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Walden University

College of Health Sciences

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Rodney Baccus

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Walden University
2017

Abstract

Impact of Nursing Certification on Patient Perception, Satisfaction, and Outcomes

by

Rodney Baccus

MS, Aspen University, 2010

BS, Southwestern Oklahoma State University, 1992

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

November 2017

Abstract

Increased responsibilities for patient care within the nursing profession leads one to examine the correlation between nursing care and patient satisfaction. Current evidence indicates that higher levels of nursing education are associated with better patient outcomes. The literature further demonstrates that increased expertise and certification within a nursing specialty leads to increased nursing empowerment, improved intrinsic value and better collaborative relationships. However, the relationship between certification status and patient satisfaction remain unclear. This systematic review sought to understand the relationship between nursing certification and patient satisfaction. Guided by Rogers' diffusion of innovation theory this project examined the peer-reviewed literature using the databases PubMed, CINAHL and Cochrane Reviews. Keywords used were patient satisfaction, nursing certification and patient perception of certification. The Cochrane methodology and Melnyk's levels of evidence were used to analyze the articles identified. Articles published prior to 2002 were excluded from the review as were those not in English; 17 articles were included in the review. Ten articles met Melnyk's criteria for Evidence Levels V-VII, 6 met the criteria for Levels III-IV, 1 was Level II. The analysis of evidence supported a positive relationship between nurse certification, patient satisfaction and patient outcomes. This project is important for nurses who are considering certification and those who seek to improve patient satisfaction. The information discovered is hoped to impact social change by providing a better understanding of the relationship between certification and improved patient satisfaction.

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Section 1: Nature of the Project

Introduction

Patient satisfaction, patient safety, and better patient outcomes have become a real concern in both the health care industry and for outside payer sources (Ofili, 2014; Urden, 2002). In answer to these concerns, the nursing profession has been providing access to and encouraging certification in the various nursing specialties. Certification is recognized as increasing nursing empowerment, improving both intrinsic and extrinsic value, improving collaborative relationships with other disciplines and contributing to better patient outcomes (Blegen, Goode, Park, Vaughn, & Spetz, 2013).

Certification was defined by the American Board of Nursing Specialties (ABNS) in 2005 as “the formal recognition of specialized knowledge, skills, and experience demonstrated by achievement of standards identified by a nursing specialty to promote optimal health outcomes”. Bringing certified nurses’ and patients together to close the gap between the two requires a broader knowledge base for both the clinician and patient, each of whom must have a willingness to accept, respect, and incorporate the views of all involved in treatment and care of the patient (Hoffman, Montori, & Chris, 2014). Accordingly, the ABNS undertook a national study to attempt to determine and/or validate nurses’ perceptions, values, and behaviors related to certification (Niebuhr, & Beil, 2007). The value of certification is and has been demonstrated through intrinsic and extrinsic rewards. Intrinsic rewards include accountability, clinical competence, confidence in clinical abilities, and professional growth, while extrinsic rewards consist

of consumer confidence, employer recognition, nursing peer recognition, and recognition from other health care professionals (Straka et al., 2014).

This DNP project was conducted using a systematic review to determine patients' perception of care, patient outcomes, and patient satisfaction with care when provided by a certified nurse rather than a noncertified nurse. Information was collected from online databases and selected article reference lists. The intention was to discover any differences in care provided by certified or noncertified nurses and to understand if the patients were as satisfied with the care received from either certified or noncertified nurses.

Background

Changes within the health care industry are happening at a rapid pace, and all disciplines are expected to adhere to those changes, while at the same time continuing to provide not only an excellent standard of care but also incorporating application of the proven changes (Eggertson, 2013). This has been especially evident within the nursing profession due to the profession adhering to traditional procedures and not being a part of the interdisciplinary team where their knowledge can be used to further patient care and influence outcomes (Eggertson, 2013). Enabling nurses to use their knowledge and skills will not only increase their preparedness for the role they will face upon admission to the current practice setting, but will also ensure their capabilities are better able to meet the health care needs of the future (Eggertson, 2013).

Certification by both accrediting bodies and specialty organizations confirms that advanced education by the nursing staff leads to increased nursing empowerment,

provides intrinsic value, and improves collaborative relationships with other disciplines (Blegen et. al., 2013). Nurses who have developed expertise in a specialty area are able to balance those emerging needs with the generalist knowledge base required by all nurses, thereby improving overall patient care (Eggertson, 2013).

Problem Statement

With increased emphasis on patient satisfaction, focusing on patient care and outcomes is placing a greater demand on the nursing profession. Meeting these demands has led the profession to encourage nursing certification within their specialty (Kendall-Gallagher & Blegen, 2009). Comparing patient outcomes and their relationship to certification has led to a systematic review of best practices supporting certification and patient outcomes.

Studies have indicated the clinician's level of knowledge and judgment plays a role in the prevention, mitigation, and creation of adverse events (Kendall-Gallagher & Blegen, 2009). In other studies, nurses with specialty certification were shown to have decreased inpatient mortality and failure to rescue (deaths in surgical inpatients following a major complication) (Kendall-Gallagher & Aiken, 2011). Enhancing patient safety through validation of practice that is consistent with standards of excellence has been shown to be another indicator of the certification process (Boyle, Cramer, Potter, Gatua, & Stobinski, 2014).

