articles published in peer-reviewed journals while 167 (87%) had publication dates that were less than 5 years from my anticipated doctoral completion date. The literature review included relevant theories, background of nursing shortage, shortage of RNs, supply and demand of RNs, the cost of nursing shortage on healthcare institutions, the impact of safe staffing and quality of care, nursing faculty, the financial impact of nursing shortage on the state of Washington, hospital expenses, and proposed strategies to resolve nursing shortages.

Relevant Theories

The essential concept used in this research was the PESTEL framework, which provided a foundation to analyze and explore strategies that healthcare leaders used to overcome a nursing shortage. I used the PESTEL framework analysis to describe how healthcare institutions take advantage of opportunities and minimize risks and threats. Business leaders use the PESTEL framework to address two basic functions for a company. The first function enables identification of the environment in which the company operates. The second basic function provides data and information that will enable the company to predict situations and circumstances that it might encounter in the future (Yüksel, 2012). Visconti (2016) explained that PESTEL analysis is an initial management of the strategic environment, and PESTEL framework analyses moderate researched problems and govern concerns. I considered other theories before I selected the PESTEL framework, such as the contingency theory and the general system theory. Contingency theory provides a foundation for managers to prepare for and to reduce the

degree of any disorders in the organization (Talluri, Kull, Yildiz, & Yoon, 2013). The development of contingency theory goes back to the 1950s as a response to past theories of management, commonly stressing "one best way" to organize (Kim, Chung, Lee, & Preis, 2015). Contingency theorists affirm that applying a contingency framework establishes bypasses of the disruption and reduces the effect of the disorders (Talluri et al., 2013). Because the purpose of the study was to explore strategies healthcare leaders use to overcome a nursing shortage, contingency theory would not have served the research purpose. The contingency theory was for building a joint communications network to manage and alleviate disorders and to minimize the impact on business performance (Talluri et al., 2013).

The second theory I considered was systems theory; von Bertalanffy introduced the general theory of systems or the general system theory in 1937 (Lewis, 2015). The general system theory proved to be influential because it provides a general framework for organizations and managers to understand how organizations function. The fundamental principle of open system theory for organizations is to import some form of energy from the environment, transform the energy in several methods, and produce an output to export back to the environment (Morgeson, Mitchell, & Liu, 2015). The general system theory would not serve the purpose of the study because it pursues a holistic approach as suggested by Lewis (2015). I used the PESTEL framework to discover the strategies that healthcare leaders use to overcome a nursing shortage. Gupta (2013) explained that the PESTEL analysis is the supreme corporate approach for exploring the external business environment.

The PESTEL framework is a reminder used by strategists in combining macroenvironmental issues in an organization or group to help identify opportunities and risks (Witcher & Chau 2010, p. 91). Analyzing macroenvironmental factors is especially valuable when used to understand how external influencers, drivers, and hurdles affect a particular area of focus such as nursing education (Johnson, Whittington, Scholes, & Pyle, 2011). Ketels and Keller (2015) explained that for more than 25 years, the PESTEL framework was still the most essential and common strategy concept taught in business schools to managers, strategists, marketers, and scholars. I used the PESTEL analysis framework to codify and categorize current and emerging trends relevant to nursing shortages and their effect on the broader healthcare environment. Consequently, through the PESTEL lens, I explored the research question and expanded on the literature review for healthcare organizations to understand the big picture of the strategies healthcare leaders use to overcome a nursing shortage and seek opportunities to blunt its effects. Exploring the strategies was an essential component of the total analysis of the PESTEL framework theory. To explore the strategies, I addressed the research questions through political, economic, social, technological, environmental, and legal factors related to nursing shortage. Gupta (2013) explained that political factors might incorporate general changes in the domestic political environment, government change, world power movements, and certain legislation and regulations. Economic changes are likely to incorporate the impacts of financial cycles, examples of world trade, currency rate changes, and labor markets and rates. Gupta added that social change might incorporate the impacts of demographic changes and concerns about the environment and sustainable

advancement. Technological changes may cover the impacts of innovative change on products, procedures, and channel distribution. Oven et al. (2012) explained that environmental events would possibly lead to a focus on constructing capabilities in the nursing profession to respond to natural catastrophes, illnesses, food shortages, and the influence of organizational breakdowns on healthcare. Researchers have used the PESTEL framework analysis in similar studies that needed exploration of different of strategies to identify and resolve problems. According to Gillespie (2011), researchers used the PESTEL analysis framework in macroenvironmental analyses and in strategic planning for future contingencies.

Background of Nursing Shortage

Exploring the current nursing shortage was important to identify its effect on the healthcare industry in the United States. To identify the causes of the present nursing shortage, researchers must look at the issue in the past and address factors contributing to the issue today. To measure an organization's turnover rates, researchers must look at the organization's ability to retain its employees. Researchers represent turnover rate by an organization's capacity to keep existing employees from deliberately leaving the job (Park et al., 2015). The past nursing shortages resulted from increased demand for nurses, such as the growth of hospitals and the expansion of healthcare services during the institution of Medicare and Medicaid (Elgie, 2007). Establishing a culture of retention and healthy clinical nurse practice environments are two major challenges confronting nurse leaders today (Kramer, Halfer, Maguire, & Schmalenberg, 2012). Additionally, Elgie related the 1983 government policy to adding extra pressure to the demand side of

nursing when the legislation changed the Medicare reimbursement from a fee-for-service system to system based on diagnostic categories.

The federal government has passed regulations and laws that regulate and support strategies toward reinforcing the nursing workforce that concentrate on recruitment and retention. Examples of such policies are the Nurse Reinvestment Act of 2002 and the American Recovery and Reinvestment Act of 2009 (Kaiser Foundation, 2012). Another major law is the passing of the ACA that has parts intended for development of the wellbeing of workforce (Kaiser Foundation, 2012). In addition to the above regulations and laws, the U.S. Department of Health Resources and Services Administration (HRSA) has built up the Nurse Education, Practice, Quality and Retention (NEPQR) program, which awards certified schools of nursing and healthcare facilities to promote nursing education, enhance patient care quality, and expand nurse retention (HRSA, 2012). However, Elgie (2007) explained that the NEPQR change demanded more patient care, an increase in technology, and more paperwork, thus, driving up nursing demand. Elgie asserted that the supply of nurses decreased because student enrollment in nursing decreased.

On the other hand, Ebrahimi, Hassankhani, Negarandeh, Azizi, and Gillespie (2016) explained that to support new nursing graduates, government programs should eliminate barriers such as lack of support-seeking behaviors, management weaknesses, ineffective communication, and cultural barriers. Elgie (2007) previously agreed that the government funding provided to nursing education dating back to the early 1960s mainly created the current nurse shortage. AbuAlRub, El-Jardali, Jamal, Iblasi, and Murray

(2013) addressed other reasons for the nursing shortage such as a lack of educational institutions offering nursing courses in rural areas contributing to the low rate of enrollment of students with rural backgrounds into nursing, resulting in a shortage of staff in rural healthcare institutions. The nursing shortage is a consequence of supply and demand of skilled nurses. Lastly, Cope et al. (2016) added that there are many factors that contribute to the nursing shortage that mainly include aging of nurses and the effects of retiring baby boomers.

Shortage of Registered Nurses

To become an RN, an individual must complete an associate degree (ASN) or a bachelor degree in nursing (BSN). In Washington, nurses must pass the National Council Licensure Examination (NCLEX) administered by the National Council of State Boards of Nursing (National Council of State Boards of Nursing, 2014). According to the National Council of State Boards of Nursing (2014), the first responsibility in licensing a nurse is to ensure that applicants have completed a nursing education program approved by a state board of nursing or a state commission on higher education. The board of nursing sets the standards for nursing education programs ensuring that their curriculum meets national nursing education standards, the students have proper clinical experiences, and faculties are qualified to teach. In addition, boards of nursing monitor nursing education programs on an ongoing basis to ensure that they continuously provide quality education (National Council of State Boards of Nursing, 2014).

Monahan (2015) evaluated the prediction of nursing shortage by 2025 by developing demand and supply models to predict the RN job shortage in each of the 50

states. Monahan predicted an increase in demand for RNs of 26% by 2020. Monahan also predicted a shortfall of 53,000 nurses. The study revealed that in the United States, 14% of nurses are considering leaving the job.

Baker, Hebbeler, Davis-Alldritt, Anderson, and Knauer (2015) conducted a study using four public school located in California. The results of the study revealed that the state of California invests minimally in nursing schools. The study also revealed that only 43% of the state's school districts hire school nurses. Zhu, Rodgers, and Melia (2014) discovered that nurses reported many positive aspects to practicing clinically. RNs identified interactions with patients and families as being emotionally satisfying and the loss of that interaction as their biggest regret since leaving practice. Many RNs explained that they felt guilty about not practicing clinically; however, most participants felt a lack of support in the workplace at many levels, and the RNs were most troubled when the lack of support arose from their peers. The emotions also extended vertically to feelings that management and physicians did not support the RNs in clinical practice (Zhu et al., 2014). Zhu et al. concluded the study by addressing four themes: (a) voluntary leaving, (b) passive staying, (c) adaptive staying, and (d) active staying.

The four themes identified by Zhu et al. (2014) could be a motivation for nurses to seek other employment opportunities. Tuckett, Winters-Chang, Bogossian, and Wood (2014) explained that a big percentage of authorized RNs reported that they were prepared and willing to change occupations. In addition to the findings provided by Tuckett et al. (2014), Flinkman and Salanterä (2014) stated that the steady loss rate for recently authorized nurses might have the potential to increase because of negative

feelings such as anxiety, feeling defeated, and lack of support from management; Moreover, inexperience, weak working relationships, and powerful urge for support that is sometimes not accessible are probable reasons why new nurses do not stay with their employers (Flinkman & Salanterä, 2014). Wallace (2013) similarly stated that effective staffing model should take into account resources such as support personnel and adequate equipment and supplies as having sufficient resources on hand improves the nurse’s workflow. Westphal, Marnocha, and Chapin (2015) suggested that recruitment and retention strategies in nursing need awareness of the factor of caring as a motivation that draws people to nursing field and contributes to nurses remaining in the profession. The other segment identified was better wages and working conditions.

A different study conducted by Akhtar, Haider, Aamir, and Hamid (2016) found that there were countless reasons why nurses leave their positions in hospital-based settings to move on to other organizations, alternative areas of practice, or leave the profession altogether to pursue new careers. Some of the reasons included lack of appreciation from superiors, a diminished sense of value within the organization, and lack of professional stimulation. Allen, Holland, and Reynolds (2014) discovered that the workplace interaction did not modify the effect of nurse employment status on a nurse's tendency to exit the profession. Allen et al. explained that the workplace sector also influenced a nurse's propensity to leave the profession, but the interaction term demonstrated that employment status had a greater influence than workplace sector.

Supply and Demand of Registered Nurses

Along with that of other health disciplines, the nursing workforce did not evenly spread across the country, producing varying levels of demand and supply that resulted in oversupply in urban areas while rural areas, especially in larger states, had difficulty maintaining the necessary supply of nurses, physicians, and other health providers. Consequently, in rural areas, nurse practitioners practiced to the fullest extent of the legal scope of practice without physician oversight requirement to relieve the rural primary care shortages. States should support rural nurse practitioner practice to meet rural primary care needs (Spetz, Skillman, & Andrilla, 2016). The demand for nurses often described for the nation or a single state, but in fact, demand was highly localized. For an entire state, the number of nurses demanded might match the number of nurses supplied, but for specific geographic regions, there may be a mismatch (Spetz & Kovner, 2013).

While many challenges face the healthcare industry, recruitment and retention are key elements in improving the healthcare system. The American Nurses Association (2012) revealed that recruitment and retention of RNs are real difficulties in the nursing shortage environment. Snavely (2016) explained that RN’s work surged, and the shortage gap closed fundamentally because of the subsidence and its related impacts. Economic effects add to the problem of recruitment and retention. The latest economic collapse has made a bubble, which will disappear as the economy enhances and shortages reemerge (Snavely, 2016).

Researchers at the Health Resources and Services Administration (2012) revealed that there were 2.8 million RNs (including advanced practice RNs) and 690,000 learner

practitioner nurses (LPNs) in the nursing workforce (i.e., working in the field of nursing or seeking nursing employment) in 2008 to 2010. About 445,000 RNs and 166,000 LPNs lived in rural areas (about 16% of the RN workforce and 24% of the LPN workforce). The report also revealed that nursing workforce grew substantially in the 2000s, with RNs growing by more than 500,000 (24.1%) and LPNs by more than 90,000 (15.5%). As a result, the growth in the nursing workforce outpaced growth in the U.S. population. The number of RNs per 100,000 population (per capita) increased by about 14%, and the number of LPNs per capita increased by about 6%.

Statistics released by the Health Resources and Services Administration in 2012 showed that due to strong growth in new entrants, the absolute number of RNs younger than 30 has increased. Nevertheless, about one-third of the nursing workforce is older than 50. The average age of nurses has increased over the past decade by almost 2 years for RNs and 1.75 years for LPNs, reflecting aging within the very large cohort of nurses aged 41 to 50 in 2000. The Health Resources and Services Administration also revealed about 55% of the RN workforce hold a bachelor's or higher degree. An associate's degree in nursing was the first nursing degree for many of the nurses obtained. The percentage of the RN workforce holding a bachelor's or higher degree increased from 50 to 55 over the past decade.

The majority of RNs (63.2%) provide inpatient and outpatient care in hospitals (Health Resources and Services Administration, 2012). The distribution of RNs across settings held relatively steady over the past decade. However, while the proportion of RNs in hospitals held steady, the number of RNs working in hospitals increased by more

than 350,000 (about 25%). In contrast to RNs, less than one-third of LPNs (29.3%) work in hospitals and that proportion has declined slightly over the past decade (HRSA, 2012).

In the midst of the nursing shortage, healthcare seekers, health organizations, and state and government agencies monitor the issue of supply and demand for nurses and healthcare employees. Auerbach et al. (2013) stated that long-term for nursing supply and demand forecasts predict progression in the total number of RNs per capita under certain circumstances. The projected improvement is a result of exceptional levels of registration in nursing degrees over the past decade. Auerbach et al. (2013) also explained that total number of associate and baccalaureate degree RN graduates between 1985 and 2010 fluctuated at about 80,000 for 2 decades. The number of new RN graduates more than doubled from 74,000 in 2002 to 157,000 in 2010. Auerbach et al. (2013) claimed that if growth in new RN graduates continues, the projected shortages for 2020 and beyond would decrease. Representatives of the American Association of Colleges of Nursing (AACN, 2017) explained that recently, the demand of RN to BSN programs expanded significantly with 646 projects accessible, including more than 400 curriculums offered online or using the web. The representatives agreed that the increase in the quantity of RN to BSN programs and registering in undergraduate studies is significant to keep the academic consistency of these curriculums, including the requirement for quality practice experiences.

Associates in the National League for Nursing (National League for Nursing, 2014) explained that the nursing shortage is affecting communities across the nation. The nurse faculty and nursing shortage is outpacing the level of federal resources allocated by

congress to help alleviate the situation. Appropriations for nursing education, such as the Title VIII - Nursing Workforce Development Programs, are inconsistent with the healthcare reality facing our nation. Insufficient investments will diminish human resource development, a shortsighted course of action that potentially further jeopardizes access to and the quality of the nation's delivery of healthcare (National League for Nursing, 2014).

The Cost of Nursing Shortage on Healthcare Institutions

Hospitals facing financial uncertainty have sought to reduce nurse staffing as a way to increase profitability (Everhart, Neff, Al-Amin, Nogle, & Weech-Maldonado, 2013). Everhart et al. believed that nurse staffing was essential in terms of quality of patient care and nursing-related outcomes. Nurse staffing can provide a competitive advantage to hospitals and as a result, a better financial performance particularly in more competitive markets. Additionally, Stone and Feeg (2013) stated that the changes in healthcare delivery left hospitals and clinics in the area with fewer openings and intensified the competition for positions. They detailed 1,800 nursing job vacancies statewide in 2010 with a mismatch of 2,850 students graduating from associate or baccalaureate programs. Stone and Feeg added that while there were a handful of large hospital systems within the area, there were still fewer available opportunities in the hospitals because of budget cuts and the overwhelming number of new graduates. There was a public appearance of a nursing shortage, but in actuality, there were too many new graduates, not enough funding within the community to hire and train new graduates, and current RNs were working longer than they ever have in the past.

Lewis (2015) revealed that RN labor costs make up 25.5% of all hospital expenditures annually, and all nursing labor costs represent 30.1% of all hospital expenditures annually. Lewis described data retrieved from Occupational Mix Survey administered by the Centers for Medicare and Medicaid Services (CMS), nursing skill mix, hours, and labor costs combined with other CMS hospital descriptive data, which included types of hospital ownership urban or rural location, hospital beds, and case-mix index. States with higher ratios of RN compared with Learner Practitioner Nurses (LPS) licenses used fewer LPNs in the inpatient setting (Lewis, 2015). The key elements of healthcare reform relevant to promoting equity include access, support for primary care, enhanced health information technology, new payment models, a national quality strategy informed by research, and federal requirements for healthcare disparity monitoring (Call et al., 2014). Call et al. added that with effective implementation, improved alignment of resources with patient needs, and most importantly, revitalization of primary care, these reforms could measurably improve equity. Hospitals should be concerned because more than 46% of Medicare budget goes to hospitals. Before the healthcare reform hospitals fought hard against proposals to enroll several million people in Medicare (Gu et al., 2014). Gu et al. added that hospitals are going to spend the next decade under detailed public scrutiny of their costs and business practices.

According to Texas Center for nursing workforce studies (2006), a study conducted among 292 responding hospitals revealed hospital employers rated the nursing shortage as severe for 2005 when they failed to fill RNs' positions for more than 60 days. The study revealed that hospital employers reported the following impacts of the RN

shortage such as over-crowding in emergency rooms, decreased physician satisfaction, reduced number of beds (closing or reducing size of units or departments), increased patient complaints, and decreased patient satisfaction. The study also revealed that nursing shortage in the United States pushed many healthcare facilities to recruit nurses from other countries to fill the current RN staffing vacancies. Texas was a good example of recruiting internationally educated nurses (IENs) with 11% of the total of nurses in the state. The study disclosed the cost of recruiting IENs was about $10,000 and took between 18 and 24 months for the nurse to arrive. Finally, the study revealed that nurse recruitment agencies advertised that it would cost $78,700 to recruit, house, orient, and pay a nurse from India. Whereas several nurse executives in Texas reported that they are making efforts to recruit nurses in the united states and financially support faculty salaries at local colleges and universities, paying relocation costs for instructors, and providing money for scholarships for nursing students (Texas Center for nursing Workforce studies, 2006).

Having higher nurse staffing levels, gives a better chance to avoiding federal monetary penalties for excessive readmission rates (Mitka, 2013). Mitka added that under provisions in the Affordable Care Act, the U.S. Centers for Medicare and Medicaid Services implemented the hospitals Readmission Reduction Program. Government representatives of the program used financial penalties to reduce the Medicare spending on preventable readmission each year. In contrast, Everhart et al. (2013) explained that nurse staffing is important in terms of quality of patients' care and nursing-related outcomes. Everhart et al. added that nurse staffing could provide a competitive advantage

to hospitals, consequently better financial performance, particularly in more competitive markets. Everhard et al. found that nurse-staffing levels had a positive association with financial performance in competitive hospital markets; however, Everhard et al. found no significant association in less competitive hospital markets. Hospitals in comparison states, operating margins declined significantly for California hospitals in Quartiles 2 and 3. Operating expenses increased significantly in Quartiles 1, 2, and 3 (Gilman et al., 2014). Anderson (2014) revealed according to a recent survey, 40% of hospitalists are seeing heavy workloads because of unsafe conditions, delays in patient admissions and discharge, and failure to discuss treatment options. Anderson explained that hospitals and providers with limited resources and medical professionals working in economically depressed areas have difficulty meeting benchmarks of progress (Anderson, 2014). Hospitals' payments reduced under the Affordable Care Act (ACA), strained finances, limited operating budgets, and staff layoffs aggravated by ACA financial penalties, payment reductions would cause a downward spiral of low performance (Anderson, 2014).

The Impact of Safe Staffing on Patient Safety and Quality of Care

The nurse staffing is complex and no rapid solution will appear in the near future (Hertel, 2012). Hertel explained that supports not regulations are necessary for nurse – patient ratios. Hertel added that RNs lack information and engagement in defining the best staffing ratios that promote patient safety. Alternatively, Wallace (2013) explained that creating a safe patient environment requires nurse manager to evaluate competency levels and critical thinking skills. Spetz, Harless, Herrera, and Mark (2013) conducted a

multivariate analysis of nurse staffing and patient outcomes that revealed an improvement in patients' mortality following a medical or surgical complication because of increase of RNs staffing. The analysis revealed a link between higher staffing and shorter lengths of stay in hospitals. Needleman et al. (2011) published findings in the New England Journal of Medicine, which showed a link between shortage of nurse staffing and higher patient mortality rates. Needleman et al. analyzed the records of nearly 198,000 admitted patients and 177,000 8-hour nursing shifts across 43 patient-care units at large academic health centers. The data revealed that the mortality risk for patients was about 6% higher on understaffed units as compared with fully staffed units. Needleman et al. also found that mortality risk increases when a nurse's workload increases because of high patient turnover. Because of nurse turnover, both patients and medical institutions suffer. Examples of outcomes of expanded nurse turnover for patients incorporate expanded mortality, contamination and infection rates, falls, prescription errors, medical errors, unfavorable occasions, and diminished patient fulfillment (Park et al., 2015; Cox et al., 2014).

The higher numbers of nurses are associated with improved survival rates among patients that are seriously ill (Duffin, 2014). Duffin revealed that seven additional lives might survive for every 100 patients if nurse numbers increased from four to six per bed. Duffin discovered that the reason survival rates improved with higher numbers of nurses was that nurses spend more time with critically ill patients than other healthcare professionals do, and are more likely to detect early signs of deterioration. Ausserhofer et al. (2013) revealed that of 35 hospitals over a 7-year period, a significant relationship

exists between RNs in the skill mix and medication errors and falls. As the proportion of RNs increased, the medication errors decreased. Ausserhofer et al. found that any decrease in staffing below the staffing minimum, increases medication errors for patients. For nurses, the shortage of staffing is a result of extended work hours, connection of inadequate staffing with expanded nurse workload, exhaustion, and work dissatisfaction (Cox et al., 2014). As nursing turnover increases, patients and healthcare institutions negatively get affected (Park et al., 2015). Authoritative variables that identify with job fulfillment and personal individual factors for every nurse are consequences of nurse turnover. Intention to quit is a powerful indicator of leaving the job and turnover (Zhang et al., 2014). On the other hand, Park et al. (2015) explained that high work demand does not certainly associate with expanded turnover. In fact, challenged nurses in the challenged working environment report more employment fulfillment. Turnover intention is equally associated with absence of management support and absence of participative administration (Park et al., 2015). When nurses are happy with their occupation and feel devoted to the organization, they are less likely to leave their job for other potential opportunities (Maurits, de Veer, van der Hoek, & Francke, 2015). When nurses quit their jobs, the patient is the ultimate loser. Turnover influences the quality of patient care. Cox et al. (2014) claimed that nursing turnover relates to inadequate staffing.

A study conducted by Shekelle (2013) revealed that 4535 out of 232,342 surgical patients in Pennsylvania died within 30 days of discharge because of nursing shortage. The differences in nurse-to-patient staffing ratios (4:1 vs. 8:1) may have been a factor in these patient deaths (Shekelle, 2013). Spetz et al. (2013) confirmed that there were

significant improvements in patient mortality following a medical or surgical complication when RNs staffing increased. Further data revealed a link between higher staffing and shorter lengths of stay. Nicely, Sloane, and Aiden (2013) also confirmed that hospitals that had higher nurse to-patient ratios, the rates of patient mortality decreased by approximately 60%. West et al. (2014) stated that the availability of medical and nursing staff is associated with the survival of critically ill patients and suggested that future studies should focus on the resources of the healthcare team. Healthcare system was truly patient-centered and might provide higher quality healthcare with greater efficiency while improving the patient experience. Patient-centered care shifted the focus from the diagnosis to the patient, a shift that could result in significant improvements in clinical outcomes, patient satisfaction, and cost reduction (Starfield, 2016).

There is a relationship between the amount of RN care and the improved patient outcomes in large hospitals; but little is evident about RN staffing in small critical access hospitals, which comprise 30% of all US hospitals (Spence Laschinger, & Fida, 2015). Patient and staff satisfaction improved because of the Transforming Care at the Bedside program that was developed as a way to improve care on medical-surgical units, patients' and family members' experience of care, teamwork among care team members, and to increase satisfaction and retention of nurses (Spence Laschinger, & Fida, 2015). After the implementation of Transforming Care at the Bedside program, turnover rates for RNs decreased to lower rates. The time RNs spent in direct patient care showed an increase compared to the control unit, and value-added care increased over baseline (Lavoie-Tremblay et al., 2013).

Nursing Faculty

While the nursing profession deals with nursing shortage, the necessity for increasing the number of nurses relates to education and shortage of nursing faculty. Pelayo (2013) addressed the nursing shortage in the state of Texas. Pelayo explained that Texas was experiencing a growing nurse faculty shortage as more educators reach retirement age. Pelayo also explained that the largest nursing program in the state had 50% of nurse faculty 60 years of age and older; 70% were eligible to retire within 5 years, and 13 full-time faculty were eligible to retire immediately. Pelayo proposed three innovative strategies targeted in 3-year project to increase qualified nurse faculty, develop new instructional experiences, increase the numbers of nursing students enrolled, and ultimately increase the numbers of qualified nurses in the community. The first strategy provided opportunities for nurses with baccalaureate degrees to serve as clinical teaching assistants (CTAs) in the simulation lab while pursuing a Master of Science in nursing degree. The second strategy included the use of the simulation lab as an actual clinical experience, permitting increased enrollments without adding to the need for clinical space. The third strategy introduced the concept of the Combination Inpatient and Simulation Clinical Experience, in which nurses investigated, developed, and used best practices. Education of the nurse, in the radically changing healthcare environment, also needs to change (Pelayo, 2013). There was a shortage of academically qualified faculty available to teach in schools of nursing. The nursing faculty shortage was because of a confluence of factors, including the global migration of nurses, a seeming persistent devaluation of faculty by academic programs, disincentives, and an overall reduction in

full-time equivalent faculty positions (Nardi & Gyurko, 2013). Nardi and Gyurko explained that nursing faculty recruitment and retention was critical to increasing the global capacity of the nursing professions' education infrastructure.

Magnussen et al. (2013) described the transformational changes in the scope and pedagogy of nursing education within a state university system through the development of the Hawaii Statewide Nursing Consortium (HSNC) curriculum. Magnussen et al. stated that HSNC designed the curriculum as a long-term solution to the anticipated shortage of nurses to care for Hawaii's diverse population. Magnussen et al. stated that to begin the process, HSNC drafted, created, and debated competencies over 1.5 years. Next, the steering committee developed outcomes based on the competencies for each year of the 3-year curriculum. The final task, to lay the foundation for the new curriculum, was to identify the health indicators, disparities, and major health issues in the state. HSNC then used the information to guide focus areas throughout the curriculum.

Clark and Allison-Jones (2011) described the application of human capital theory in a creative venture between a health system and a school of nursing that had demonstrated success in addressing health indicators, disparities, and major health issues in the state. The application of human capital theory developed a tuition advancement program to support interested personnel in attaining the associate degree in nursing and to support current RNs in attaining the baccalaureate degree. Clark and Allison-Jones stated that with nursing education programs challenged to increase student enrollment, the programs confronted many colleges with a limited financial infrastructure, a shortage of

qualified faculty, and difficulty establishing the clinical sites needed to support additional students. Clark and Allison-Jones stated that increasing the number of RNs in the system teamwork resulted in the development of a tuition advancement program (TAP), a benefit package to support employees interested in pursuing nursing careers and increasing their educational levels. Morgan and Somera (2014) explained that the future of nursing is dependent on nurses with terminal degrees to construct an innovative framework able to support the mounting complexities of effective and accessible care with excellent outcomes while preserving organizational resources.

Jacobs (2016) provided a potential solution for recruiting and retaining nurses for specialty areas of nursing as well as professional nursing associations by pairing student nurses with professional nurses who belong to nursing associations as mentors. Jacobs discussed the importance of engaging student nurses in specialized fields of nursing and professional nursing associations; articulated the purpose of a nurse immersion program; described the development, implementation, and evaluation strategies of mentorship nurse immersion program; and provided lessons learned from the nurse immersion program. Additionally, Hickey, Sumsion, and Harrison (2013) proposed awareness of nursing double degrees (DD) and posed questions about their possible impact on nursing shortages. Hickey et al. explained that double degrees ranged between four to six years in length depending on the university requirements and the degree of similarity in the combined disciplines. For example, all Bachelor of Nursing/Bachelor of Midwifery double degrees were 4 years but a Bachelor of Nursing/Bachelor of Arts in International Studies was 5 years. Hickey et al. explained that there was a lack of knowledge about

why increasing numbers of students were interested in DDs or what their experiences were like while studying two degrees concurrently. Hickey et al. also added the double degrees programs did not require staff with nursing qualifications, a DD nursing graduate with the second degree in early childhood teaching was well qualified to work in these programs.

Faculty shortages affect the nursing workforce, and the increase for educational options for nurses is imperative. Solutions for nursing shortage demand an increase for the nursing faculty workforce. McKinnon and McNelis (2013) summarized the driving forces in the pursuit of graduate studies in nursing as interest in and availability of graduate studies, financial assistance and employer incentives, flexible program delivery options, family support, mentoring, and collaborative initiatives. Restraining forces in the pursuit of graduate studies in nursing included: time constraints and geographical barriers, financial costs, work responsibilities, and family responsibilities.

The Financial Impact of Nursing Shortage

The healthcare field employs approximately 235,130 individuals in the State of Washington (Kaisar Family Foundation, 2015). The number of nursing jobs has increased by 20% and will continue to grow as projected until 2022. (American Nurses Association, 2014). Washington State Nurses Association (2009) acknowledged that the economic recession required healthcare organizations to make demanding decisions about allocating scarce funds. Laying off direct care staff nurses or nurse leadership was risky and would cause medical errors, poorer patient outcomes and nursing injuries as well as burnout. Reductions in salaries and benefits, along with reductions in continuing

education and residency programs were restricted. These financial outcomes would have a negative impact on nursing retention, and would lead to unsafe patient care (Washington State Nurses Association, 2009). According to Washington State Nurses Association, investing in nurse retention is a financial responsibility now and for the future. The associated costs to recruit, hire, and train a nurse for a job would range from $80,000 to $100,000. Nursing Shortage and retention issues were associated with creating a workplace where nurses are valued, respected, and fulfilled to reduce burnout. The economic impact was associated with healthcare facilities saving money and reducing costs as a whole.

Hospital expenses. According to Swedish health system's revenues and expenses (2013), the total expenses of Swedish's hospitals were $1,968,082,000 in 2013. Because hospitals operated around the clock, payroll and benefits were the largest expense component, representing approximately 50% of Swedish hospital costs. Operating expenses accounted for 40% including utilities of the total expenses. All other services made up 10% of hospitals' total expenses (Swedish Hospital, 2013). Gilman et al. (2014) explained that financial performance encompasses the direct labor cost, comprised inpatient care costs, and hospital expenditures.

Cho et al. (2015) revealed that nursing is one of the largest categories in hospitals' budgets. Cho et al. suggested that nursing characteristics sometimes need much consideration in combination and point to promising strategies for improving the quality and safety of hospital care while preserving scarce nurse resources by making informed investments. Cho et al. explained that better nurse work environments exited where both

doctors and nurses had good working relationships, nurses were involved in hospital affairs, management listens and responds to patient care problems identified by bedside nurses, and institutions invested in the continued learning of nurses and quality improvement for patient care.

Langabeer and Helton (2015) explained that trends in hospital revenues and costs over the past decade showed that labor costs, which included salaries and benefits for physicians, nurses, technicians, and numerous other personnel, accounted for a large proportion of overall hospital costs, as well as total cost increases over the past decade. Non-labor costs also had increased, including pharmaceuticals, professional fees, and maintenance of additions to plant and capital, including technology. Langabeer and Helton added that labor costs accounted for more than half of hospitals' total expenses. Labor costs increased steadily in the past few decades. An increasingly significant issue for hospitals was the growth in the patients covered by the federal Medicare program or a state Medicaid program. Healthcare costs in general were on the rise. Several factors attributed to the rise including technological advances, biological advances, an aging population, pharmaceutical costs, provider shortages, and the current state of economic distress (Patel & Rushefsky, 2014). Recent reports revealed profits for hospitals are slim and on the decline. A slight downward trend in operating margins over the past years exists because approximately 40% of the self-paid portion of healthcare bills are never paid (Mindel & Mathiassen, 2015).

Toussaint and Berry (2013) explained that the increasing healthcare interest in lean management principles generates productive environment for implementing things

that are hard to implement, clarifying things that are hard to understand, and opening opportunities for financing something that requires ongoing complicated efforts. Toussaint and Berry explained that applying lean management principles provided opportunities to healthcare leaders to evaluate the operations of their healthcare institutions and measure the overall state of their organization performance. Aij and Lohman (2016) explained that the application of lean principles and methods in healthcare to improve healthcare processes had grown explosively in recent years. Aij and Lohman stated if lean principles applied successfully, hospitals could reduce waste and patients experience more value. Healthcare organizations who used Lean management approach showed success in enhancing quality and improving proficiency while controlling expenses and costs in the arrangement of ideal patient consideration. Since applying Lean management approach, organizational culture is subject to transforms from the inside out. Healthcare managers and leaders have opportunities to become facilitators, coaches, and instructors and permit forefront specialists to make changes or improvements. Healthcare leaders who apply Lean management approach connect with the whole staff in distinguishing and tackling issues based on a continuous improvement attitude and the driving force behind Lean work (Toussaint & Berry, 2013).

Labor costs appear to be the major expense for hospitals (Sutherland, 2015). Southerland also explained that intermediate product costs for labor are results of either actual or relative workload. Southerland added that healthcare leaders attribute hour wages and benefit expenses of nurses to patients based on nurses reported workload measures. Hussein, Ismail, and Manthorpe (2015) agreed to with Southerland and

explained that attributes were quantified subsequently in a 'nursing work measures,' which related favorably to both nursing and patient outcomes, including nurse turnover, vacancy rates and satisfaction, and patient mortality and satisfaction. Southerland (2015) described the costs of minor supplies were attributed to the department and then allocated to the patient based on nursing workload. Minor supply items include sutures, staples, dressings, needles, syringes, and gloves. Many direct departments consume services from indirect departments. The indirect departments allocate their fixed and variable costs to patient care departments as overhead and then to individual patients. For example, accountants and managers attribute housekeeping costs to departments based on departments' square footage and to patients based on patients' lengths of stays (Sutherland, 2015).

Proposed Strategies to Resolve Nursing Shortage

Nardi and Gyurko (2013) explained that healthcare leaders could enhance nursing faculty capacity by (a) designing new education models that fit global healthcare needs and pooling teaching resources, (b) designing and using the same databases across organizations to track and project faculty needs, and (c) collaborating between schools and businesses to create mutually beneficial agreements for services. Alternatively, Wilkes, Mannix, and Jackson (2013) proposed that the concept of clinical scholarship should be a corner stone of nursing as a profession and as a discipline. There is a need to create spaces for nurses to consider the nature of clinical scholarship and to enact this need in the clinical realm. Omar, Abdul Majid, and Johari (2013) suggested that the effects of moral obligation as a mediating variable on the relationship between job

satisfaction and intention to leave among nurses who work was crucial and needed attention so that management and employers could have ample understanding and guidelines to draft the retention strategies. Millett, Stickler, and Wang (2015) added that taking accelerated nursing courses enables students to enter the profession in a condensed time. The accelerated nursing courses included guidelines for the accelerated acquisition of the academic and clinical components of the pathway. The challenges and difficulties experienced by accelerated students were intense and unique. Millett et al. stated that as potential students decided to pursue nursing as an alternative career, such students found it necessary to incorporate relevant course structures reflecting the unique abilities of graduate students.