The nursing profession has continued to move forward with the use of evidence-based medicine and increased knowledge, transforming that knowledge into useful clinical forms and implementing them across the entire care team where it can be

measured in terms of meaningful impact on performance and health outcomes (Stevens, 2013). It was these competencies that brought the nurse into the realm of utilizing their knowledge in clinical decision making and producing evidence on interventions while promoting uptake and use by individual providers and groups of providers to improve outcomes (Stevens, 2013). Understanding the results of patient satisfaction in the current literature can provide information that may clarify if there is a difference in patients' perception, outcomes, and satisfaction with care received from certified nurses versus noncertified nurses.

Purpose Statement

Quality health care has been defined as the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge (Lohr & Schroeder, 1990). Through this definition, three aspects of quality have been ascertained: (a) services/interventions, (b) targeted health outcomes, and (c) consistency with current knowledge/research evidence. These aspects of quality align with the pathway of consistency or standardization of care, which provides positive patient outcomes through scientific best evidence (Stevens, 2013). Therefore, certification supported by evidence-based practice brings to light the gap between what members of the nursing profession know and what they do in the care of patients (Stevens, 2013).

To validate the ABNS (2005) concept that patient needs within the health care delivery system have been best met when registered nurses certified in specialty practice provide nursing care has been investigated concerning the question of certification and its

effect on patient outcomes (Biel, Grief, Patry, Ponto, & Shirey, 2014). Specialties have constantly sought opportunities for nurses to enhance their careers, improve patient outcomes, and gain further respect and recognition for their expertise (Krapohl, Manojlovich, Redman, & Zhang, 2010). Certification is and has remained a mainstay indicative of more in-depth knowledge throughout the specialty areas concerning their activity and treatment (Corbett, 2012). As each specialty has evolved, it has recognized the value of high level nursing expertise and proficiency through higher education, licensure, and certification; while also recognizing the contribution of high level nursing expertise to positive outcomes for their patients (Corbett, 2012).

Understanding patient satisfaction and its importance in specialty clinics such as wound care, nephrology, cardiology, pediatrics, and so on, is vital, in part because insurers have demanded results from health care entities on how patients perceive their care. Some of the common reasons discovered as to why patients are not satisfied with their care include providers not listening to their complaints, treating them for something other than the original complaint, and having lengthy waiting times. Dissatisfied patients are more likely to complain about their care to friends, seek legal actions, and find health care elsewhere, all of which affect health care entities. Therefore, patient satisfaction has become evaluation of an existing practice and will be utilized in this project to answer the practice-focused question.

Nature of the Doctoral Project

Information gained from this project should help describe the results regarding patients' perception, and satisfaction and certified or noncertified nursing specialty care.

A systematic review of the literature guided this project, beginning with the discovery in research and looking at the evidence summary and integration into practice (as indicated) that should lead to the process outcome evaluation that can set the goal for transformation. This process follows the ACE Star Model of Knowledge Transformation (Appendix A; Stevens, 2013).

Significance of the Project

Because of the emphasis on patient outcomes, the significance of this project has been in its examination of nursing certification and patient perceptions, and satisfaction in an attempt to discover if there were differences in those outcomes when patients were cared for by a certified or noncertified nurse. Certified nurses have a higher perception of empowerment, which has been shown to lead to improved work effectiveness and validation of specialized knowledge, each leading to improved patient outcomes (Straka et. al., 2014). Certification has been shown to provide knowledge and competency in a specific area, resulting in a rewarding practice environment and the delivery of quality patient care (Boltz, Capezuti, Wagner, Rosenberg, & Secic, 2013).

Nurse certification also confirms to the client they have been cared for by highly trained professionals. Therefore, nursing certification in their respective specialty would greatly benefit the consumer, provider, and professional nurse (Wilkerson, 2011). In addition, the Pew Health Professions Commission, the Institute of Medicine, the ABNS, the American Nurses Credentialing Center (ANCC), and other nursing professional groups have called for specialty certification as a means of enriching nursing, assessing

continued competency after licensure, and improving the quality of care (Boyle et al., 2014).

Gap in Practice

Understanding certification and the implications associated with broadening the knowledge base within any profession or specialty has been of concern when it comes to patients and their outcomes. Explanation of certification within a specialty in the nursing profession is a part of the responsibility of the profession, staff, and the organization. This explanation informs the public and patient of the broader knowledge base of the certified nurse. Certification of nurses, Joint Commission Accreditation Hospital Organization, and Magnet status of the hospital have all indicated a higher level of care (Blegen et al., 2013; Coleman et al., 2009; Corbett, 2012; Eggertson, 2013; Krapohl et al., 2010; Van den Heede et al., 2009).

The ANCC, as noted in Lundmark et al., 2012, indicated that primary research on nursing credentialing has relied more on nurse-reported value of certification and relationships of certification to knowledge and/or professional behavior differences. The ANCC also reported there have been fewer attempts to link certification with patient outcomes (Lundmark et al., 2012). Currently, the level of such research available is mainly descriptive and correlational, with little information concerning nurse certification and how it directly links to patient outcomes in a causal relationship (Lundmark et al., 2012). Therefore, the lack of direct studies and development of a causal relationship points to a need for further research into the relationship between certification and patient satisfaction.

Practice-Focused Question

A systematic review of the literature related to nursing certification and patient outcomes was conducted. In keeping with the intent of the review, literature was sought that addressed developing a better understanding of patient perceptions, and satisfaction with care to enable the nursing profession to better meet the needs of those for whom they are providing care. The practice-focused question guiding this review was as follows: Does care delivered by a certified nursing improve patient's perceptions of care and their satisfaction with nursing care?

Summary

The certified nurse reports empowerment, increased intrinsic value, better collaborative relationships, and having the perception that their patients are more satisfied with their care (Blegen, 2011). This perception may indeed be true, as other studies have shown the clinician's level of knowledge and judgment played a role in the prevention, mitigation, and creation of adverse events (Kendall-Gallagher & Blegen, 2009). For those nurses who have developed expertise in their particular specialty area, accredited specialty organizations endorse the advanced training and experience for their work and achievements (Blegen, 2011). Yet, the question remains of whether the patient perceives any difference in the care and outcomes between the certified and noncertified nurse.

With nurses moving forward and seeking greater opportunities to enhance their careers, improve patient outcomes, and gain further respect and recognition for their expertise, certification has remained a mainstay indicative of more in-depth knowledge (Corbett, 2012; Krapohl et al., 2010). The increased certification of nurses brings about

greater recognition and expertise to the profession while also providing more positive outcomes for patients (Corbett, 2012). As practitioners in the field move forward through the process, it is expected that further research will provide greater insight into the question of certification and patient satisfaction. For example, support for nurse certification and patient safety outcomes was studied using nurse quality indicators and the results indicated further examination was needed on a larger scale (Boltz et al., 2013).

Section 2: Background and Context

Introduction

Patient satisfaction has been and continues to be regarded as a key indicator of health care quality. Health care professionals are concerned with patient outcomes and satisfaction, in part because of the reflection on the health care provider but also because of the increased interest in the payers of health care (Curley, 1998; Fife, 2014).

Certification is one way that providers and professional organizations attempt to meet established standards and benchmarks for health care quality.

Maintaining patient satisfaction has also increased compliance, clinical visits, revenues, and essentially improved staff performance and attitude (Corbett & Ennis, 2014). This can be important when one is dealing with specialty clinics and attempting to ascertain ways to maintain and grow the clinic. Answering the question of certification and noncertification making a difference in patient attitudes can be a determinant on obtaining further knowledge and training involving nurses who treat those with a chronic disease requiring specialty services (Boyle et al., 2014; Kendall-Gallagher & Blegen, 2009; Stevens, 2013). It can also be reinforced to the public by educating them on the value of certification for nurses, what actual certification is, and the value to the patient and outcomes when cared for by certified nurses (Jeffries, 2013).

According to the American Board of Neuroscience Nursing (ABNN, 2016), certification validates a nurse's knowledge, skills, and abilities in a defined role and clinical area of practice, based on predetermined standards. Ascertaining certification of the nurse is either obtained by the patient asking, the nurse providing the information, or

the facility declaring the level of training of their nurses (ABNN, 2016). The ANCC (2010) has agreed credentialing advances the profession of nursing by encouraging and recognizing professional achievement, and they indicate more professional recognition and credibility, professional achievement, career advancement, professional opportunities, personal accomplishment, higher pay, and the benchmark of success as noted by components of a positive work environment, quality indicator, and patient care. The organization has identified professional opportunities in their pursuit and accomplishment of certification within their field of practice (ANCC, 2010).

As one looks further, patient satisfaction surveys and their influence on the industry are expected to bring to light ways to improve patient satisfaction, especially in the specialty clinics. This involvement was envisioned to support and validate the ABNS's (2005) concept that patient needs within the health care delivery system were best met when registered nurses who were certified in a specialty practice were the providers of nursing care.

It was essential to recognize the gap and begin the process of closing it to ensure that nursing professionals do what they know and know what they do. This raises the practice of consistency, which leads to a reliability of practice and improves the confidence level of staff and patients (Stevens, 2013). Each of these steps were expected to increase patient loyalty through decreased waiting time, thoroughness of care, patient/provider communication, staff compassion, and maintaining appointments and referrals (Unger, 2011).

Literature Search Strategy

Determining the materials available was the first step in looking at the full spectrum of published peer-reviewed research and other articles. There are various strategies to be successful in the literature search, such as using keywords, the best search engines, and databases including Cochrane Review, PubMed, literature reviews, research articles, and studies. The search strategy for this project involved the following key words: *patient satisfaction*, *nursing certification*, and *patient perception of certification*; publication date ranges included 2002 to present, and other search limiters included English articles only.

Concepts, Models, and Theories

The hope in creating a more specialized and contracted form relating to patient satisfaction was to bring forth validation and confirmation of perceptions of the nursing profession and/or patients regarding education and certification. Therefore, I used Roger's diffusion of innovation, based on Rogers' (1962) work and described by Sahin (2006) as the process in which an innovation is communicated through certain channels over time, gains momentum, and spreads through a specific population or social system. As health care broadens and specialty certifications come into being, the patients need to be provided with more information to increase their knowledge on the value of receiving care from certified nurses. It is through this knowledge base that patients should be able to understand and perceive the value provided by certified nurses (Jeffries, 2013). Because diffusion of innovations theory seeks to explain how, why, and at what rate new

ideas and technology spread through cultures, keeping the lines of communication open are vital to pursuing and accomplishing one's goals (LaMorte, n.d.).