Fisher (2014) recommended three recommendations, the first recommendation was to create new nursing education systems that contained existing resources in community colleges and universities and that provided for common prerequisites, a competency-based nursing curriculum, and shared instructional resources. The second recommendation was to convene one or more expert panels to develop a model prelicensure curriculum. Faculty members can use the second recommendation as a framework in community college-university partnerships for development of their local curriculum based on emerging healthcare needs, and widely accepted nursing competencies as interpreted for new care delivery models and incorporated best practices in teaching and learning. The third recommendation was to invest in a national initiative to develop and evaluate new approaches to prelicensure clinical education, including a required postgraduate residency under a restricted license.

Hatva (2012) presented the idea of partnership of members of the Archbold Medical Center Human Resources, Administration, and Engineering with administrators and professors at nearby Southwest Georgia Technical College (SWGTC) as an example to implement an innovative, community focused, long-term solution to the shortage of healthcare technology management (HTM) professionals in their geographical area. The partnership and new program had been a resounding success. The program promised potential students excellent job placement prospects, and Archbold had saved significantly by not having to pay consultants or staff overtime. The new program included electronics, physiology, and medical terminology, and offered credit for practical experience or classes already taken.

In a study conducted by Jacobs (2016) projected that one way to enhance the interaction between new nurses and mentors was joining a specialty professional nursing association. A professional nursing association offers many resources, including journals, continuing education, scholarship and professional opportunities, networking, professional insurance, research grants, professional standards, process of specialized learning, and certification. Jacobs stated that professional nursing associations might have a dramatic effect on nurses' personal and professional growth goals and outcomes. Informational meetings designed to recruit and mentor student members may be beneficial. Jacobs added that many student nurses lack exposure to all specialty areas of nursing during their educational programs. The lack of exposure may decrease student interest in pursuing a career in unexplored specialty areas. The mentoring of student nurses in a career path in specialty areas may provide a pathway for recruitment and

retention in the profession and professional associations. Wagner (2014) proposed Kinesthetic Learning Strategy and helpful hints to increase learner engagement, improve retention of material, and make nursing education more enjoyable for instructors and learners. Wagner stated that what was needed was an adaptation of traditional formats to enable for brief interruptions in content using creative strategies to highlight important information, emphasize concepts critical to safety or other priorities, clarify confusing material, provide a transition to subsequent topics, or reinforce ideas. Icebreakers were especially important for new classes or for learners who did not know each other or who might feel uncomfortable. It was essential to build a community of learning, especially for classes that were ongoing or that required future creative teaching strategies and group work. Wagner explained that adding creative teaching strategies to personal teaching styles might enhance learning and enjoyment. A few words of caution might ensure success with their implementation. Utilizing the inventory of teaching assets might enable for the realistic infusion of creative strategies without excessive burden to the nurse educator. As educators gained experience in teaching, comfort with the content, and confidence in their abilities, they might become more creative with new and different strategies (Wagner, 2014).

El-Jardali et al. (2013) conducted research that addressed the nursing shortages and maldistribution as priority issues for healthcare systems around the world. The research targeted the imbalances repeatedly intensified in underserved areas in developing countries. El-Jardali et al. focused their attention and investigated underserved areas in the Middle East Region. El-Jardali et al. investigated the

characteristic and the factors associated with the retention of nurses working in rural areas in Lebanon. The findings of the study revealed poor retention of nurses in rural and underserved areas in Lebanon, especially in the hospital sector. The findings also revealed that the current situation was disturbing as it reflected an unstable and dissatisfied nursing workforce. El-Jardali et al. explained that it was essential to improve nurses' job satisfaction and retention in rural settings by developing targeted retention strategies for younger nurses and nurses working in hospitals as well as the offering of professional development opportunities and devising an incentive scheme targeting rural nurses.

Other research conducted by Heponiemi et al. (2014) introduced three factors used to model employee desire for the continuance of employment. The first factor found was management support. Management support comprises nurses' attitudes regarding management's care for employees, how managers responded to concerns, and how managers acknowledged employees' contribution in the workplace. The second factor identified by factor analysis was personal relationships. Personal relationships included how nurses liked talking with coworkers, how much they would miss these relationships if they terminated employment, and how much they respected fellow employees. Results of the research revealed that switching costs is the third and final factor. Switching costs comprises benefits lost or benefits nurses felt they might lose if they switched employers as well as other costs associated with finding a job in a new location. Dolansky and Moore (2013) explained that in their day-to-day work, nurses' abilities to absorb in problem-solving, setting priorities, knowing their mission, interactions and partnerships,

making rational decision, and quick action-taking were greatly influenced by their ability to identify how any one component of their work system was related to other components.

Ulrich et al. (2014) conducted a study that revealed in hospitals with a lower number of nurses caring for a higher number of patients, there were higher (a) inpatient hospital-related deaths as a result of complications, (b) 30-day mortality rates, (c) emotional exhaustion, and (d) increases with job dissatisfaction in nurses. The literature shows that successful organizations grow by excellent managers, supervisors, and leaders. Healthcare institutions started to realize that the need to invest in nurse managers and their career development to reduce turnover of nursing staff is critical as nursing shortage increases. Through research, healthcare institutions have realized that providing strong education and investment in nursing faculty is more effective to address the nurse shortage. McCalla-Graham and De Gagne (2015) reported that recent studies reported being as much as $65,000 to replace one nurse, which caused hospitals to transfer their energy and money to retain nurses. Effective managers work hand in hand with nurses to keep positive work place and promote effective communication with nurse leaders to maintain nurses (Hayes, Douglas, & Bonner, 2013).

Summary of Literature Review

Healthcare organizations require steady, well trained, and fully engaged nursing staff and managers to provide effective levels of patient care and an increase in revenues for healthcare institutions. Nevertheless, the challenge to keeping the above foundation is apparent by the shortage of 500 to one million nurses in the United States projected for

2020 (Auerbach et al., 2013). The current nurse shortage resulted by factors related to recruitment and retention, fewer workers, aging workforce, and unsatisfying work environments and unsatisfactory nurses (Cox et al., 2014). Other factors of nursing turnover often reported include job dissatisfaction, job stress, and intentions to leave, control over decisions and organizational commitment. The nursing profession is in unlimited need to hold nurses and keep turnover rates low since turnover has a negative impact on patients, nurses, and healthcare institutions (Park et al., 2015). Sutherland (2015) revealed the impact of nursing shortage on the quality of care and patient outcomes and claimed that nursing shortage poses a financial burden on healthcare organizations. Sutherland also explained the supply and demand for nurses. Keeping up with the demand for nurses is necessary to keep skilled nurses and reduce turnover.

Factors that will continue to affect the demand and supply of the nurse workforce include population growth, aging of the nation's population (baby boomers), economic conditions, and aging of the nursing workforce (Cope et al., 2016). Cope et al. addressed the effects of nursing shortage on hospitals and addressed consideration in intense recruitment and retention efforts to recover from the job losses caused by the retirement of baby boomers from the nurse workforce. Health systems are under pressure for locating resources to ensure effective delivery.

The literature includes essential factors that I used in the PESTEL framework to identify strengths, weaknesses, opportunities, and threats as the nursing shortage affects the healthcare system. The strengths include the availability of qualified nursing staff, accessibility of job description at all nursing levels, offering education programs, and

providing healthcare provider's development programs for nurses (Clark & Allison-Jones, 2011). The weaknesses include diversified measurements, samples, and levels of intention to leave the nursing occupation caused by lack of resources support. Organizational and individual factors influence nurses' intention to leave (Chan, Tam, Lung, Wong, & Chau, 2013). The PESTEL framework revealed opportunities such as identifying of what benefits would keep nurses in the profession, learning what the satisfiers are for nurses, hospitals introducing intensive training programs for nurses in different specialties, quality patient care, investment in professional development programs for nurse, and the increase in federal funding for nurses to respond to the nursing shortage (Fisher, 2014). Lastly, the threats identified resembled patients' safety endanger the quality of care that places patients at risk and increases medical errors that could have a negative impact on hospitals' financial revenuers (Park et al., 2015; Cox et al., 2014).

Transition

The first section of the study introduced the research topic and the method used to analyze the nursing shortage on healthcare institutions. In section one, I introduced the background of the problem, the problem statement, the purpose statement, the nature of the study, the research questions, the conceptual framework, the significance of the study, and the literature review. The problem statement hosted the general business problem and the specific business problem. The general business problem was that by 2025, the nursing shortage may affect the national healthcare system. The specific business problem was that some healthcare leaders may not be aware of strategies to overcome

nursing shortage. The first section concluded by examining the literature review. Based on the literature review, healthcare organizations require steady, well trained, and fully engaged nursing staff and managers to provide effective levels of patient care. Keeping and maintaining trained and engaged staff remains a challenge by a shortage of 500 to one million nurses in the United States projected for 2020 (Auerbach et al., 2013).

In Section 2, an overview of the qualitative research design for the study was discussed, including the rationale for the chosen design, role of the researcher, participants, research method and design, population, data collection instruments, data analysis technique, and reliability and validity. The last section addressed the application to professional practice and implications for change, present the research finding, and recommendations for action. I provided recommendations for further study.

Section 2: The Project

In this section I provide an overview of the qualitative research design that I used for the study. The section includes the rationale for the design, the role of the researcher, participants, ethical treatment of participants, data collection, and analysis of the data. I collected, coded, and analyzed the data by using themes, conclusions, and recommendations. I analyzed the data in a manner that would preserve the reliability, the validity, and the integrity of the research.

Purpose Statement

The purpose of this qualitative single case study was to explore the strategies healthcare leaders use to overcome a nursing shortage. I conducted open-ended interviews with healthcare administrators and healthcare managers who successfully used strategies to overcome a nursing shortage in a major hospital in the Seattle metropolitan area in the State of Washington. The study may contribute to social change by improving healthcare quality through greater awareness of strategies that could enable healthcare leaders overcome a nursing shortage today. Nurse leaders who find ways to address the negative impacts of a nursing shortage can reduce costs and increase revenues. Nursing leaders are the persons required to lead the needed changes in healthcare (Yoder-Wise et al., 2013). More efficient and effective hospitals provide better services to their customers, and because the main service of hospitals is curing patients, better services to patients imply healthier community.

Role of the Researcher

Ritchie, Lewis, Nicholls, and Ormston (2013) explained that the role of a researcher is that of a facilitator to enable the interviewee to talk about their thoughts, feelings, views, and experiences. As the researcher, I used many of characteristics required of an effective researcher including the ability to be flexible and understanding of participant needs. I used good communication skills while conducting interviews with participants such as asking appropriate open-ended questions followed by active listening for sufficient understanding of what I heard. I conducted face-to-face interviews to collect data for this qualitative case study.

I had no direct relationship to the problem researched, the location of the interviews, or the participants invited to be in the study. It was my knowledge that the nursing shortage and its effects was an important research topic with the National League for Nursing as well as my role as a financial processor for medical institutions and my interaction on a daily basis with healthcare professional staff. In this case study, I took measures to protect human participants. I treated the participants in an ethical manner not only by respecting their decisions and protecting them from harm but also by making efforts to secure their well-being by following guidelines from the Belmont Report as suggested by Miracle (2016). Before contacting any of the study participants and inviting them to participate, I first obtained Institutional Review Board (IRB) approval. While the risk of harm was insignificant to the participants, I took privacy and confidentiality measures to protect the participants throughout the research process. To maintain confidentiality of the study participants, I used pseudonyms. I attained all proper consents

before beginning the research. I also ensured that the study participants were aware that they could withdraw from of the study at any time. Finally, I took steps to ensure that participants' names were kept completely confidential.

I acknowledged the possibility of personal bias, and to avoid it, I distanced myself from any relationships with the hospital employees to not interfere with the research results. I was and am not affiliated with any hospital setting, Yin (2015) noted that qualitative research incorporates interaction and observations between the researcher and the study participant. The researcher then must filter data collected during the study process. According to Yin (2014), a source of information vital to case study research is through face-to-face interviews. Yin added that most case study research is about behavior and human affairs, which makes interviews a critical source of evidence in case studies.

Before conducting the interview, I introduced myself and notified the participants that I would use my recording device and take brief notes, so I could maintain focus with the participants. I had a transcript handy to help the participants understand their rights and ensured that I conducted the research in an ethical manner. I collected consent forms after explaining the content of the consent form. I conducted the interviews in quiet and undisruptive locations to avoid interruption. Each individual interview lasted approximately 30 to 45 minutes to ensure enough time. I concluded the interviews by thanking the participants. I ended the interview with my prepared script as suggested by Pan, Gillies, and Slater (2015). The rationale for using an interview protocol (Appendix B) was to stay consistent with my designed research interview process in order to bring

forward in-depth information reflecting participants' experiences and viewpoints of the particular topic as suggested by De Ceunynck, Kusumastuti, Hannes, Janssens, and Wets (2013).

Participants

The focus of the qualitative case study was to explore the strategies healthcare leaders use to overcome a nursing shortage. The eligibility criteria for the participants in this study were healthcare administrators and managers in a major hospital in the Seattle metropolitan area in the state of Washington who successfully used strategies to overcome a nursing shortage. The rationale behind selecting the specific target group of participants is their experiences with nursing shortages and their effect on the hospital where they work. Nurse leaders could support and participate in research to raise awareness of nursing retention (Lartey, Cummings, & Profetto□McGrath, 2014). Yin (2015) explained that selecting specific study participants yields to plentiful and relevant data based on the research topic. Researchers approach specific participants to collect rich and in-depth data (Holloway & Galvin, 2016). Being a single case study, participants were full-time or part-time healthcare managers in a major hospital in the Seattle metropolitan area in the State of Washington who successfully used strategies to overcome a nursing shortage.

I gained access to the participants through the director of clinical effectiveness-systems at the hospital after the approval of the Human Resources Department (Seidman, 2013; Pinnock et al., 2013; Leftheriotis, & Giannakos, 2014). For this study, the target population from whom to attain pertinent data was 10 healthcare professionals. Once I

received Walden IRB permission and the permission of the department of education and research in the organization in which I conducted the interviews with the participants, I collected the contact information and phone numbers of the participants and contacted them via e-mail or telephone. I introduced the study topic and scheduled the interview appointments following principles of capturing and communicating participants' experiences in their own words via interviews as suggested by Yilmaz (2013), Drabble, Trocki, Salcedo, Walker, and Korcha (2015), and Yin (2014).

Discussion of the research with participants and gaining their informed consent allows researchers to begin to gain participants' trust (Saunders, 2012). IRB approval is a Walden University and federal regulation that protects research populations from being at risk (Crocker, 2012). The guidelines of the Walden University IRB govern the conduct and protection of participants in the research (Thresholds Institutional Review Board, 2011). Upon gaining approval from the hospital's department of education and research to start interviewing the participants, I got the participants names and the contact information from the director of clinical effectiveness-systems at the hospital. I contacted the participants and scheduled dates for conducting the interviews (Doody & Noonan 2013; Marshall & Rossman, 2014; Seidman, 2013).

To establish a working relationship with the participants, I confirmed the confidentiality of the participants in the research (Marshall & Rossman, 2014). Harvey (2014) stated that researchers might also engage in process consent, seeking informed consent on an ongoing basis, or use member checking to gauge participants' approval of how the researcher represents the participants in the findings. I built trust by explaining to

the participants the use of the consent form following the academic code of ethics as suggested by Seidman (2013).

Research Method and Design

In this section, I assess qualitative method and four qualitative designs from which I selected the best design to satisfy the research purpose. Qualitative designs included narrative, ethnographic, phenomenological, and case study research. I explain the selection of the case study design as it satisfied the purpose of the research on how the nursing shortage affects the healthcare facility.

Research Method

I used a qualitative method as the appropriate method to answer the central research question. I explored the strategies that healthcare leaders use to overcome a nursing shortage in healthcare institutions located in the Seattle area. For the purpose of the research, a qualitative approach was a better fit than a quantitative approach. Mertler (2016) explained that a quantitative researcher creates a hypothesis and theory as they pertain to a specific phenomenon and uses numerical data to support or refute the claims. Since the nature of the study was exploratory to describe a phenomenon in words and not in numeric data, quantitative research was not the best method for the study. Qualitative researchers interpret the data as themes emerge while quantitative researchers have predetermined theories or hypotheses (Hanson, Balmer, & Giardino, 2011). Hanson et al. also added that the goal of the quantitative method is to determine the correlation between independent and dependent variables within the given survey population.

Englander (2015) explained that data collection procedure via interviews became closely associated with qualitative human scientific research.

According to Venkatesh et al. (2013), mixed method research is an approach that combines quantitative and qualitative research methods in the same research inquiry. Such work can help develop rich insights into various phenomena of interest that cannot satisfy the research using only a quantitative or a qualitative method. Palinkas et al. (2011) explained that researchers use mixed method to develop a science for understanding and overcoming barriers to implementation. The mixed methods approach is an extension of, rather than a replacement for, the quantitative and qualitative approaches to research, as the latter two research approaches will continue to be useful and important (Venkatesh et al., 2013). Because the mixed method design combines quantitative and qualitative research, and because the nature of the study was only exploratory, mixed method was not an option to pursue.