Relevance to Nursing Practice

Patient satisfaction has not always been a top priority within the health care industry; in fact, it was not until 2002 when the federal government became involved in patient satisfaction that things took a turn towards increased fulfillment in terms of patient outcomes and satisfaction (Siegrist, 2013). Patient satisfaction and its value within the health care industry took a leap forward in 2007 when Medicare and other third-party payers began to provide financial incentives for those entities with high patient satisfaction rates. This became even more prominent in 2010 with the implementation of the Affordable Care Act and the strengthening of the financial incentives (Siegrist, 2013).

Studies have found that patients were interested in their health and do have a high percentage rate of completion when filling out the questionnaires. Patients do make comments on questionnaires about their feelings of the care they have received (Urden, 2002). In fact, although patients may not fully understand the technical details of their care, they have their own perceptions of care and how they are treated and answer accordingly and with surprising accuracy (Siegrist, 2013). Therefore, patient satisfaction is now here to stay and should only be improved on.

Improving patient satisfaction was and continues to be a primary goal of providers and their institutions. Again, this has been elaborated on by the increased demand from payers for increased data on patient satisfaction, in the belief that the greater the satisfaction the greater the expectation that quality issues are identified and addressed

(Urden, 2002). In addition, evaluating patient satisfaction coincides with clinical relevancy, improved patient compliance, increase in the patients' participation in their own care, continued use of current medical services, remaining with the current health care provider, and potential for more positive health care expenditures (Ilioudi, Lazakidou, & Tsironi, 2013).

In support of positive patient satisfaction and possible improved reimbursement, studies have found that patient satisfaction is greater when nurses work in a better environment and have a more favorable patient-to-nurse ratio and better staffing levels (Kutney-Lee et al., 2009). This satisfaction was further enhanced by the patients' perceptions of care and treatment they receive; therefore, it is important for nurses to be aware of how the public perceive certification and to educate the public and patients on the value of nursing certification, as many times the public is unaware of the pathways required for certification and the improved delivery systems (Jeffries, 2013). Because nurses work closely with the patients and their families and can hold certifications in their specialties, and because patients with chronic disease are seemingly vulnerable and many times exhibit a powerlessness or lack of control over their circumstances, it is through certification and advanced education that the nurse is able to communicate and exhibit competencies, which in turn leads to higher patient satisfaction rates and outcomes (Curley, 1998).

Because of the specificity of specialty clinics and the lack of research and high-quality evidence in outcomes and various interventions, there remain variations in treatment without good quality evidence, which many times leads to differing outcomes

(Corbett & Ennis, 2014). Therefore, there remains much to be done to alleviate these discrepancies. However, the Association for the Advancement of Wound Care has made some progress in specialty care clinics by developing a patient educational brochure to accompany each clinical practice guideline, thereby promoting best practice interventions in patient-friendly language (Corbett & Ennis, 2014). Finally, there has been movement towards improving the decision support models in specialty care to deal with the encountered dilemmas and outcomes. These have been some of the steps being taken to align patient priorities and concerns and the research agendas supported by best practice evidence (Corbett & Ennis, 2014). Verification or validation of the nurse's perception of certifications and higher education and the relationship to patient outcomes and/or satisfaction may be justified, as evidenced by the results of this project.

Local Background and Context

With the nursing profession proposing an increase in patient satisfaction, a decrease in mortality and morbidity, and improved overall outcomes due to nursing certification, this project focused on the satisfaction/perception of the patient who was being treated in a specialty clinic and whether outcomes were related to certification, or whether a noncertified nurse receives the same satisfaction results as the certified. The American Association of Critical-Care Nurses (AACN, 2017) explained the value of certification, as a mark of excellence and that in today's health care is more important than ever. It also supported the idea that achieving certification demonstrates to patients, employers, and the public that a nurse's knowledge, skills, and abilities meet rigorous national standards, reflecting a deep commitment to patient safety (AACN, 2017). This

was a gap that needed to be filled to determine the complexity of certification versus noncertification and patient satisfaction and outcomes. On the one hand, nurses were of the belief that higher education and certification led to better patient outcomes and satisfaction; yet, the patient may or may not perceive this as a viable commitment or necessity (Jeffries, 2013).

With the onset of patient satisfaction and the intricacies of practice in each of the specialty clinics, increasingly organizations have been focusing on the qualified health care provider, patient satisfaction results, cost effectiveness, and patient outcomes when attempting to make informed decisions about how best to use their resources (Corbett & Ennis, 2014). The specialty clinic, due to its various nature, is one that consumes extensive resources and affects health and quality of life; therefore, attention to all the details including staff and the end-user was necessary to ensure a measurement for quality of life (Corbett & Ennis, 2014). With the increase of chronic disease prevalence, the extensive resources used, and how these chronic diseases affect the quality of life, organizations have continued to prepare for an increase in patients, a decrease in qualified staff, and an increase in the number of services required for caring for those with chronic disease (Corbett & Ennis, 2014).

Role of the DNP Student

I am a registered nurse who has been involved in wound care for the past 20 years. I have also been a wound care instructor for the past 9 years, during which time I have been involved in the training of approximately 50 nurses, six physician assistants, four nurse practitioners, and two physicians. It is through this pathway that I have learned

the importance of patient satisfaction and the various ways it impacts overall healing and wellbeing, not only of wounds but other aspects of disease as well. Combining patient satisfaction and nurse certification, I believe, will strengthen the existing bond between nurse involvement and patient satisfaction/perception and outcomes.

Summary

Examining certification in relation to patient satisfaction and patient perception is information that could help validate certification throughout the profession while presenting the profession in a more positive light. Attempting to validate the assumptions within the nursing profession concerning certification and patient satisfaction was the reason behind the current project. Being able to determine outcomes and the effects on both the nurses and the patients, I believe, is paramount to the profession as those in the profession move forward in expanding the role they play in the health care arena.

Moving forward through the certification process and developing the significance of its association to patient satisfaction was of prime importance in providing the suspected evidence of their association within the health care field. It remains to be seen through the gathering of the evidence, the availability of information on this subject, and how it imparts value to the outcomes, if any.

Section 3: Collection and Analysis of Evidence

Introduction

Incorporating patient satisfaction into the equation for a specialty clinic required an understanding of patient's needs and wants while keeping an open mind concerning certification versus noncertification of nurses (Corbett & Ennis, 2014; Martin, Arenas-Montoya, & Barnett, 2015). For example, patient preferences have been determined to include empowerment, participation, decision support aides, research agenda selection, and personalized medicine (Corbett & Ennis, 2014). Utilizing the patient's input in the clinic has been shown to improve patient satisfaction by improving quality health care and improved accessibility to care (Unger, 2011).

As patient satisfaction has become more important in the health care realm, so are the expectations of the health care industry to be able to meet the needs of the patient. This has been evidenced by the increase in the number of articles written concerning patient satisfaction, from 761 articles in the 1970's to 8,500 being written in the mid-1990s (Kravitz, 1998). It was noted through certification that nurses' level of knowledge increases, as does their judgement in patient evaluation and care (Kendall-Gallagher & Blegen, 2009). Adding to that was the increased patient safety through validation of practice that was consistent with standards of excellence (Boyle et al., 2014) and the requirement of nurses and providers to focus not only on the disease process but also to listen to the patient expressing their concerns (Stein-Parbury, 2007).

Practice-Focused Question

For this project, I looked at the research in an attempt to determine if patient satisfaction and/or perception was a factor when patients are cared for by certified or noncertified nurses. (Koberich, Feuchtinger, & Farin, 2016). Understanding certification and how it exemplifies the knowledge base and experience level of nursing staff when providing care for patients was an intricate part of the level of expertise presented by certified nurses (Krapohl et al., 2010). It was only through this understanding that the patient should be able to recognize the level of care provided and be better able to make an informed decision concerning their care when provided by a certified nurse or noncertified nurse (Eggertson, 2013). Therefore, attempting to answer the question concerning patient satisfaction and perception of care when delivered by a certified nurse rather than a noncertified nurse was the purpose of this project.

Sources of Evidence

Using databases including Cochrane Review, PubMed, CINAHL allowed the researcher to view the various articles electronically. My search strategy involved the following keywords: *nurse certification*, *patient satisfaction*, *patient perceptio* with publication dates ranging from 2002 to present. Other search limiters included English articles only.

Advancements made in the health care field, patient satisfaction, and information available on the Internet were placing health care providers in the spotlight, increasing the likelihood or desired health outcomes consistent with current professional knowledge (Lohr, 1990). The attention and commitment this brought about led to the nursing

profession seeking to increase patient knowledge concerning certification and care provided (Jeffries, 2013). Increasing patient knowledge was expected to aid in determining if indeed patients are concerned with nursing certification and care provided by certified nurses versus noncertified nurses (Koberich et. al. 2016).

Population and Sampling

Due to the nature of the literature, review participation of a research population was not required.

Project Design

The purpose of the systematic review was to look at published journals and articles to ascertain if patient satisfaction is different when cared for by a certified or noncertified nurse. To accomplish this review, core components of a systematic review based on the *Cochrane Systematic Review Handbook* methodology was used.

Accordingly, the review included defining the review question, developing a search strategy, selecting, reviewing, and excluding relevant articles, collecting and analyzing the data, presenting and reporting the results, interpreting the results, and drawing conclusions (Higgins & Green, 2011). Melnyk and Fineout-Overholt's (2011) levels of evidence were also used to guide analysis of articles identified.

Purpose and Method

In 2002, patient satisfaction began to become an integral part of health care, especially with governmental involvement (Siegrist, 2013). However, it was not until 2007 that patient satisfaction became an active component of third-party payers,

organizational measures, and a priority for providers in achieving desired patient outcomes (Siegrist, 2013). With the increased focus on patient satisfaction, I hoped to discover whether or not there is a difference in patient care when delivered by a certified nurse versus a noncertified nurse. I also hoped to discover if the literature supported nursing certification.

Because certification was and continues to be a voluntary endeavor with the nurse taking on the added responsibility of an increased knowledge base, I believed the literature would corroborate and support those efforts in a positive manner, thereby justifying the time and effort required to obtain certification. I looked at patient satisfaction and perception of care when considering nursing certification and patient outcomes.