Research Design

For this study, I used a case study approach to explore the experience of healthcare administrators and healthcare managers who experienced success with job retention among nurses, which might result in overcoming nursing shortages. According to Yin (2014), a case study design should be considered when (a) the focus of the study is to answer what, how, and why questions; (b) researchers cannot manipulate the behavior of participants involved in the study; (c) researchers want to cover contextual conditions because they believe they are relevant to the phenomenon under study; or (d) the boundaries are not clear between the phenomenon and context. The type of case study

used was exploratory. Researchers in exploratory case studies probe situations in which the intervention evaluated has no clear, single set of outcomes (Yin, 2014). Case study was the best fit for this study because researchers develop an in-depth description and analysis of a case or of multiple cases as suggested by Yin (2014). Yin also explained that case studies provide little basis for scientific generalization.

Lewis (2015) explained that narrative researchers collect data to develop skills used in problem solving such as communication, which would not have served the purpose of the study. Marshall and Rossman (2014) explained that researchers criticized the narrative approach for its focus on the individual rather than the social context like life stories. Frost (2013) argued that narrative approaches focus on people creating narratives and stories that reflect a sense of self that integrates with the contexts of their lives. Cortazzi (2014) stated that a narrative always responds to the question, *and then what happened?* For that reason and because the purpose of the study was to explore the strategies healthcare leaders use to overcome a nursing shortage, and not to narrate these effects, narrative approach would not have been appropriate for this study.

Phenomenology was the second approach considered. The phenomenological approach would not have fit the purpose of the study because it involves a return to an experience to obtain a comprehensive description that provides the basis for a reflective structural analysis that portrays the essence of the experience (Manen, 2016). The phenomenological methodology was also not proper for this study because I did not examine a central question or a phenomenon. The aim of a phenomenological study is to

discover the fundamental and precipitating factors accounting for the experiences (Manen, 2016).

Another qualitative design that would not have fit the purpose of the study was the ethnographic approach. According to Dwyer et al. (2014), The purpose of the ethnographic design is to understand cultural practices, human beliefs and behaviors, and sociocultural changes over time. Dwyer et al. (2014) also explained that ethnographic design is particularly suitable for tourism-related research and for tourism policy planning. The main reason for conducting this study was to explore the strategies healthcare leaders use to overcome a nursing shortage. For that reason, ethnographic design would not have fit the purpose of the study.

The sample selected for the study included a minimum of five healthcare professionals working for one hospital in the Seattle metropolitan area. I continued to interview until I achieved data saturation. Hennink, Kaiser, and Marconi (2016) explained that saturation is an essential guiding standard to determine sample sizes in qualitative research. Saturation occurs when the data from the interviews become repetitive and participants add no new information to the research (Gibbins, Bhatia, Forbes, & Reid, 2014; McGuire et al., 2013; Onwuegbuzie, & Byers, 2014). Estimating adequate sample size is directly associated with the concept of saturation (Marshall, Cardon, Poddar, & Fontenot, 2013).

Population and Sampling

In the study, the target population were healthcare professionals to attain pertinent data. The target population consisted of healthcare administrators and healthcare

managers working in the same hospital. The primary goal for choosing this population was to engage professional staffs that deal with nursing shortage. Since the study focused on healthcare administrators and healthcare managers who successfully used strategies to overcome nursing shortage, the sample of participants was purposive homogenous. I selected participants from one employer. Holloway and Galvin (2016) described homogeneous sampling as the selection of a sample from a group of persons with the same subculture or having similar characteristics. Holloway and Galvin (2016) also explained that researchers select a purposive sample for a specific purpose; therefore, it must have specified characteristics, such as being information rich. I selected homogeneous sample of nurse managers who successfully used strategies to overcome nursing shortage. The rationale for limiting the sample size to a minimum of five healthcare administrators and managers was to provide accurate data, explore, and focus on specific population that has hands on the research topic. Fusch and Ness (2015) clarified that in a qualitative study, the sample size is not as crucial as sampling procedures, depth of inquiry, and validity of gathered information. I only examined a single case. Marshall et al. (2013) recommended: (a) single case studies should generally contain 15 to 30 interviews, (b) qualitative researchers should examine the expectations of their intended journal outlets based on history and culture, and (c) replication studies should further examine the impacts of culture and study design.

Employing sample size enabled me to achieve saturation when I observed no new themes, findings, concepts, events, or issues from the data collection process. Data saturation was determined when information become repetitious among the participants.

Saturation occurs when the data gathered from interviews becomes tedious, and further interviews add no new data by the participants of the study (McGuire et al., 2013). Holloway and Galvin (2016) explained that researchers use different names for saturation such as informational redundancy, suggesting no other new concepts or ideas to the research. The sampling was tactical and purposeful because the study focused on a case's unique context and in this case exploring the strategies that healthcare leaders use to overcome nursing shortage as suggested by Miles, Huberman, and Saldana (2013). Utilizing the sample size enabled me to examine and provide an in-depth picture of nursing shortage at the hospital. Miles et al. stated that qualitative research usually involves in-depth work with small samples of individuals in their normal environment, whereas quantitative research usually occurs outside of the subjects' personal contexts in order to achieve statistical significance.

For participant selection, I used purposive sampling. Suen, Huang, and Lee (2014) explained that purposive sampling is a technique carefully selected by researchers based on the study purpose with the expectation that each participant will provide exclusive and rich information of value to the study. Consequently, members of the accessible population are not interchangeable and researchers determine sample size by data saturation not by statistical power analysis. A purposive homogenous selection of participants required participants who successfully used strategies to overcome nursing shortage. Participants were from one geographic area (Seattle), one healthcare educational program, and one employer (Hospital). To guarantee that the participants would provide information that would be significant to the study, I used purposive

homogenous sampling. Patton (2015) explained that purposive homogeneous sampling focuses, reduces variation, simplifies analysis, and facilitates group interviewing. Patton stated that the purpose of the interview is to discover what the participant is thinking and to uncover their perspective. My focus was to explore the healthcare professionals' perspectives, experiences, and their insights to the topic of the study.

Ethical Research

During the research process, I protected confidentiality of participants. I informed participants of the purpose of the research and ensured that their identities were anonymous. Before collecting the data, I made sure to get approval from Walden University's IRB number 06-05-17-0412075 for this study. After obtaining approval from Walden University IRB and the permission of the department of education and research to contact the participant research, I contacted potential participants by e-mail or phone to offer the opportunity to participate in the study.

Schwartz (2013) explained that the role of the IRB is to ensure that under the common rule, federally funded or conducted research must comply with regulations aimed at protecting human subjects and meet the requirement for ethical research. After acknowledging the participants' willingness to participate in the study, I explained the topic explored, I went over the consent form to the participants prior to the interview process and provided the date and the time of the interview.

Before conducting the interview, I distributed consent form to the participants explaining background, procedures, confidentiality, risks, and benefits of participating in the study. I informed the participants that during the interview, participants have the right

to decline or may choose not to answer some of the questions, withdraw from participating in the research, or not participate at all. I informed the participants that they have the right to withdraw from the study at any time. Peter (2015) explained that participants must understand the nature of the research relationship and the right to refuse to answer questions and withdraw from the research at any time. To protect the participants' names and their identities, I used de-identification by replacing the participants' names and identities by unique subject identification numbers. Harriss and Atkinson (2015) asserted that protection from harm was an ethical obligation of the researcher; ensuring the confidentiality was my focus to protect the participants.

I also protected the participants through the informed consent and protocol implementation after I got Walden University IRB approval. Before conducting the interviews and collecting the data, I made sure that all participants clearly understood the research subject, signed the consent forms, and returned the signed consent forms to me. I will keep all data obtained confidential in a safe in my office at home. I will also keep the data for 5 years and then destroy it.

Data Collection Instruments

I collected the data to explore the strategies that healthcare leaders use to overcome nursing shortage. The data collection instruments that I used were interviews using semistructured questions and documentation. I created interview questions, asked the questions to research participants, and recorded the answers since I was the data collection instrument. McIntosh and Morse (2015) explained that the researcher is the research instrument in semistructured or unstructured qualitative interviews; unique

researcher characteristics have the potential to influence the collection of empirical materials. I used semistructured interview questions to explore and answer the central research question. I conducted interviews with the participants.

I used documentation as the second method of collecting data to explore the strategies that healthcare leaders use to overcome nursing shortage. Yin (2014) explained that one more source of information that can be instrumental to qualitative researchers is documentation. Yin (2014) also explained that documents could contain official records, letters, newspaper accounts, diaries, or reports. Elo et al. (2014) confirmed three categories of methods for data collection: direct, such as interviews; indirect, an example would be tool instrumentation, and independent such as documentation analysis. According to Yin (2014), there are six primary sources for case study research; documentation, archival records, interviews, direct observation, participant observation, and physical artifact. In this study, I collected documents that I retrieved from public records of the selected healthcare institution.

For the purpose of the study, I used Nvivo software for data analysis. Researchers use Nvivo 11 software in qualitative and mixed method research. Nvivo 11 software has the capability to collect, transform, and organize the data collected in a systematic way for reporting. Zamawe (2015) explained that the idea behind using Nvivo is to make qualitative data analysis easier. I used Nvivo software to assist me in coding and analyzing the responses given by the study participants to come to conclusion and recommendations. In-depth participant interview helped me explore the strategies that healthcare leaders use to overcome nursing shortage.

Brinkmann (2013) clarified that the participants' detailed interviews assist in defining themes, which consequently address the research questions. In this study, I designed and used the interview protocol process containing a welcome statement to the selected participants who are healthcare professionals. I conducted all face- to-face interviews individually with each selected participant. I collected the consent forms from the participants after making sure that the participants signed the forms. I reminded the participants that I would maintain confidentiality of all collected information. I asked questions to participants directed to determining the participant's perspectives on the strategies that they use to overcome nursing shortage. I made certain to ask the interview questions in the same order presented in Appendix A. I ensured to take hand-written notes to guarantee best gathering of information provided by each participant. I used audio recording to provide an accurate record of the conversation. Each individual interview lasted approximately between 30 to 45 minutes in order to ensure enough time. I concluded the interview by thanking the participants and used the closing statement.

After the interview, I transcribed the taped conversation, review the content of each individual interview, and I conducted a follow-up telephone interview if any information was needed in order to clarify any rising issues. I notified the participants by phone to schedule a follow-up date to review the collected data and made certain I transcribed their words and meaning accurately. The rationale for an interview protocol is that interviews provide in-depth information affecting participants' experiences and viewpoints of a particular topic. De Ceunynck et al. (2013) explained that often times, interviews work together with other forms of data collection in order to provide the

researcher with a well-rounded collection of information for analyses. To enhance the reliability and the validity of the study, I used member checking by restating or summarizing the information retrieved during the interview and then questioning the participant to determine accuracy as suggested by Birt et al. (2016). Member checking is often a single event that takes place only with the verification of transcripts or early interpretations (Morse, 2015).

Data Collection Technique

The data collection method I used was through semistructured interviews and documentations. I conducted face-to-face interviews. Sullivan (2013) stated that with face-to-face interactions, researchers are constantly participating in impression-management, showing various impressions to various individuals. For the purpose of this research, I selected face-to-face interview as a primary data collection method to ensure that I obtain enough data from the participants that aligned with each research question. I used documentation as the second method of collecting data besides interviews as suggested by Yin (2014) to explore the strategies that healthcare leaders use to overcome nursing shortage. According to Skinner, Edwards, and Corbett (2014), the use of documents has a number of advantages and disadvantages, the advantages of using documents include: freely available in most circumstances, inexpensive source of data, provide contextual background, provide opportunity for study of trends over time, and unobtrusive. The disadvantages include incompleteness, documentations may be incomplete, in some cases, there may be inaccuracy and questionable authenticity of data,

search for documents may pose challenges, analysis of documents may be time consuming, and access may be difficult.

The essential characteristics of a face-to-face interview are the direct personal contact between interviewer and respondent, the specific division of tasks between interviewer and participants (asking and responding questions) and the use of an interview questions (Appendix A) in which the wording and the order of the questions are fixed (Loosveldt & Beullens, 2013). In this study, I used face-to-face interviews to collect the data from the participants. Loosveldt and Beullens explained that the most important risk of the presence of an interviewer is the influence or effect that the interviewer may have on the respondent's answers. In order to eliminate such risk, I ensured to follow the interview protocol and explained to the participants that they can feel comfortable providing their opinion and views and I was only getting their insight to assist me explore the research questions. I introduced myself as the researcher and explained the consent form. I informed the participants that I would take hand-written notes to guarantee best gathering of information provided by each participant. I also informed the participants that I would use audio recording to provide an accurate record of the conversation. Tinny (2013) explained that audio recording provides a complete verbal record and can be studied much more thoroughly than notes.

Data Organization Technique

Upon collecting the data, I coded and analyzed the information collected from the participants. I used the cataloging and labeling systems. Hunting (2014) defined first-level or substantive coding that involves an analysis of data that codes a passage using

multiple and overlapping codes as open coding. Since I used Nvivo 11, I transcribed the data collected and coded it into themes. I used audit trail to systematically organize the data collected. Bazeley and Jackson (2013) referred to organizing large qualitative data as to routinely manage the data flows into a comprehensive database to make subsequent analysis of these data as efficient as possible. I will keep all data obtained confidential in a safe in my office at home. I will keep data for 5 years and then destroy it.

Data Analysis

The data analysis technique entailed processing the data collected and transcribed from face-to-face interviews. I created a data collection form to assist me in summarizing the collected transcribed documents. I used methodological triangulation technique that involves interviews and documentation. According to Yin (2014), there are six primary sources for case study research; documentation, archival records, interviews, direct observation, participant observation, and physical artifact. Hussein (2015) confirmed that using methodological triangulation technique is beneficial in providing confirmation of findings and increasing validity of studied phenomena. I triangulated data from interviews and documents shared by participants that included documentation about Hospital Employee Education and Training (HEET) program to address concerns related to the shortage of qualified healthcare workers (Washington State Board for Community and Technical Colleges, 2016), and reviewed notes of the literature review to increase the validity of the research as suggested by Aiken et al. (2013). I also made sure to check information revealed in the literature review to confirm alignment with the themes

created in the coding process following the same approach of Saldaña (2015). I followed the below five steps to analyze the data:

1. Documentation of the data and the process of data collection
2. Organization/categorization of the data into concepts
3. Connection of the data to show how one concept may influence another
4. Corroboration/legitimization, by evaluating alternative explanations, disconfirming evidence, and searching for negative cases
5. Representing the account (reporting the findings). (Miles et al., 2013)

I read, analyzed, interpreted the transcribed data, and made sure to avoid bias. Since I had no personal relationship with the participants, I distanced myself to avoid bias in the conclusion and the recommendation of the study. I made sure to relate themes created from the data interpretation to the literature review themes by only asking questions related to the research topic. I used to Nvivo 11 software since researchers use it in qualitative and mixed method research. Nvivo 11 software has the capability to collect, transform, and organize the data collected in a systematic way for reporting. Woods et al. (2015) stated that regardless of the type of qualitative data (e.g., interview data, survey data, observational data, personal journals, diaries, permanent records, transcription of meetings) or the type of research design, researchers could use NVivo to conduct the analysis.

Reliability and Validity

Reliability

Marshall and Rossman (2014) explained that reliability is a concept understood to concern the replicability of research findings and whether or not they would remain the same if another study, using the same or similar methods, were undertaken. Dependability involves participants evaluating the findings and the interpretation and recommendations of the study to make sure that the data received from the informants of the study support the findings (Cope, 2014). To establish dependability, I used an audit trail and code-recode strategy as suggested by Thomas and Beh (2015). To accomplish audit trail rigor, a researcher must define the decisions made throughout the research process to specify the rationale for the methodological and interpretative judgments (Houghton, Casey, Shaw, & Murphy, 2013). Audit trail establishes dependability, a code-recode strategy as identified by (Thomas & Beh, 2015). To ensure dependability, I used documentation as a second method of collecting data in addition to interviews.

Validity

To ensure validity, I followed the approach of consistency with other researchers that have explored the same research topic but from different approaches. I ensured to respect the interview questions to avoid uncertainty. Marshall and Rossman (2014) explained that the validity of findings or data refers to the correctness or precision of a research reading. To ensure dependability, credibility, transferability, and confirmability, I made sure to transcribe the participants ‘responses in an unbiased way.

Thomas and Magilvy (2011) stated that credibility, dependability, confirmability, transferability, and authenticity are key in persuading the study to be reliable. To ensure credibility, I defined the topic researched through the participants' views. Thomas and Magilvy additionally proposed three criteria for testing the legitimacy of qualitative research, which incorporate validity, transferability, and confirmability. To guarantee credibility and precision of the research, I followed up with the participants by emailing them my interpretations and asking for their opinion as a method of member checking as recommended by Thomas and Magilvy (2011).

Thomas and Magilvy (2011) suggested to enhanced transferability, the researcher must give enriched details of the study results to enable the readers to choose if the results are transferable to different organizations. To ensure transferability, I provided enough detailed results of the study. Marshall and Rossman (2014) explained that researchers could reach transferability by presenting a rich description of the findings to enable comparison between different researches. Reaching transferability enables researchers of similar studies in the future to gain insights of the problem researched in the study. Transferability is dependent on credibility, which in turn is dependent on dependability and confirmability (Noble & Smith, 2015).

To ensure confirmability, I used member checking before finalizing transcribed draft to ensure the information collected was correct, exact, and effective. To ensure validity, I confirmed review all the data collected with the participants to ensure that they agreed with the transcribed data. I also used triangulation during the study. Data triangulation entails gathering data from multiple sources involved in the same study

(Hussein, 2015). I used an audit trail and code-recode strategy as suggested by Thomas and Beh (2015). An audit trail is one technique for developing confirmability in qualitative research (Symon, Cassell, & Johnson, 2016). In addition, Tong, Palmer, Craig, and Strippoli (2014) explained that confirmability seeks to validate that the findings are resulting from the data and not misconstrued or imagined by the researcher.

To ensure data saturation, I continued to interview participants until I achieved the data saturation, no new information is forthcoming, and the information becomes repetitive. Marshall et al. (2013) explained to reach saturation, a researcher gathers data to the point of diminishing returns, and when nothing new appears. Estimating adequate sample size relates to the concept of saturation. Saturation happens when the data gathered from interviews becomes tedious, and further interviews add no new data by the participants of the study (McGuire et al., 2013). Saturation occurs when researchers no longer receive information that can add to the theory or the researched topic. Researchers reach data saturation when the information collected is enough to duplicate the study (Malterud, Siersma, & Guassora, 2015).

Transition and Summary

In Section 2, I introduced the methodology for this qualitative case study, I have described in detail the instrument that I used to collect the data as well as steps to interpret and analyze the data using Nvivo11 software. In Section 2, I discussed the ethical research in addition to explaining the reliability validity of the study. In Section 3, I presented the results of the data analysis, application to professional practice, implication to social change, and recommendation for future studies.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative case study was to explore the strategies healthcare leaders use to overcome a nursing shortage. In this section, I present findings and described results from this study. I started Section 3 with an introduction addressing the purpose of the study, followed by a presentation of findings. Moreover, I discuss the potential applications to professional practice, implications for social change, recommendations for action, recommendations for further research, and reflections.

I conducted a qualitative case study to identify what strategies healthcare administrators and healthcare managers use to overcome a nursing shortage in Seattle, Washington. The central research question in this study was: What strategies do healthcare leaders use to overcome a nursing shortage? According to the data collected, analyzed, and interpreted, healthcare administrators and healthcare managers used different strategies to alleviate nursing shortages based on the internal structure of each unit to which each leader belongs in the hospital. The purpose of this qualitative case study was to explore the strategies healthcare leaders use to overcome a nursing shortage. The target population comprised five healthcare professionals working at one medical facility in the Seattle, Washington, area.

Participants responded to interview questions about the strategies they use to overcome nursing shortages. The interviews were audio recorded, transcribed, and then coded. Also, I reviewed and analyzed company documents that the participants recommended from available on-line resources. The five strategies that emerged were (a)

development of communication programs, (b) increased employee engagement, (c) investments in nursing education, (d) positive work environment, and (e) improving the healthcare system through new policies and regulations.

Presentation of the Findings

In this study, I addressed the central research question: What strategies do healthcare leaders use to overcome nursing shortage? I used semistructured interviews consisting of seven questions and document review of the Hospital Employee Education and Training program. The participants were employed in various units in the same healthcare facility. I conducted and recorded face-to-face interviews. Each interview with each participant lasted about 45 minutes. After five interviews, I reached saturation where no new information emerged, and no further interviews were needed, as suggested by Dworkin (2012).

As soon as I completed the interviews, I transcribed them and e-mailed the transcripts to the participants for review. Researchers use transcript review to ensure that the correct views were apprehended and no errors or mistakes occurred (Houghton et al., 2013). I allowed the participants one week to make revisions and necessary corrections on the transcripts. After the participants made the corrections, I uploaded the transcripts in NVivo 11software. Once I uploaded the data into NVivo 11, I used the auto-coding feature to get a better view of each of the interview questions and their answers. After I revised each of the interview questions and answers, I coded the transcript and created nodes. Strategies identified included (a) development of communication programs, (b) increased employee engagement, (c) investments in nursing education, (d) positive work

environment, and (e) improving the healthcare system through new policies and regulations.

Strategy 1: Development of Communication Programs

The healthcare organization implemented communication strategies to target the nursing shortage. Some of the participants were satisfied regarding the results of the programs implemented by the hospital. The healthcare organization had been in the lead of evolving communication partnerships in the area of healthcare workforce development. Internal communication creates confidence and increases the solid relationships between leaders and staff (Mishra, Boynton, & Mishra, 2014). The healthcare organization has been in the forefront of developing labor-management partnerships in the area of healthcare workforce development (Moss & Weinstein, 2009).

P1 stated that healthcare leaders do rounding or meetings with the nurses weekly. Since the healthcare administrators and healthcare managers have multiple clinics, it is not always reasonable to have daily meetings, but the healthcare administrators and healthcare managers attempt weekly rounding to connect with their nurses either in person, via e-mail, or on the phone. P1 also stated that healthcare leaders have nursing meetings that are quarterly, but they also have little huddles in every clinic on a daily basis, which are nursing gatherings where they discuss any concerns or issues. The last type of communication is communication via e-mails where they have updates for nurses to keep them involved and informed. Internal communication increases efficiency and positivity among staff in organizations (Mishra et al., 2014).

Another participant, P2, stated that they have relationships with major recruiters with whom they work to acquire nurses. P2 also stated, “We are overcoming nursing shortage by staying in close communication with our recruiters”. This response was in line with the information provided in the literature concerning recruitment and retention strategies in nursing. Recruitment and retention strategies in nursing need awareness of the caring motivation aspect that draws people to the nursing field and contributes to them remaining in the profession (Westphal et al., 2015). Good communication is considered an example of interactional equality and is well received by employees (Buiter & Harris, 2013). P3 explained that nurse retention starts by hiring the right people who work well with others and establishing good communication skills from the start. This process begins when conducting interviews with potential nurses. Communication is considered a good strategy that managers implement to overcome the nursing shortage effects. The same participant revealed that as managers, they work with other staff members to establish good communication skills and facilitate team work efforts to provide opportunities to participate in leadership projects. When leaders establish a high level of communication, employees will show increased satisfaction (Buiter & Harris, 2013). Three out of five leaders (60%) mentioned that open and clear communication is key to a successful relationship between healthcare administrators, healthcare managers, and nurses. Team building requires considerable attention to interpersonal and communication skills (Lavoie-Tremblay et al., 2013). P1 explained that as managers or leaders, they have open door policies for nurses to express their concerns and voice their distress to their managers about things that do not work well for them. P1 also explained

that their nurses are welcome to give feedback. A similar research conducted by nursing educators and theorists regarding support of communication programs for nurses agreed with the findings of this study that ineffective communication is considered a barrier or obstacle between nurses and leadership that creates lack of trust between the two groups and leads to poor communication (Ebrahimi et al., 2016).

The development of communication programs theme aligned with the literature and the PESTEL framework. Using communication technology enables healthcare leaders to stay connected with their nurses, which also promotes trust and involvement between all hospital staff. Results culminating in this thematic finding are also consistent with the ideas expressed by Eberechukwu and Chukwuma (2016) who confirmed that leaders who are positively involved with employees in healthcare build resilient relationships. As those relationships develop and become stronger, effective communication will also develop trust between leaders and their employees and between all hospital staff and their organizations' customers.

Strategy 2: Increased Employee Engagement

The second strategy I discovered was trust and employee engagement. The healthcare organization increased efforts to get nurses engaged and be part of the team. Many participants described good feelings about engaging their employees in the decision making and keeping them interested and retained. P1 stated, "The other strategy is to keep nurses involved. It is a small environment; so the nurses are involved in their work environment, and they are empowered and engaged". Van Bogaert et al. (2013)

agreed. They found that team work engagement is positively associated with intention to stay in the profession.

P1 stated, "Just to keep the nurses involved and have them be part of the decision making is very big. It is kind of shared leadership". Bakker (2014) described that the most important part of increasing employee engagement is to provide employees with different resources to assist them with performing their jobs. P2 explained that as healthcare administrators and healthcare managers, they try to use shared leadership programs to increase nursing engagement. As a result, nurses are happy with their job, and they want to stay. Retention is something that these managers try to sustain to help with the nursing shortage. Nurses who express advanced levels of job satisfaction are expected to be more psychologically engaged in their work and have greater organizational commitment (Hayes et al., 2013).

P2 claimed that healthcare administrators and healthcare managers use the staffing committee of staff nurses who work with management and get involved in decision-making concerning staffing decisions. The managers also use peer interviewing when they interview new candidates. They share leadership and staff involvement as employee engagement. P3 revealed that creating a positive work environment helps people stay; it is considered one of the reasons of longevity. P3 stated, "We offer staff opportunities and offer participation in leadership projects; we want nurses on our team, and we are willing to grow them and develop their career". The conclusion drawn by Maurits et al. (2015) supported the information given by the participants in this study that nursing staff members in healthcare who experience more independence are more

engaged in their work and less likely to consider leaving the healthcare sector or job. The body of literature was in alignment with the employee engagement strategy.

Auerbach et al. (2013) claimed that healthcare organizations require steady, well-trained, and fully engaged nursing staff and managers to provide effective levels of patient care. Maurits et al. (2015) confirmed that in developing strategies for retaining nursing staff in healthcare, leaders and policy makers should target their efforts at enhancing nursing staff's independence, thereby improving their work engagement. The participants felt that employee engagement was key to retain nurses in their units and assured that building personal relationships with their nurses was the initiative that cannot happen without people being engaged. When nurses are happy with their occupation and feel devoted to the organization, they are less likely to leave their job for other potential opportunities (Maurits et al., 2015). P4 stated, "I think we have to look at the personal relationship and cultivate that, ask nurses where they want to be and help them that way, that is what you can do as a leader within your unit, department, or institution". Another participant thought that leaders and managers would just have to support nurses who will be future healthcare manager and encourage them to be leaders. These responses were in line with the conclusion drawn from a study conducted by Memon, Salleh, Baharom, & Harun (2014) explaining that when employees think that they are part of the organization's values and feel that they are a good fit, they are more likely to be more engaged and satisfied with their job. In conclusion, four out of five (80%) participants stated that employee engagement plays a big role in their departments to retain and keep nurses.

The results revealed in this thematic finding are in line with the findings of a research study by Dempsey and Reilly (2016) that revealed when employee engagement increases, morale and productivity in an organization increase, employee recruitment and retention seem to be easier, and profits also increase. Dempsey and Reilly (2016) also explained that promoting employee engagement may help improve the quality of patient care. The increased employee engagement theme relates to the PESTEL framework. Increased employee engagement reflects the sociocultural aspects of the PESTEL analysis. The sociocultural trends address tendencies in the way employees work, think, and get engaged. Healthcare leaders can engage employees by minimizing social risks (Harter, Schmidt, & Hayes, 2002).

Strategy 3: Investments in Nursing Education

The third strategy that stood out during the data analysis was the investment in nursing education. The healthcare organization encouraged investing in nursing education as a strategy to overcome nursing shortage. P5 explained that they try to provide many educational opportunities to keep nurses interested and retained. The same participant added that education is a huge issue changing perspectives of the country as a whole. P5 also questioned, “If we, as a society, value nursing teachers, and how do we show we value them, is it through pay?” The same participant explained that as a community, “We need to value nurses and nursing teachers”. Another participant thought that leaders of the healthcare system need to support nursing schools so that they can double their potential applicants. El-Jardali et al. (2013) explained that examples of extrinsic rewards

include bonuses, raises, paid vacations, tuition reimbursement, and paid or unpaid leave to pursue further education. P2 stated:

> I know 320 something kids that are coming out right after high school and they want to be nurses, they have above average but not 4.0 GPA and they would make great nurses; but, unfortunately, they cannot get into the nursing school because there are not enough programs that accept enough nursing students.

As seen in the body of literature, and according to AACN's report on 2016-2017, enrollment and graduations in baccalaureate and graduate programs in nursing in the United States, nursing schools turned away 64,067 qualified applicants from baccalaureate and graduate nursing programs in 2016 because of insufficient number of faculty, clinical sites, classroom space, and clinical preceptors, as well as budget constraints (American Association of Colleges of Nursing, 2017). P2 believed that to fix the nursing shortage, the healthcare system needs to create a better infrastructure to educate more nurses. P2 explained that leaders of healthcare system should probably work with nursing schools to get more nurses educated and open more programs to double or triple the number of students. P2 stated, "This is how we make more nurses". Recent data showed that enrollment in colleges of nursing has increased for five years straight; however, the increased enrollment falls far short of current and projected demand for nurses with a national shortage of 800,000 expected by 2020 (Elgie, 2007).

P4 explained that the other piece is to look at the state level which involves legislation. Many states including Washington now are encouraging nursing students to get their bachelor degree (Nurse Journal Social Community for Nurses Worldwide,

2017). This strategy will get nurses at early time to be at a professional level first. At the second level, there is a lack of educators for nursing students, most of nursing educators are retiring. This response was in alignment with Westphal et al. (2015) who explained that as the need for nurses continues to increase, a shortage of nurse educators (NEs) is limiting the number of RNs in the workforce.

P4 stated, “We need to find educators to educate these nurses, we need to invest in the nursing education”. P4 explained that this could be accomplished by either providing grants, offering nursing tuitions reimbursement, or any other programs such as assistance of private foundations to fund higher education. The response P4 gave was in alignment with the conclusion of El-Jardali et al. (2013) who explained extrinsic rewards include bonuses, raises, paid vacations, tuition reimbursement, and paid or unpaid leave to pursue further education. As a result, the healthcare system will gain more educators for the next generations. P4 gave an example for Washington state where there is a foundation that donates about 300,000$ in grants every two years to fund such programs. The same participant added, “If you give funding to the nursing programs, you will get more nurses”. The results concluded from investments in nursing education theme agreed with the findings of Bush (2016). Bush (2016) revealed that nurses might make decisions to stay on with hospitals based on their need to be a part of a professional learning community where healthcare leaders spread learning opportunities throughout the organization. Finally, investing in nursing education corresponds with the economic factor of the PESTEL framework analysis. Healthcare institutions can take advantage of

the economic support from investors or charitable programs to encourage educational opportunities for nurses.

Strategy 4: Positive Work Environment

The fourth strategy was positive work environment. During the interviews, few participants referenced to work environment. Participants in the study felt that their work environment and their corporate culture assisted in retaining nurses within their departments. P1 stated:

> In my unit, we are fortunate to have nurses who come and stay; we only have nursing shortage when they retire because of the type of ambulatory unit that we are. It is a Monday through Friday schedule; thus, the schedule is enticing, and the environment is enticing.

P1 also explained that their strategy is simply to make their work environment inviting. The nurses are involved because of their small work environment; therefore, these nurses have direct access to their leaders anytime. This aligns with Morgan and Somera (2014) who explained the fundamental issue causing nurses to leave the profession, adding to the shortage, was the work environment. On the other hand, the conclusion drawn by Hayes et al. (2013) opposed that internationally, there have been no previous studies that have examined if nurse characteristics are associated with satisfaction with the work environment and levels of job satisfaction, stress and burnout. Agreeably, another study conducted by Park et al. (2015) revealed that challenged nurses in challenged working environments report more employment fulfillment. Another participant explained that once healthcare managers get nurses in, they try to match them

up with something that the nurses enjoy doing to create good work environment. An example of that would be doing a little tweaking of schedules to attract and retain nurses. This tweaking also would provide opportunities for nurses to spend more time with their families and enjoy their personal life as well. The same participant added, “We try to retain the nurses that we have so we do not have to look outside to bring new nurses”.

Another participant voiced that many institutions at least twice a year at the human resource level run reports to compare and benchmark themselves as far as salaries against other institutions within their state. If these institutions find nurses are getting paid more in other healthcare facilities, they adjust the salaries up to twice a year to keep their nurses. P4 explained that healthcare administrators and healthcare managers can lose a nurse over a dollar an hour which makes a huge difference. The same participant added, “It is important to stay competitive in the market and always look at the salaries at the city level, state level, and keep yourself relevant in the market”.

As seen in the literature, Everhart et al. (2013) explained that given the importance of nurses in the overall delivery of healthcare, hospitals in markets with higher levels of competition must successfully recruit and retain nurses to achieve a competitive advantage over other hospitals in the market. This confirms the information provided by P4. P2 explained that at the hospital, leaders have doubled the number of new graduate nurses and enrolled them in a residency program that provides six months of support and internship to support their existing nurses. Monahan (2015) explained that to address the global nursing shortage, expanding efforts should be exerted to provide

new nurses and student nurses with residency programs and preceptorships, especially in the specialty area such as perioperative nursing.

P2 explained that another enticing element is providing part-time opportunities to nurses. By providing part-time schedules, nurses can spend more time with their families and especially nurses that are curving down their carrier as they get close to retirement age. While conducting these interviews, I asked about barriers that could prevent or prevented these professional from implementing these strategies to prevent nursing shortage in their healthcare units. Most participants pointed to the union policies that these healthcare professionals have to obey. One participant stated, “If we did not have the union, we could do more for our nurses”.

On the other hand, another participant saw that the union is good since the union protects their employees. When I asked about what the participant can do to overcome these barrier, most participants replied that the union limits healthcare administrators and healthcare managers from what they can do for specific or individual nurses. One participant stated, “It is really good to have a union contract, but when it comes to individuals’ needs and retaining, we may be very limited on what we can do for individual nurses”. The results concluded in this theme are in line with the findings of a research conducted by Dempsey and Reilly (2016). Dempsey and Reilly (2016) revealed that hospital administrators may enhance positive work environments by understanding and implementing strategies to reduce turnover of hospital employees. By creating a positive work environment where employees are satisfied, leaders in healthcare may increase hospital staff retention. Creating positive work environment theme relates to the

PESTEL framework analysis. Leaders in healthcare may reduce nursing shortage by providing a safe environment for their employees free of associated health risks or threats.

Strategy 5: Improving the Healthcare System Through New Policies and Regulations

The last strategy was improving healthcare system through new policies and regulations. During the interviews, most participants discussed areas of apprehension regarding improving the healthcare system policies and regulations. Participants were concerned about the healthcare reform and expressed anxiety about what is going to occur within the next few months or even years. One participant stated that their biggest concern is that regardless of what happens at the Capitol Hill level, they worry about what the congress passes since they are on the front line. The same participant added that healthcare is a human right, everyone should have healthcare coverage. Since the baby boomers are aging at this point, the need for healthcare services is only going to get bigger. This response was in line with the information revealed in the literature regarding the increase of the needed RNs which can be attributed to the rise in the baby boomer population (Cox et al., 2014).