Methodology consisted of focusing on such scholarly information as deemed from the literature. Because of the nature of the project, the information was relative public knowledge and permission was not needed to ascertain the desired information.

Data Collection and Intervention Practice

Retrieval of the literature was accomplished by using a database search that included PubMed, Cochrane, and CINAHL. The literature review was accomplished by looking at the core components and doing a systematic review based on the *Cochrane Systematic Review Handbook*. Accordingly, the review included defining the review question; developing a search strategy; selecting, reviewing, and excluding relevant articles; collecting and analyzing the data; presenting and reporting the results; interpreting the results; and drawing conclusions (Higgins & Green, 2011).

Importance of Institutional Review Board Approval

Approval by the Walden University Institutional Review Board was received before any data was collected for the project. The Walden University Institutional Review Board approval number is 08-21-17-0410078.

Data Analysis

Analysis came from selected articles and included peer-reviewed, cross-sectional studies, and original research. Search strategies included the key terms *nurse certification, patient satisfaction, patient perception*.

The evidence was analyzed using the Cochrane methodology. Column headers in the evaluation table (Appendix B) I included (a) first author and year, (b) aim, (c) sample and setting, (d) design method, (e) interventions, (f) findings, (g) limitations, and (h) documentation quality measures assessed. The articles were to be looked at and noted for their levels of evidence based on the methodological design outlined by Melnyk and Fineout-Overholt (2011). The strength of the articles had the potential informational range from Level I, the strongest, involving systematic reviews and randomized controlled trials, to Level VII, the weakest, which could include evidence garnered from authorities or experts (Appendix C).

Summary

As patient satisfaction emerges more and more as a factor relating to outcomes and a role player within the health care industry, it has been on the shoulders of health care providers to ensure an adequate patient knowledge base for purposes of being able to

ascertain the care they have received and from whom it came. It was through this concept that it was reported that the success and performance of health care organizations rely on the strategic management of knowledge (Harris, 2016).

Thus, nursing intellectual capital has emerged with a great intensity as a concept comprised of knowledgeable resources that add value and credibility to the health care organization (Bonitis, 1999). This has reinforced nurses as they continue to seek their goal of certification in their specialties and the validation it brings (Bonitis, 1999). It has also been noted that nursing intellectual capital conceptualizes the influence of nursing knowledge on patient and organizational outcomes, and the skills and experience of the certified nurse convey quality of patient care outcomes, which are sustained by ongoing professional development (Covell & Sidani, 2013).

Seeking information regarding the improvement and continuation of patient satisfaction has led to information, through the research, that I hoped would expand on the viability and sustainability of such actions leading to the end results of patient satisfaction. Identification of the research studies reached through the systematic literature review should aid in determining the barriers and strategizing improvement efforts to overcome barriers associated with patient satisfaction. With help from the Institutional Review Board, articles within the research were determined to be either exempt from the review, contained in the review, and the level of the review. The Institutional Review Board is key in determining the progress of the systematic review as it maintains ethical standards and participant privacy as indicated (Burns & Grove, 2009).

Section 4: Findings and Recommendations

Introduction

Patients have increasingly become more involved in their health care and are relying on the health care industry to provide quality care and outcomes. This involvement has raised concerns within the health care community because patient satisfaction has been linked with increased compliance, clinical visits, revenues, and improvement in both staff performance and attitude (Corbett & Ennis, 2014). Thus, nursing certification has become one avenue providers and professional organizations have taken to meet established standards and benchmarks for health care quality and to ensure better patient outcomes. Certification has allowed the nurse to become more involved in decision making and improve their mentoring skills while enhancing nursing empowerment or the perception thereof (Ugur, Scherb, & Specht, 2015).

The nursing profession is continually seeking ways to improve practice and patient outcomes. One of the ways this has been accomplished is through nursing certification. However, members of the nursing profession have been lacking in their conveyance of certification information to the public and patients, which may lead to some confusion on the patient's part as to the level of expertise of their providers. (Eggertson, 2013; Krapohl et al., 2010). Therefore, the following question guided this project: Does care delivered by a certified nurse improve a patient's perception of care, outcome, and satisfaction with nursing care?

The question raised the issue of patient perception of care, outcomes, and satisfaction with nursing care relating to the overall knowledge base and certification of

the nursing staff caring for the patient. Establishing that certification did make a difference in outcomes and satisfaction would enhance the perception of certification by the nursing profession (Blegen, 2011).

This literature review was conducted in order to provide the nursing profession with information concerning any differences in patient outcomes, perception, or satisfaction with the nursing staff as it relates to the certification or noncertification of those nurses. With the increased knowledge base attained through certification and the utilization of the patient's input in the clinic, it has been shown that patient satisfaction is improved not only by receiving improved quality of health care but also improved accessibility to care (Unger, 2011).

Exploring the certification of nurses, the increased knowledge base obtained through certification, the broadening of views of treatment modalities, improved confidence in clinical abilities, improved clinical competence, accountability, and their professional growth all point to a more secure and competent nurse who is able to provide more consistent and advanced care to the patient (Straka et al., 2014). Other rewards that added to the repertoire of the certified nurse were consumer confidence, employer recognition, nursing peer recognition, and recognition from other health care professionals (Straka et al., 2014).

The literature review focused on scholarly information that included nursing certification, patient satisfaction, and perceptions, each of which was intended to provide information concerning the correlation between certified and noncertified nurses and perceptions, and satisfaction. It is hoped this review will provide the information needed

to bring certified nurses' and patients together so they may be able to close the gap between the two by sharing related knowledge, which in turn will broaden the knowledge base of both parties, thereby opening the doors to acceptance, respect, and incorporation of the views of each party involved in the treatment and care of the patient (Hoffman et al., 2014). Working together to improve outcomes and strengthen the bond between nurse and patient is paramount to achieving the desired outcomes of improved patient satisfaction (Stein-Parbury, 2007).

Findings and Implications

This review of the literature produced information regarding nurse certification and patient satisfaction. The findings associated with nurse certification indicated the nursing profession has become stronger and more competent in their interactions with the patients, their satisfaction, perception of treatments, and outcomes (Kendall-Gallagher & Blegen, 2009). This was explored through the clinician's level of knowledge, clinical nursing competency, and judgment all of who play a role in prevention, mitigation, and creation of adverse events (Cramer et al., 2014; Kendall-Gallagher & Blegen, 2009). In association with the above, researchers found that nurses with specialty certification have been instrumental in decreasing inpatient mortality and failure to rescue relating to surgical inpatients (Kendall-Gallagher & Aiken, 2011). In addition, increased patient safety and validation of practice was found to add to the standards of excellence (Boyle et al., 2014).

Patients' concerns have been found to be associated in part with nurse staffing, patient-to-nurse ratio, and attitudes of the nursing staff (Kutney-Lee et al., 2009). Patient

perception of care was also a deciding factor in overall satisfaction (Jeffries, 2013). Some common factors relating to patient satisfaction/dissatisfaction were perceived reception of care, not being listened to by providers, not being treated for the original complaint, and increased waiting times. Depending on patient perception, these factors have been associated with increased complaints/support of care to friends, the seeking of legal action, and looking for health care elsewhere (Kutney-Lee et al., 2009; Jeffries, 2013). Much of this can be alleviated through positive interactions between nurses and patients.

Patient satisfaction has also been shown to increase compliance with care, decrease missed appointments, increase revenue, and improve staff performance and attitudes (Corbett & Ennis, 2014). This has been found to be true even if the patients do not fully understand the technical details of their care, for the basis of patient satisfaction is heavily associated with the patient's perception of care and how they perceive treatment (Siegrist, 2013).

Through the process of determining ways to implement and incorporate nursing certification and patient satisfaction, perception, and outcomes into the totality of health care, the door to social change was opened. Preparing for that change begins with nursing. The AACN (2017) has supported the fact that achieving certification demonstrates to patients, employers, and the public that the nurse's knowledge, skills, and abilities meet rigorous national standards while reflecting a greater commitment to patient safety.

Research concerning nurse credentialing has tended to lean more on nurse-reported value of certification and the relationship of certification to knowledge and

professional behavior differences. The ANCC reported there have been few attempts to link certification with patient outcomes (Lundmark et al., 2012). Because of that, the level of research available has been more descriptive and correlational, thus leaving little information concerning nurse certification and its link to patient outcomes (Lundmark et al., 2012). This lack of directional studies and the development of casual relationships point to the need for further studies into the direct relationship of certified nurses and patient satisfaction.

Patient satisfaction and nursing certification are two separate entities tied together in such a way that each in many ways is dependent on the other through their interactions within the health care system. For example, certification and advanced knowledge allow the nurse to better communicate and exhibit competencies relevant to the situation, which has been indicated to lead to higher patient satisfaction rates and outcomes (Curley, 1998). For the nurse, this means continually seeking knowledge that will broaden their expertise and provide competent, quality, and consistent care for each patient. The patient, on the other hand, can be assured of receiving the best care available when they are dealing with certified nursing staff (Corbett. & Ennis, 2014).

This quality of care and collaboration was expected to lead to the institution/facility achieving fewer complaints, increasing patient satisfaction, and providing a more settled and contented staff, due in part to the alignment of patient priorities and concerns within the health care field (Corbett & Ennis, 2014). In the meantime, the nursing profession has benefited from increasing the number of certified nurses, which may lead to a greater influx of students into the nursing profession. The

AACN (2017) has been instrumental in explaining the value of certification as a mark of excellence and how that relates to patient safety and satisfaction.

Outcomes discovered during the research indicated the possibilities for social change through better outcomes and improved patient satisfaction. Certification in any field is a mark of professionalism, and according to ABNS (2005), ANCC (2010) and Niebuhr (2007) certified nurses are recognized and respected, have proven their competence in their specialty, have more job opportunities and more professional opportunities, are more confident and credible, earn more money, and are valued by the U.S. government.

Certification has also been shown to benefit the patient by decreasing medical errors, decreasing costs to patients, letting them know they are being cared for by those who are held to a higher standard of care, protecting the public, and enabling consumers to readily identify competent professionals while increasing the overall improvement of patient care according to ABNS (as cited in Jeffries, 2013). Evidence such as this has indicated increased nursing certification will and is promoting improved care while contributing to valuable positive outcomes. The nursing profession is joining the ranks of other professions in establishing the value and importance of certification through presentation of outcomes achieved.