P1 stated, “We need to keep talking about this subject because the question in every healthcare institution is, how we fix nursing shortage problem knowing it is coming and it is coming really fast?” Elgie (2007) explained that if government policies remain in place that is applying downward pressure on nursing workforce wages and benefits, then the shortage of nurses today will persist indefinitely. Another participant explained that

government policies and regulations should change perspectives of the country. An example would be changing how nurses are being valued and seen economically, politically, and financially. The same principles should apply to nursing educators. Agreeably, Gupta (2013) explained that political factors might incorporate general changes in the domestic political environment, government change, world power movements, and certain legislation and regulations. Political factors within the PESTEL framework affecting healthcare organizations include impact on economy, changes in government regulations, political stability, and health and safety laws (Ho, 2014). Managers of responsible organizations can apply better management by the PESTEL analysis and turn threats into opportunities (Atighechian, Maleki, Aryankhesal, & Jahangiri, 2016).

P2 questioned if nurses and educators are being valued, "How do we show that we value them? Is it through pay? The way the healthcare is going, it is kind of a huge question to answer". The same participant added, "I do not know if I have the answer to that, I do not know if the nursing shortage will be fixed in the near future by potential policies and regulations". Participant P2 added, "I think that nursing shortage is a huge problem we are all facing". Kaiser Foundation (2012) revealed that the federal government had passed regulations and laws that regulate and support the government strategies toward reinforcing the nursing workforce that concentrate on recruitment and retention. One example of the policies is the Nurse Reinvestment Act of 2002 and the Recovery and Reinvestment Act of 2009. Another law was the passing of the ACA that had parts intended for development of the wellbeing of the workforce (Kaiser

Foundation, 2012). In addition to the above regulations and laws, HRSA has built up the NEPQR program, which awards certified schools of nursing and healthcare facilities to promote nursing education, enhance patient care quality, and expand nurse retention (HRSA, 2012).

From the participants' responses, I concluded that most of them are more involved at the political level whether they like politics or not. Participants agreed that they must voice their concerns and get their distress heard by the federal government. The body of the literature is in alignment with improving the healthcare system through new policies and regulations strategy identified in this study (Kaiser Foundation, 2012; Hertel, 2012). The results of a study conducted by Jones, Hamilton, and Murry (2015) was in alignment with this theme. Jones et al. revealed that shortage of nurse labor resources continues to be an issue and consistently identified as the most substantial factor affecting incomplete care among nursing staff in hospitals. Establishing new healthcare policies and regulations theme relates to the PESTEL framework analysis. Political leaders may help reduce nursing staff shortage by presenting policies and regulations that healthcare leaders can use to support local and national healthcare institutions.

Applications to Professional Practice

The main objective of this study was to explore strategies healthcare leaders use to overcome nursing shortage. The findings of this study included successful strategies for healthcare leaders who may experience the nursing shortage. Healthcare leaders may apply these strategies to overcome nursing shortage and reduce turnover. By applying the

first strategy, development of communication programs, leaders can appoint a communication manager to improve communication. They can redesign their processes to include feedback. Leaders can specify who to involve and how much time a document can remain with an employee. The next strategy is positive work environment; leaders also can enhance positive work environment by promoting moral through engaging employees which could result in job satisfaction and increase employee retention. Healthcare leaders can create a respectful friendly positive work environment where employees are satisfied and happy. By providing a positive work environment where employees are rewarded and motivated, healthcare leaders will retain nurses. The third strategy is investments in nursing education. Healthcare leaders can encourage their nurses to take any educational opportunities while working to better themselves and get promoted to higher positions. Finally, the last strategy is improving healthcare systems through new policies and regulations. Healthcare leaders can voice their concerns about healthcare policies and regulations through attending meetings where they can participate and share their apprehensions about the nursing shortage and its effects on the community.

Implications for Social Change

It is essential to improve nurses' job satisfaction and retention by developing targeted retention strategies for younger nurses and nurses working in hospitals as well as the offering of professional development opportunities (El-Jardali et al., 2013). The implications for social change include better services to patients, alleviating pain, and reducing deaths rates. The results of this study may assist healthcare leaders on a small-

scale or non-healthcare leaders on a large-scale with organizational changes or improvements. Increased communication programs, strong engagement, access to resources or educational opportunities, and effective planning strategies can lead to a more involved and satisfied workforce. When nurses are satisfied, engaged, and work in a positive work environment, they are more likely to provide better healthcare services and increase patient satisfaction. More efficient and effective hospitals provide better services to their customers since the main service of hospitals is in curing patients, better services to patients imply healthier community.

Nursing leaders are the persons required to lead the needed changes in healthcare (Yoder-Wise et al., 2013). Cording, Harrison, Hoskisson, and Jonsen (2014) explained that if employees are dissatisfied, they will decrease how they treat stakeholders and consumers (Cording et al., 2014). Fundamentally, if healthcare administrators and healthcare managers are focused on sustaining employee engagement and increasing internal communication, they are more likely to experience an increase in nursing motivation, patient satisfaction, decrease in nursing turnover, and solid relationships (Kunie, Kawakami, Shimazu, Yonekura, & Miyamoto, 2017). The findings of this study may assist healthcare leaders to overcome the nursing shortage, which in turn may lead to establishing a culture of retention and healthy clinical nurse practice environments as suggested by Kramer et al. (2012).

Recommendations for Action

Healthcare managers and healthcare leaders who are going through the nursing shortage within their departments may benefit from the findings of the study. In addition,

healthcare leaders or healthcare managers that are interested in increasing employee engagement, establishing solid communication, and creating positive work environment may also benefit from the results of the study. I recommend the following actions based on the results drawn from this study:

Development of communication programs. Healthcare leaders should establish solid communication programs with their employees to guarantee trust and open dialogs. Healthcare leaders should consider the experiences of the participants of this study when developing such programs that improve communication and build trust between these leaders and their employees.

Increased employee engagement. Healthcare leaders should increase employee engagement to assure employee satisfaction. This can be accomplished by hiring qualified managers and maintaining solid leadership strategies to build an engaged workforce.

Investment in nursing education. Healthcare leaders should encourage educational opportunities for further growth for their employees. Based on the recommendations drawn from the third theme, that is the investment in nursing education, healthcare leaders should work hand in hand with their employees to take advantage of any educational opportunities. This will guarantee lower attrition and facilitate willingness to stay.

Positive work environment. Healthcare leaders should work hard to create a positive enticing work environment to guarantee employee retention. Related to the fourth theme emerged in this study, that is the positive work environment, healthcare

managers, healthcare leaders, or leaders in general should ensure that their employees have a safe environment where they can work comfortably. A safe and welcoming environment increases satisfaction, respect, teamwork, and collaboration among all members of the institution (Clark, 2016).

Improving the healthcare system through new policies and regulations. Healthcare leaders should participate in events that provide opportunities to raise and voice concerns as far as nursing shortage at the county, the state, or the federal level. Recommendations from the last theme developed in this study that is improving the healthcare system through new policies and regulations revealed that healthcare managers, healthcare leaders, or leaders in general should invest time and be part of efforts in improving the healthcare system's policies and regulation by raising awareness and effects of nursing shortage.

I will distribute the results of this research to healthcare leaders in diverse ways. I will share my findings by lecturing at one or two healthcare conferences. In addition, I will distribute my research findings through academic scholarly articles and healthcare journals.

Recommendations for Further Research

Numerous studies about shortage of nurses and its effects exist; nevertheless, research on strategies to overcome the nursing shortage is limited. Continued studies regarding strategies nurses not healthcare leaders implemented should be explored to address areas not addressed in the study and to review delimitations. Opportunities for further studies might include researching nursing shortage and satisfaction in healthcare

organizations. Another recommendation would be to perform a multi case study. A researcher could look at multiple hospitals and compare the results. A multi case study could also be used to compare the views of nurses in one organization versus the views of nurses in other organizations.

Lastly, I recommend further studies especially quantitative studies that could expand on the existing findings. Contributions from a quantitative study may add further understanding or views into nursing shortage on a larger platform. Researchers can distribute surveys to participants in a larger area to define other strategies other healthcare leaders utilize overcome nursing shortage. Furthermore, this study focused on one hospital in one state; future studies could explore other states to gain a greater understanding of nursing shortage.

Reflections

The doctoral study journey was interesting and overwhelming at times. Putting piece by piece together was a great learning experience and challenge that encouraged me to keep going. I was able to learn much from the participants regarding nursing shortage. From this experience, I have learned that there were different strategies managers used to overcome nursing shortage. The topic of nursing shortage is going to expand as the population continues to grow and baby boomers begin turning 65 and aging into Medicare since 2011.

When I chose the topic of nursing shortage, I knew that I would have to exclude myself and be unbiased. This study was an opportunity for participants to share their experiences and explain their views about nursing shortage. To stay focused, I made sure

to follow the interview protocol. I had no relationship with the participants and I have never been in their facility prior to the interviews. The fact that I had no prior relationship with the participants helped to decrease the bias. Finally, while interviewing the participants, I realized that they were all dedicated to the institution they work for. This made me think about what other healthcare leaders in general would have to say about the same topic of research.

Conclusion

This qualitative case study was completed to explore strategies healthcare leaders use to overcome nursing shortage. After analyzing the data, five strategies emerged. I related each strategy back to the literature review, the social exchange, and the existing body of knowledge. The strategies that emerged were development of communication programs, increased employee engagement, investments in nursing education, positive work environment, and improving the healthcare system through new policies and regulations.

I concluded from the study that when nurses are not pleased with communication, work environment, and are less engaged, they are likely to leave their job. When nurses are happy with the communication, engaged by leadership, and the work environment is enticing, they are more pleased and more productive. Healthcare leaders should become more involved with their nurses and consider implementing the strategies discovered in this study if they want to overcome the nursing shortage.

References

AbuAlRub, R. F., El-Jardali, F., Jamal, D., Iblasi, A. S., & Murray, S. F. (2013). The challenges of working in underserved areas: A qualitative exploratory study of views of policy makers and professionals. *International Journal of Nursing Studies, 50*, 73–82. doi:10.1016/j.ijnurstu.2012.08.014

Aij, K., & Lohman, B. (2016). *Practical lean leadership for healthcare managers: A guide to sustainable and effective application of lean principles*. Boca Raton, FL: CRC Press.

Aiken, L. H., Sloane, D. M., Bruyneel, L., Van den Heede, K., & Sermeus, W. (2013). Nurses' reports of working conditions and hospital quality of care in 12 countries in Europe. *International Journal of Nursing Studies, 50*, 143–153. doi:10.1016/j.ijnurstu.2012.11.009

Akhtar, C. S., Haider, M., Aamir, A., & Hamid, A. B. A. (2016). Work-life balance, job satisfaction and nurses retention: moderating role of work volition. *International Journal of Business Excellence, 10*, 488-501. doi:10.1504/ijbex.2016.10000215

Alam, S. M. T. (2015). Factors affecting job satisfaction, motivation and turnover rate of medical promotion officer (MPO) in pharmaceutical industry: A study based in Khulna City. *Asian Business Review, 1*(2), 126-131. doi:10.18034/abr.v1i2.324

Allen, B. C., Holland, P., & Reynolds, R. (2014). The effect of bullying on burnout in nurses: The moderating role of psychological detachment. *Journal of Advanced Nursing, 71*, 381–390. doi:10.1111/jan.12489

American Association of Colleges of Nursing. (2017). *Fact sheet: Nursing shortage, April.* Retrieved from http://www.aacn.nche.edu/media-relations/fact-sheets/nursing-shortage

American Nurses Association. (2012). *Recruitment and retention of nurses*. Retrieved from http://www.nursingworld.org/MainMenuCategories/ThePracticeofProfessionalNursing/workforce/Recruitment

American Nurses Association. (2014). *The nursing workforce 2014: Growth, salaries, education, demographics & trends*. Retrieved from http://www.nursingworld.org/MainMenuCategories/ThePracticeofProfessionalNursing/workforce/Fast-Facts-2014-Nursing-Workforce.pdf

American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, (2009).

Anderson, A. (2014). *Impact of the affordable care act on the health care workforce*. Retrieved from http://www.heritage.org/health-care-reform/report/the-impact-the-affordable-care-act-the-health-care-workforce

Anderson, B. (2010). A perspective on changing dynamics in nursing over the past 20 years. *British Journal of Nursing, 19*, 1190-1191. doi:10.12968/bjon.2010.19.18.79055

Auerbach, D. I., Buerhaus, P. I., & Staiger, D. O. (2016). How fast will the registered nurse workforce grow through 2030? Projections in nine regions of the country. *Nursing Outlook, 64*(1), 1-7. doi:10.1016/j.outlook.2016.07.004

Auerbach, D. I., Staiger, D. O., Muench, U., & Buerhaus, P. (2013). The nursing workforce in an era of health care reform. *New England Journal of Medicine, 368*, 470-1472. doi:10.1056/NEJMp1301694

Ausserhofer, D., Schubert, M., Desmedt, M., Blegen, M. A., De Geest, S., & Schwendimann, R. (2013). The association of patient safety climate and nurse-related organizational factors with selected patient outcomes: A cross-sectional survey. *International Journal of Nursing Studies, 50*, 240–252. doi:10.1016/j.ijnurstu.2012.04.007

Baker, D. L., Hebbeler, K., Davis-Alldritt, L., Anderson, L. S., & Knauer, H. (2015). School health services for children with special health care needs in California. *Journal of School Nursing, 31*, 318–325. doi:10.1177/1059840515578753

Bazeley, P., & Jackson, K. (2013). *Qualitative data analysis with NVivo* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking: A tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research, 26*, 1802–1811. doi:10.1177/1049732316654870

Biswas, S., & Bhatnagar, J. (2013). Mediator analysis of employee engagement: Role of perceived organizational support, PO fit organizational commitment and job satisfaction. *Vikalpa, 38*(1), 27-40. Retrieved from http://www.vikalpa.com/

Brinkmann, S. (2013). *Qualitative interviewing. Understanding qualitative research*. New York, NY: Oxford University Press.

Brunges, M., & Foley-Brinza, C. (2014). Projects for increasing job satisfaction and creating a healthy work environment. *Association of Operating Room Nurses Journal, 100*, 670-681. doi:10.1016/j.aorn.2014.01.029

Buiter, J. M., & Harris, C. M. (2013). Post-merger influences on human resource practices and organizational leadership on employee perceptions and extra-role behaviors. *SAM Advanced Management Journal, 78*(4), 14-22. Retrieved from www.uclibs.org

Bush, T. (2016). Collegiality and professional learning communities. *Educational Management Administration Leadership, 44*, 871-874. doi:10.1177/1741143216663993

Call, K. T., McAlpine, D. D., Garcia, C. M., Shippee, N., Beebe, T., Adeniyi, T. C., & Shippee, T. (2014). Barriers to care in an ethnically diverse publicly insured population. *Medical Care, 52*, 720–727. doi:10.1097/mlr.0000000000000172

Chan, Z. C. Y., Tam, W. S., Lung, M. K. Y., Wong, W. Y., & Chau, C. W. (2013). A systematic literature review of nurse shortage and the intention to leave. *Journal of Nursing Management, 21*, 605-613. doi:10.1111/j.1365-2834.2012.01437.x

Cho, E., Sloane, D. M., Kim, E.Y., Kim, S., Choi, M., Yoo, I. Y., . . . Aiken, L. H. (2015). Effects of nurse staffing, work environments, and education on patient mortality: An observational study. *International Journal of Nursing Studies, 52*, 535–542. doi:10.1016/j.ijnurstu.2014.08.006

Clark, C. (2016). *Fostering healthy work environments: Powered by civility, collegiality, and teamwork* (PowerPoint slides). Retrieved from http://www.nursinglibrary.org/vhl/handle/10755/603359

Cope, D. G. (2014). Methods and meanings: Credibility and trustworthiness of qualitative research. *Oncology Nursing Forum, 41*, 89-91. doi:10.1188/14.ONF.89-91

Cope, V., Jones, B., & Hendricks, J. (2016). Why nurses chose to remain in the workforce: Portraits of resilience. *Collegian, 23*(1), 87–95. doi:10.1016/j.colegn.2014.12.001

Cortazzi, M. (2014). *Narrative analysis.* New York, NY: Routledge.

Cox, P., Willis, K., & Coustasse, A. (2014). The American epidemic: The U.S. nursing shortage and turnover problem. *Insights to a Changing World Journal, 2014*(2), 54-71. Retrieved from http://franklinpublishing.net/insightstoachangingworld.html

Crocker, P. M. (2012). *Relationship between entry-level skills and manager preferred skills for business graduates* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 1038151336)

De Ceunynck, T., Kusumastuti, D., Hannes, E., Janssens, D., & Wets, G. (2013). Mapping leisure shopping trip decision making: Validation of the CNET interview protocol. *Quality and Quantity, 47*, 1831-1849. doi:10.1007/s11135-011-9629-4

Dempsey, C., & Reilly, B. (2016). Nurse engagement: What are the contributing factors for success? *Online Journal of Issues in Nursing, 21*, 1-2. doi:10.3912/OJIN.Vol21No01Man02

Dolansky, M.A., & Moore, S.M. (2013). Quality and safety education for nurses (QSEN): The key is systems thoughtful. *Online Journal of Issues in Nursing, 18*(3), Manuscript 1.doi:10.3912/OJIN.Vol18No03Man01

Doody, O., & Noonan, M. (2013). Preparing and conducting interviews to collect data. *Nurse Researcher, 20*, 28–32. doi:10.7748/nr2013.05.20.5.28.e327

Drabble, L., Trocki, K. F., Salcedo, B., Walker, P. C., & Korcha, R. A. (2015). Conducting qualitative interviews by telephone: Lessons learned from a study of alcohol use among sexual minority and heterosexual women. *Qualitative Social Work, 15*, 118–133. doi:10.1177/1473325015585613

Duffin, C. (2014). Increase in nurse numbers linked to better patient survival rates in ICU. *Nursing Standard, 28*(33), 10–10. doi:10.7748/ns2014.04.28.33.10.s8

Dworkin, S. L. (2012). Sample size policy for qualitative studies using in-depth interviews. *Archives of Sexual Behavior, 41*, 1319-1320. doi:10.1007/s10505-012-0016-6

Dwyer, L., Gill, A., & Seetaram, N. (2014). *Handbook of research methods in tourism: Quantitative and qualitative approaches.* Cheltenham, United Kingdom: Edward Elgar Publishing.

Eberechukwu, A., & Chukwuma, A. (2016). Integrated marketing communication in building customer-based equity. *International Journal of Management & Economics Intervention, 2*, 573-582. doi:10.18535/ijmei/v2i3.02

Ebrahimi, H., Hassankhani, H., Negarandeh, R., Azizi, A., & Gillespie, M. (2016). Barriers to support for new graduated nurses in clinical settings: A qualitative study. *Nurse Education Today, 37*, 184–188. doi:10.1016/j.nedt.2015.11.008

Elgie, R. (2007). Politics, economics, and nursing shortages: A critical look at United States government policies. *Nursing economic*, *25*(5), 285-292. Retrieved from http://www.nursingeconomics.net/cgi-bin/WebObjects/NECJournal.woa

El-Jardali, F., Alameddine, M., Jamal, D., Dimassi, H., Dumit, N. Y., McEwen, M., . . . Murray, S. F. (2013). A national study on nurses' retention in healthcare facilities in underserved areas in Lebanon. *Human Resource Health, 11*(1), 1-13. doi:10.1186/1478-4491-11-49

Ellis, T. J., & Levy, Y. (2010). Towards a guide for novice researchers on research methodology: Review and proposed methods. *Issues in Informing Science and Information Technology, 6,* 323-337. Retrieved from http://www.informingscience.us/icarus/journals/iisit

Elo, S., Kaariainen, M., Kanste, O., Polkki, T., Utriainen, K., & Kyngas, H. (2014). Qualitative content analysis: A focus on trustworthiness. *SAGE Open, 4*(1), 1-12. doi:10.1177/2158244014522633

Englander, M. (2015). The interview: Data collection in descriptive phenomenological human scientific research. *Journal of Phenomenological Psychology, 43*(1), 13-35. doi:10.1163/156916212x632943

Eriksson, P., & Kovalainen, A. (2015). *Qualitative methods in business research: A practical guide to social research* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Everhart, D., Neff, D., Al-Amin, M., Nogle, J., & Weech-Maldonado, R. (2013). The effects of nurse staffing on hospital financial performance: Competitive versus less competitive markets. *Health Care Management Review, 38*(2), 146-155. doi:10.1097/HMR.0b013e318257292b

Figueroa, S., Bulos, M., Forges, E., & Judkins-Cohn, T. (2013). Stabilizing and retaining a quality nursing work force through the use of the married state preceptor ship model. *Journal of Continuing Education in Nursing, 44*, 365-373. doi:10.3928/00220124-20130603-08

Fischer, K. M. (2016). How the educational funding provisions of the patient protection and affordable care act will affect the nursing shortage in the United States. *Northwestern Journal of Law and Social Policy*, *11*(1), 54-77. Retrieved from http://scholarlycommons.law.northwestern.edu/njlsp/

Fisher, M. (2014). A Comparison of professional value development among pre-licensure nursing students in associate degree, diploma, and Bachelor of Science in nursing programs. *Nursing Education Perspectives, 35*(1), 37–42. doi:10.5480/11-729.1

Flinkman, M., & Salanterä, S. (2014). Early career experiences and perceptions - a qualitative exploration of the turnover of young registered nurses and intention to leave the nursing profession in Finland. *Journal of Nursing Management, 23*, 1050–1057. doi:10.1111/jonm.12251

Frost, D. M. (2013). Stigma and intimacy in same-sex relationships: A narrative approach. *Qualitative Psychology, 1*, 49–61. doi:10.1037/2326-3598.1.s.49

Fusch, P. I., & Ness, L. R. (2015). Are we there yet? Data saturation in qualitative research. *The Qualitative Report*, *20*, 1408-1416. Retrieved from http://tqr.nova.edu/

Gaudette, É., Tysinger, B., Cassil, A., & Goldman, D. P. (2015). Health and health care of Medicare beneficiaries in 2030. *Forum for Health Economics and Policy, 18*(2), 75-96. doi:10.1515/fhep-2015-0037

Gibbins, J., Bhatia, R., Forbes, K., & Reid, C. M. (2014). What do patients with advanced incurable cancer want from the management of their pain? A qualitative study. *Palliative Medicine*, *28*(1), 71-78. doi:10.1177/0269216313486310

Gillespie, A. (2011). *Foundations of economics* (3rd ed.). Oxford, United Kingdom: Oxford University Press.

Gilman, M., Adams, E. K., Hockenberry, J. M., Wilson, I. B., Milstein, A. S., & Becker, E. R. (2014). California safety-net hospitals likely to be penalized by ACA value, readmission, and meaningful-use programs. *Health Affairs, 33*, 1314–1322. doi:10.1377/hlthaff.2014.0138

Gupta, A. (2013). Environmental and pest analysis: An approach to external business environment. *Merit Research Journal of Art, Social Science and Humanities*, *1*(2), 13-17. Retrieved from http://meritresearchjournals.org/

Gu, Q., Koenig, L., Faerberg, J., Steinberg, C. R., Vaz, C., & Wheatley, M. P. (2014). The medicare hospital readmissions reduction program: Potential unintended consequences for hospitals serving vulnerable populations. *Health Services Research, 49,* 818-837. doi:10.1111/1475-6773.12150

Hanson, J. L., Balmer, D. F., & Giardino, A. P. (2011). Qualitative research methods for medical educators. *Academic Pediatrics, 11*, 375-386. doi:10.1016/j.acap.2011.05.001

Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87*(2), 268–279. doi:10.1037/0021-9010.87.2.268

Harvey, L. (2014). Beyond member-checking: A dialogic approach to the research interview. *International Journal of Research & Method in Education, 38*(1), 23–38. doi:10.1080/1743727x.2014.914487

Hatva, E. (2012). Partnership with college solves staff shortage problem. *Biomedical Instrumentation & Technology, 46*, 289-293. doi:10.2345/0899-8205-46.4.289

Hayes, B., Douglas, C., & Bonner, A. (2013). Work environment, job satisfaction, stress and burnout among haemodialysis nurses. *Journal of Nursing Management, 23*, 588–598. doi:10.1111/jonm.12184

Health Resources and Services Administration. (2012). *Nurse education, practice, quality and retention* (NEPQR). Retrieved from http://bhpr.hrsa.gov/nursing/grants/nepqr.html

Hennink, M. M., Kaiser, B. N., & Marconi, V. C. (2016). Code saturation versus meaning saturation: How many interviews are enough? *Qualitative Health Research, 26, 1447- 1586.* doi:10.1177/1049732316665344

Hertel, R. (2012). Regulating patient staffing: A complex issue. *Med-Surg Matters, 21*(1), 3-7. Retrieved from https://www.amsn.org/newsletter

Hickey, N., Sumsion, J., & Harrison, L. (2013). Why nursing? Applying a socio ecological framework to study career choices of double degree nursing students and graduates. *Journal of advanced nursing*, *69*, 1714-1724. doi:10.1111/jan.12029

Heponiemi, T., Kouvonen, A., Virtanen, M., Vänskä, J., & Elovainio, M. (2014). The prospective effects of workplace violence on physicians' job satisfaction and turnover intentions: the buffering effect of job control. *BMC Health Services Research, 14*(1), 1-8. doi:10.1186/1472-6963-14-19

Ho, J.K.K. (2014). Formulation of a systemic PEST analysis for strategic analysis. *European Academic Research*, *2*, 6478–6492. Retrieved from http://euacademic.org/Default.aspx

Holloway, I., & Galvin, K. (2016). *Qualitative research in nursing and healthcare* (4th ed.). London, England: Wiley-Blackwell.

Houghton, C., Casey, D., Shaw, D., & Murphy, K. (2013). Rigour in qualitative case study research. *Nurse Researcher, 20*, 12-17. doi:10.7748/nr2013.03.20.4.12.e326

Hunting, G. (2014). Intersectionality-informed qualitative research: A Primer. *Institute for Intersectionality Research & Policy, SFU, 4*(1), 32-56. Retrieved from http://www.sfu.ca/iirp/

Hussein, A. (2015). The use of triangulation in social sciences research: Can qualitative and quantitative methods be combined? *Journal of Comparative Social Work*, *4*(1), 1-12. Retrieved from http://journal.uia.no/index.php/JCSW

Hussein, S., Ismail, M., & Manthorpe, J. (2015). Changes in turnover and vacancy rates of care workers in England from 2008 to 2010: Panel analysis of national workforce data. *Health & Social Care in the Community, 24*, 547–556. doi:10.1111/hsc.12214

Jacobs, S. (2016). A scoping review examining nursing student peer mentorship. *Journal of Professional Nursing, 33*(3), 212-223. doi:10.1016/j.profnurs.2016.09.004

Johnson, G., Whittington, R., Scholes, K., & Pyle, S. (2011). *Exploring strategy: Text & cases* (9th ed.). Harlow Essex, United Kingdom: Financial Times Prentice Hall.

Kahana, E., & Kahana, B. (2014). Baby boomers' expectations of health and medicine. *Medicine and Society*, *16*, 380-384. doi:10.1001/virtualmentor.2014.16.05.msoc2-1405

Kaiser Foundation. (2012). *Nursing workforce*. Retrieved from http://www.kaiseredu.org/Issue-Modules/Nursing-Workforce/Background-Brief.aspx

Kaisar Family Foundation. (2015). *Total health care employment*. Retrieved from http://kff.org/other/state-indicator/total-health-care-employment/?currentTimeframe=0&selectedRows=%7B%22nested%22:%7B%22washington%22:%7B%7D%7D%7D&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

Ketels, C. & Keller, M. (2015). 25 Years of the competitive advantage of nations. *Competitiveness Review*, *25*, 458-570. doi:10.1108/CR-08-2015-0073

Kim, M. J., Chung, N., Lee, C. K., & Preis, M. W. (2015). Motivations and use context in mobile tourism shopping: Applying contingency and task–technology fit theories. *International Journal of Tourism Research*, *17*, 13-24. doi:10.1002/jtr.1957

Kramer, M., Halfer, D., Maguire, P., & Schmalenberg, C. (2012). Impact of healthy work environments and multistage nurse residency programs on retention of newly licensed RNs. *Journal of Nursing Administration, 42*(3), 148-159. doi:10.1097/nna.0b013e31824808e3

Kunie, K., Kawakami, N., Shimazu, A., Yonekura, Y., & Miyamoto, Y. (2017). The relationship between work engagement and psychological distress of hospital nurses and the perceived communication behaviors of their nurse managers: A cross-sectional survey. *International Journal of Nursing Studies, 71*, 115–124. doi:10.1016/j.ijnurstu.2017.03.011

Langabeer II, J. R., & Helton, J. (2015). *Health care operations management* (2nd ed.). Burlington, MA: Jones & Bartlett Publishers.

Lartey, S., Cummings, G., & Profetto-McGrath, J. (2013). Interventions that promote retention of experienced registered nurses in health care settings: A systematic review. *Journal of Nursing Management, 22*, 1027–1041. doi:10.1111/jonm.12105

Lavoie-Tremblay, M., O'Conner, P., Harripaul, A., Biron, A., Ritchie, J., Lavigne, G. L., . . . Sourdif, J. (2013). The effect of transforming care at the bedside initiative on healthcare teams' work environments. *Worldviews on Evidence-Based Nursing, 11*(1), 16–25. doi:10.1111/wvn.12015

Leedy, P.D., & Ormrod, J. E. (2015). *Practical Research: Planning and Design* (11th ed.). Essex, England: Pearson Education.

Leftheriotis, I., & Giannakos, M. N. (2014). Using social media for work: Losing your time or improving your work? *Computers in Human Behavior, 31*, 134–142. doi:10.1016/j.chb.2013.10.016

Lewis, L. C. (2015). Nursing workforce trends demand transformational leadership. *Journal of Nursing Administration, 45*, 467–525. doi:10.1097/nna.0000000000000246

Lewis, P. A. (2015). Systems, structural properties, and levels of organisation: The influence of Ludwig Von Bertalanffy on the work of FA Hayek. *Forthcoming in Research in the History of Economic Thought and Methodology, 34*, 125-159. doi:10.2139/ssrn.2609349

Lewis, S. (2015). Qualitative inquiry and research design: Choosing among five approaches. *Health Promotion Practice, 16*, 473–475. doi:10.1177/1524839915580941

Loosveldt, G., & Beullens, K. (2013). The impact of respondents and interviewers on interview speed in face-to-face interviews. *Social Science Research, 42*, 1422–1430. doi:10.1016/j.ssresearch.2013.06.005

Magnussen, L., Niederhauser, V., Ono, C. K., Johnson, N. K., Vogler, J., & Ceria-Ulep, C. (2013). Developing a statewide nursing consortium, island style. *Journal of Nursing Education, 52*(2), 77-84. doi:10.3928/01484834-20130114-01

Malterud, K., Siersma, V. D., & Guassora, A. D. (2015). Sample size in qualitative interview studies: Guided by information power. *Qualitative Health Research, 26*, 1753–1760. doi:10.1177/1049732315617444

Manen, M. (2016). *Phenomenology of practice: Meaning-giving methods in phenomenological research and writing*. New York, NY: Routledge.

Mancino, D. J., & Feeg, V. (2014). The health care paradigm is shifting—is nursing ready to lead change? *Dean's Notes*, *35*(4), 1-4. Retrieved from http://www.ajj.com/sites/default/files/services/publishing/deansnotes/mar14.pdf

Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013). Does sample size matter in qualitative research? A review of qualitative interviews in IS research. *Journal of Computer Information Systems*, *54*(1), 11-22. doi:10.1080/08874417.2013.11645667

Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research*. (6th ed.). Thousand Oaks, CA: Sage Publications.

Maurits, E. E. M., de Veer, A. J. E., van der Hoek, L. S., & Francke, A. L. (2015). Autonomous home-care nursing staff are more engaged in their work and less likely to consider leaving the healthcare sector: A questionnaire survey. *International Journal of Nursing Studies, 52,* 1816–1823. doi:10.1016/j.ijnurstu.2015.07.006

McCalla-Graham, J. A., & De Gagne, J. C. (2015). The lived experience of new graduate nurses working in an acute care setting. *Journal of Continuing Education in Nursing, 46*(3), 122–128. doi:10.3928/00220124-20150220-17

McGuire, A. L., Robinson, J. O., Ramoni, R. B., Morley, D. S., Joffe, S., & Plon, S. E. (2013). Returning genetic research results: Study type matters. *Personalized Medicine, 10*, 27-34. doi:10.2217/pme.12.109

McIntosh, M. J., & Morse, J. M. (2015). Situating and constructing diversity in semi-structured interviews. *Global Qualitative Nursing Research, 2*(0), 1-12. doi:10.1177/2333393615597674

McKinnon, T. H., & McNelis, A. M. (2013). International programs in United States schools of nursing: Driving forces, obstacles, and opportunities. *Nursing Education Perspectives, 34,* 323–328. doi:10.5480/1536-5026-34.5.323

Mee, S. (2014). Is distance education the answer to the nursing shortage? *Open Journal of Nursing, 4*, 158-162. doi:10.4236/ojn.2014.43020

Memon, M. A., Salleh, R., Baharom, M. R., & Harun, H. (2014). Person-organization fit and turnover intention: The mediating role of employee engagement. *Global Business & Management Research, 6*(3), 205-209. doi:10.1097/jnr.0000000000000019

Mertens, D. M. (2014). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods* (4th ed.). Thousand Oaks, CA: Sage Publications.

Mertler, C. (2016). *Introduction to educational research*. Thousand Oaks, CA: Sage Publications.

Mishra, K., Boynton, L., & Mishra, A. (2014). Driving employee engagement: The expanded role of internal communications. *Journal of Business Communications, 51*(12), 183-202. doi:10.1177/2329488414525399

Mindel, V., & Mathiassen, L. (2015). Contextualist inquiry into hospital revenue cycle transformation: Bridging research and practice. *Journal of the Association for Information Systems*, *16*, 1016-1057. doi:10.1109/hicss.2015.358

Miles, M. B., Huberman, A. M., & Saldana, J. (2013). *Qualitative data analysis: A methods Sourcebook* (3rd ed.). Thousand Oaks, CA: Sage.

Millett, C. M., Stickler, L. M., & Wang, H. (2015). Accelerated nursing degree programs: Insights into teaching and learning experiences. *ETS Research Report Series, 2015*(2), 1–32. doi:10.1002/ets2.12078

Miracle, V. A. (2016). The Belmont report. *Dimensions of Critical Care Nursing, 35,* 223–228. doi:10.1097/dcc.0000000000000186

Mitka, M. (2013). Greater nurse staffing may lower hospital readmissions. *JAMA*, *310*, 1911-1911. doi:10.1001/jama.2013.282373

Monahan, J. C. (2015). A student nurse experience of an intervention that addresses the perioperative nursing shortage. *Journal of Perioperative Practice*, *25*, 230-234. Retrieved from http://www.afpp.org.uk/books-journals/Journal-of-Perioperative-Practice

Morgan, D., & Somera, P. (2014). The future shortage of doctoral prepared nurses and the impact on the nursing shortage. *Nursing Administration Quarterly, 38*(1), 22-26. doi:10.1097/NAQ.0000000000000001

Morgeson, F. P., Mitchell, T. R., & Liu, D. (2015). Event system theory: An event-oriented approach to the organizational sciences. *Academy of Management Review*, *40*, 515-537. doi:10.5465/amr.2012.0099

Morse, J. M. (2015). Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative Health Research, 25*, 1212–1222. doi:10.1177/1049732315588501

Moss, H., & Weinstein, M. (2009). *Addressing the skills shortage in healthcare through the development of incumbent employees: hospital employee education and training (HEET) program*. Retrieved from https://blogs.uoregon.edu/lerc2/files/2017/03/heetwhitepaper-1xqy5eg.pdf

Muller, R. (2013). Bull's eye! Hitting the financial knowledge target. *Nursing Management, 44*(10). 53-55. doi:10.1097/01.NUMA.0000434467.67213.d1

Nardi, D. A., & Gyurko, C. C. (2013). The global nursing faculty shortage: Status and solutions for change. *Journal of Nursing Scholarship, 45*, 317-326. doi:10.1111/jnu.12030

National Council of State Boards of Nursing. (2014). 2014 NCLEX examination candidate bulletin. Retrieved from https://www.ncsbn.org/2014_NCLEX_Candidate_Bulletin.pdf

Needleman, J., Buerhaus, P., Pankratz, V. S., Leibson, C. L., Stevens, S. R., & Harris, M. (2011). Nurse staffing and inpatient hospital mortality. *New England Journal of Medicine, 364,* 1037-1045. doi:10.1056/nejmsa1001025

Nicely, K., Sloane, D., & Aiden, L. (2013). Lower mortality for abdominal aortic aneurysm repair in high-volume hospitals is contingent upon nurse staffing. *Health Services Research, 48*, 972-991. doi:10.1111/1475-6773.12004

Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence Based Nursing*, *18*(2), 34-35. doi:10.1136/eb-2015-102054

Nurse Journal Social Community for Nurses Worldwide. (2017). *Registered Nurses Requirements by State + Qualifications.* Retrieved from http://nursejournal.org/registered-nursing/rn-requirements-by-state/

Nurse Reinvestment Act of 2002, Pub. L. No. 107-205, (2002).

Washington State Board for Community and Technical Colleges. (2017). *Hospital employee education and training grant.* Retrieved from https://www.sbctc.edu/colleges-staff/grants/hospital-employee-education-training.aspx

Omar, K., Abdul Majid, A., & Johari, H. (2013). Job satisfaction and turnover intention among nurses: The mediating role of moral obligation. *Journal of Global Management*, *5*(1), 44-55. Retrieved from http://globalmj.eu/

Osingada, C. P., Nalwadda, G., Ngabirano, T., Wakida, J., Sewankambo, N., & Nakanjako, D. (2015). Nurses' knowledge in ethics and their perceptions regarding continuing ethics education: a cross-sectional survey among nurses at three referral hospitals in Uganda. *BMC Research Notes, 8*(1), 1-5. doi:10.1186/s13104-015-1294-6

Oven, K. J., Curtis, S. E., Reaney, S., Riva, M., Stewart, M. G., Ohlemüller, R., . . . Holden, R. (2012). Climate change and health and social care: Defining future hazard, vulnerability and risk for infrastructure systems supporting older people's health care in England. *Applied Geography, 33*, 16–24. doi:10.1016/j.apgeog.2011.05.012

Onwuegbuzie, A. J., & Byers, V. T. (2014). An exemplar for combining the collection, analysis, and interpretation of verbal and nonverbal data in qualitative research. *International Journal of Education*, *6*, 183-246. doi:10.5296/ije.v6i1.4399

Palinkas, L. A., Aarons, G. A., Horwitz, S., Chamberlain, P., Hurlburt, M., & Landsverk, J. (2011). Mixed method designs in implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, *38*(1), 44-53. doi:10.1007/s10488-010-0314-z

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed

method implementation research. *Administration of Policy in Mental Health, 42*, 533–544. doi:10.1007/s10488-013-0528-y

Pan, X., Gillies, M., & Slater, M. (2015). Virtual character personality influences participant attitudes and behavior–an interview with a virtual human character about her social anxiety. *Frontiers in Robotics and AI*, *2*(1), 1-11. doi:10.3389/frobt.2015.00001

Park, S. H., Weaver, L., Mejia-Johnson, L., Vukas, R., & Zimmerman, J. (2015). An integrative literature review of patient turnover in inpatient hospital settings. *Western Journal of Nursing Research, 38*, 629–655. doi:10.1177/0193945915616811

Patel, K., & Rushefsky, M. E. (2014). Healthcare politics and policy in America. *Public Integrity, 17*(1), 94-96. doi:10.2753/PIN1099-9922170107

Patton, M. Q. (2015). *Qualitative research &evaluation methods* (4th ed.). Thousand Oaks, CA: Sage Publications.

Pelayo, L. W. (2013). Responding to the nursing shortage: Collaborations in an innovative paradigm for nursing education. *Nursing Education Perspectives, 34*, 351-352. doi:10.5480/1536-5026-34.5.351

Peter, E. (2015). The ethics in qualitative health research: special considerations. *Ciência & Saúde Coletiva, 20*, 2625-2630. doi:10.1590/1413-81232015209.06762015

Pinnock, H., Hanley, J., McCloughan, L., Todd, A., Krishan, A., Lewis, S., . . . McKinstry, B. (2013). Effectiveness of telemonitoring integrated into existing clinical services on hospital admission for exacerbation of chronic obstructive

pulmonary disease: researcher blind, multicentre, randomised controlled trial. *British Medical Journal, 347*, 6070–6070. doi:10.1136/bmj.f6070

Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (2013). *Qualitative research practice: A guide for social science students and researchers*. Thousand Oaks, CA: Sage Publications.

Saunders, M. (2012). Choosing research participants. *The Practice of Qualitative Organizational Research: Core Methods and Current Challenges.* London, United Kingdom: Sage Publications.

Saldaña, J. (2015). *The coding manual for qualitative researchers*. Sage (3rd ed.). Thousand Oaks, CA: Sage Publications.

Schwartz, J. (2013). Legal and policy environment for state-based biomedical research. *Health Law and Policy Brief*, *1*(1), 10-11. Retrieved from http://digitalcommons.wcl.american.edu/

Seidman, I. (2013). *Interviewing as qualitative research: A guide for researchers in education and the social sciences* (4th ed.). New York, NY: Teachers College Press.

Shahid, A., & Azhar, S. M. (2013). Gaining employee commitment: Linking to organizational effectiveness. *Journal of Management Research, 5*, 250-268. doi:10.5296/jmr.v5i1.2319

Shekelle, P. G. (2013). Nurse–patient ratios as a patient safety strategy. *Annual Internal Medicine, 158*, 404-410. doi:10.7326/0003-4819-158-5-201303051-00007

Silva, E. (2016). Here come the baby boomers. *Journal of the American College of Radiology, 13*, 242-242. doi:10.1016/j.jacr.2015.12.002

Skinner, J., Edwards, A., & Corbett, B. (2014). *Research methods for sport management*. New York, NY: Routledge.

Snavely, T. M. (2016). A brief economic analysis of the looming nursing shortage in the United States. *Nursing Economics*, *34*, 98-100. Retrieved from http://www.nursingeconomics.net/cgi-bin/WebObjects/NECJournal.woa

Spence Laschinger, H. K., & Fida, R. (2015). Linking nurses' perceptions of patient care quality to job satisfaction. *Journal of Nursing Administration, 45*, 276–283. doi:10.1097/nna.0000000000000198

Spetz, J., Harless, D. W., Herrera, C.-N., & Mark, B. A. (2013). Using minimum nurse staffing regulations to measure the relationship between nursing and hospital quality of care. *Medical Care Research and Review, 70*, 380-399. doi:10.1177/1077558713475715

Spetz, J., & Kovner, C. T. (2013). How can we obtain data on the demand for nurses? *Nursing Economics, 31*, 203-207. Retrieved from http://www.nursingeconomics.net/cgi-bin/WebObjects/NECJournal.woa

Spetz, J., Skillman, S. M., & Andrilla, C. H. A. (2016). Nurse practitioner autonomy and satisfaction in rural settings. *Medical Care Research and Review, 73*, 1-9. doi:10.1177/1077558716629584

Starfield, B. (2016). Is patient-centered care the same as person-focused care? *Permanente Journal, 15*(2), 63-69. doi:10.7812/tpp/10-148

Stone, A. M., & Feeg, V. D. (2013). In debt and misled: new graduate voices on the "nursing shortage. *Dean's Notes, 35*(1), 1-3. Retrieved from https://www.ajj.com/services/publication-services/deans-notes

Suen, L. J. W., Huang, H. M., & Lee, H. H. (2014). A comparison of convenience sampling and purposive sampling. *Hu Li Za Zhi, 61*(3), 105-111. doi:10.6224/JN.61.3.105.

Sullivan, J. (2013). Skype: An appropriate method of data collection for qualitative interviews? *Hilltop Review, 6*(1), 54-60. Retrieved from http://scholarworks.wmich.edu/hilltopreview/

Sutherland, J. M. (2015). Pricing hospital care: Global budgets and marginal pricing strategies. *Health Policy. 119*, 1111-1118. doi:10.1016/j.healthpol.2015.04.011

Swedish Hospital. (2013). *Swedish health systems revenues & expenses*. Retrieved from http://www.swedish.org/about/overview/facts-figures/revenues-expenses

Symon, G., Cassell, C., & Johnson, P. (2016). Evaluative practices in qualitative management research: A critical review. *International Journal of Management Reviews, 4*, 93-105 doi:10.1111/ijmr.12120

Talluri, S., Kull, T. J., Yildiz, H., & Yoon, J. (2013). Assessing the efficiency of risk mitigation strategies in supply chains. *Journal of Business Logistics, 34*, 253-269. doi:10.1111/jbl.12025

Thomas, E., & Magilvy, J. K. (2011). Qualitative rigor or research validity in qualitative research. *Journal for Specialists in Pediatric Nursing, 16*, 151-155. doi:10.1111/j.1744-6155.2011.00283x

Thomas, S., & Beh, L. (2015). Ensuring continuity and credibility of research through audit trail: Guidelines and examples from case studies. *Scottish Journal of Arts, Social Sciences and Scientific Studies*, *15*(2), 102-117. Retrieved from http://scottishjournal.co.uk/

Thresholds Institutional Review Board. (2011). *The institutional review board of the Thresholds Institute*. Retrieved from http://www.thresholds.org

Tinny, M. (2013). Note taking: A lesson for novice qualitative researchers. *IOSR Journal of Research & Method in Education, 2*(3), 13-17. doi:10.9790/7388-0231317

Tong, A., Palmer, S., Craig, J. C., & Strippoli, G. F. M. (2014). A guide to reading and using systematic reviews of qualitative research. *Nephrology Dialysis Transplantation, 31*, 897-903. doi:10.1093/ndt/gfu354

Toussaint, J. S., & Berry, L. L. (2013). The promise of lean in health care. *Mayo Clinic Proceedings, 88*(1), 74–82. doi:10.1016/j.mayocp.2012.07.025

Tsai, T. C., Orav, E. J., & Jha, A. K. (2015). Patient satisfaction and quality of surgical care in US hospitals. *Annals of Surgery*, *261*(1), 2-8. doi:10.1097/SLA.0000000000000765

Tuckett, A., Winters-Chang, P., Bogossian, F., & Wood, M. (2014). “Why nurses are leaving the profession . . . lack of support from managers”: What nurses from an e-cohort study said. *International Journal of Nursing Practice, 21*, 359–366. doi:10.1111/ijn.12245

Ulrich, B. T., Lavandero, R., Woods, D., & Early, S. (2014). Critical care nurse work environments 2013: A status report. *Critical Care Nurse, 34*, 64–79. doi:10.4037/ccn2014731

U.S. Department of Labor Bureau of Labor Statistics. (2014, January). *Occupational outlook handbook, 2014-15 edition*, *registered nurses*. Retrieved from http://www.bls.gov/ooh/healthcare/registered-nurses.htm

Van Bogaert, P., Wouters, K., Willems, R., Mondelaers, M., & Clarke, S. (2013). Work engagement supports nurse workforce stability and quality of care: nursing team□ level analysis in psychiatric hospitals. *Journal of Psychiatric and Mental Health Nursing*, *20*, 679-686. doi:10.1111/jpm.12004

Venkatesh, V., Brown, S. A., & Bala, H. (2013). Bridging the qualitative-quantitative divide: guidelines for conducting mixed methods research in information systems. *MIS Quarterly*, *37*, 21-54. Retrieved from http://www.misq.org/

Visconti, R. (2016). Healthcare public partnerships in Italy: Assessing risk sharing and governance issues with PESTEL and SWOT analysis. *Corporate Ownership and Control journal, 13*(4), 1-10. doi:10.2139/ssrn.2422450

Wagner, E. A. (2014). Using a Kinesthetic learning strategy to engage nursing student thinking, enhance retention, and improve critical thinking. *Journal of Nursing Education, 53*, 348–351. doi:10.3928/01484834-20140512-02

Wallace, B., (2013). Nurse staffing and patient safety: What's your perspective? *Nursing Management, 44*(6), 49-51. doi:10.1097/01.NUMA.0000430406.50335.51

Washington State Board for Community and Technical Colleges. (2016). *Hospital employee education and training*. Retrieved from https://www.sbctc.edu/colleges-staff/grants/hospital-employee-education-training.aspx

Washington State Nurses Association. (2009). *Nursing shortage and workforce issues*. Retrieved from https://www.wsna.org/assets/entry-assets/Nursing-Practice/Publications/pp.shortage.pdf

West, E., Barron, D. N., Harrison, D., Rafferty, A. M., Rowan, K., & Sanderson, C. (2014). Nurse staffing, medical staffing and mortality in intensive care: An observational study. *International Journal of Nursing Studies, 51*, 781-794. doi:10.1016/j.ijnurstu.2014.02.007

Westphal, J., Marnocha, S., & Chapin, T. (2015). A pilot study to explore nurse educator workforce issues. *Nursing Education Perspectives, 37*(3), 171-173 doi:10.5480/14-1332

Wilkes, L., Mannix, J., & Jackson, D. (2013). Practicing nurses' perspectives of clinical scholarship: A qualitative study. *BMC Nursing, 12,* 1-7. doi:10.1186/1472-6955-12-21

Witcher, B. J., & Chau, V. S. (2010). *Strategic management: Principles and practice* (1st ed.). Hampshire, United Kingdom: Cengage Learning EMEA.

Woods, M., Paulus, T., Atkins, D. P., & Macklin, R. (2015). Advancing qualitative research using qualitative data analysis software (QDAS)? Reviewing potential versus practice in published studies using ATLAS.ti and NVivo, 1994–

2013. *Social Science Computer Review, 34*, 597-617. doi:10.1177/0894439315596311

Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Thousand Oaks, CA: Sage Publications.

Yin, R.K. (2015). *Qualitative research from start to finish* (2nd ed.). New York, NY: Guilford Publications.

Yilmaz, K. (2013). Comparison of quantitative and qualitative research traditions: epistemological, theoretical, and methodological differences. *European Journal of Education, 48*, 311–325. doi:10.1111/ejed.12014

Yoder-Wise, P. S., Scott, E. S., & Sullivan, D. T. (2013). Expanding leadership capacity: Educational levels for nurse leaders. *Journal of Nursing Administration, 43,* 326-328. doi:10.1097/NNA.0b013e31829422ca4

Yüksel, I. (2012). Developing a multi-criteria decision making model for PESTEL analysis. *International Journal of Business and Management*, *7*, 52-53. doi:10.5539/ijbm.v7n24p52

Zamawe, F. (2015). The implication of using NVivo software in qualitative data analysis: Evidence-based reflections. *Malawi Medical Journal, 27*(1), 13-15. doi:10.4314/mmj.v27i1.4

Zhang, Y., Punnett, L., Gore, R., & CPH-NEW Research Team. (2014). Relationships among employees' working conditions, mental health, and intention to leave in nursing homes. *Journal of Applied Gerontology: The Official Journal of the Southern Gerontological Society*, *33*(1), 6-23. doi:10.1177/0733464812443085

Zhu, J., Rodgers, S., & Melia, K. M. (2014). A qualitative exploration of nurses leaving nursing practice in China. *Nursing Open, 2*(1), 3–13. doi:10.1002/nop2.11

Appendix A: Interview Questions

The central research question of the study is:

The central research question of the study is: What strategies do healthcare leaders use to overcome nursing shortage?

Interview Questions

To narrow the scope of the central research question, the following interview questions will assist in gaining insight into the issue addressed:

1. What effective strategies do you use to prevent nursing shortage in your healthcare organization?
2. What strategies have worked best for your healthcare organization to prevent nursing shortage in your healthcare organization?
3. How do you implement a strategy to address the nursing shortage in your healthcare organization?
4. How do you assess the effectiveness of these strategies?
5. What are the principal barriers to implementing strategies to prevent nursing shortage in your healthcare organization?
6. How do you address the principal barriers to implementing strategies to prevent nursing shortage in your healthcare organization?

What other information, including company documents, that you consider relevant to this research would you like to share with me?

Appendix B: Interview Protocol

Institutions: _____ Healthcare Hospital

Participant (Title): ______________________________________

Interviewer: Edward Mehdaova

Date of the interview______________________________________

Time of the interview______________________________________

Introductory Protocol

Strategies to Overcome Nursing Shortage.

Before conducting the interview, I will introduce myself, and notify the participants that I will use my recording device and take brief notes so I can maintain eye contact with the participants. I will have a transcript handy to help the participants understand their rights and ensure that I conduct the research in an ethical manner. I will collect consent forms after explaining the content of the consent form. I will conduct my interview in quiet and undisruptive locations to avoid interruption. Each individual interview will last approximately between 30 to 45 minutes in order to ensure enough time. I will ask the main research followed by the sub-questions following the research question document. I will conclude the interview by thanking the participants and use the closing statement. Lastly, I will ensure to end the interview with my prepared script.

Opening Statement:

Thank you for taking time to participate in this research. I thank you for accepting my invitation to interview because you are a healthcare professional with great

experience in the healthcare industry. I kindly would like you to explain to me the strategies that you use to overcome nursing shortage. This research will explore these strategies through the experience of healthcare managers, healthcare administrators (individuals that deal with financial statements, and analyzing revenues and costs for the selected hospital) which may result in decrease in nursing shortage' effects on the hospitals.