Recommendations

Filling the gap in the knowledge of each of the entities involved in the health care establishment requires not only defining nurse certification and how it affects patients and their outcomes but also identifying the perception qualities (if possible) of the

various patients. Each of these, if understood by the other, can lead to a better collaboration between the various entities, which in turn should result in a better overall quality of care and outcomes. (Corbett & Ennis, 2014; Covell & Sidani, 2013). In addition, patient safety has been cited as one of the most commonly cited reasons to support specialty certification and combined with the above has collectively been shown to benefit the patient, provider, and professional nurse (Wilkerson, 2011).

Strengths and Limitations of the Project

Strengths of the project are evidenced by the literature acknowledging more positive outcomes for patients when cared for by certified nurses. This has come not only from improved judgement in patient evaluation but also in the safety results, outcomes, and increased patient satisfaction (Boyle et al., 2014; Kendall-Gallagher & Blegen, 2009). In addition, patients who feel empowered, participate in their care, have a say in the decisions concerning their care, and perceive a more personalized medicine approach have improved satisfaction through the improvement of quality health care and accessibility to care (Corbett & Ennis, 2014; Unger, 2011).

Limitations noted within the literature indicate that primary research concerning nursing credentialing leans more toward nurse-reported value of certification and relationships of certification to knowledge and/or professional differences, according to the ANCC (Lundmark et al., 2012). There have been fewer attempts to link certification with patient outcomes (Lundmark et al., 2012). Currently, the level of research available is mainly descriptive and correlational, with little information concerning nurse certification and its direct link to patient outcomes in a causal relationship (Lundmark et

al., 2012). The lack of direct studies and development of a causal relationship points to a further need for research into the relationship between certification and patient satisfaction, perception, and outcomes.

Section 5: Dissemination Plan

The interaction between patients and members of the health care team, especially nurses, has been, is, and will continue to be an inevitable part of the intricacies that make up the wholeness of health care. Information garnered during this project should be made available to the various facilities with whom I have an association through the distribution to each of the chief nursing officers. Each of these facilities face similar challenges, while each one presents with unique variations of their own due to the cultural differences involved in the various facilities.

Because of the importance placed on patient satisfaction, perception, outcomes, and the costs of health care (Ilioudi et al., 2013), I recommended the information gathered be made available to the various schools of nursing, chief nursing officers, and chief executive officers of various clinics and hospitals. Each of these entities should have the knowledge gathered from the research that correlates patient satisfaction and possible improved reimbursement to better nursing work environments, favorable patient-to-nurse ratios, and improved staffing levels to be able to present justification for staffing and outcomes (Kutney-Lee et al., 2009).

The nursing profession should also be aware that not all parties involved in the health care system were aware of the increased knowledge level of nurses who obtain certification in their specialty. Bringing that knowledge to the forefront by proclaiming these achievements in a forthright manner through broadcasting, advertisement, postings, and so on to all involved in the health care industry becomes the responsibility of the nursing profession. An informed public is a public that becomes aware of the various

differences provided throughout the health care industry (Jeffries, 2013). It is through espousing their own achievements that the nursing profession can exemplify the impact certification can have on the industry and impress on other health care professions and patients how such knowledge can implement changes and improve quality of care for all within the health care industry.

Analysis of Self

It amazed me how the results of research tend to be right on with the results that come from varied researchers and areas of health care. Until I began this project, I was under the impression that what I was seeing in the various facilities were isolated incidences of what seemed at times to be indifference; however, after this project I see it is a widespread problem, this thing known as patient satisfaction, perception, and outcomes.

As a practitioner, patient satisfaction has always been in the forefront of my mind when I took care of a patient, and because they are the reason for our existence I was under the impression all providers felt the same. However, I have found this was not true, and the literature bore this out. After reviewing the literature, I have attempted to increase and be more aware of my responsibility as a provider to seeing if I could help the patient achieve the outcomes they desire and aid them along the way in any way I could. This has added approximately 5 to 7 minutes to each patient visit, but I have seen patients become more solidified in their care which resulted in more positive outcomes.

The information has been somewhat of an eye-opener for me as a scholar. I have become more attentive to listening to patients and clinicians to better understand the

concerns each has and seek ways to better collaborate in producing better outcomes.

Existing research was almost eerily consistent in its findings. This project also opened my eyes to be more aware of my surroundings, the care provided, how health care changes affect those involved, and not becoming staid in the level of care provided. This type of conditioning has also led me to reinforce the communication methods I undertake and to better relate to those who may not have the level of knowledge or education associated with the clinicians.

Working through this project has also helped me develop as a communicator and in attaining goals that would help promote a more positive attitude and outcome within the clinics. Being able to present consistent, reliable, and pertinent information to my colleagues not only has changed their perception of me but has also allowed me to better understand their position on patients, expected outcomes, and avenues to achieve those goals. Through cooperation and diligence, there has been a slight to moderate change in patient collaborative services. This is evidenced in part by communicating with various patients who see other clinicians and verbally report a change in attitude towards them.

Bringing collaborative efforts together from a different point of view has led to “more compliance” among the patients, improved outcomes, a more relaxed and informative staff, and improved steps in ensuring the patient is better equipped to handle their care once they leave the clinic. This has definitely been a learning experience that has made me a better person both as a provider and family man.

Challenges remain, as indicated by the literature, to continue to work toward completely integrating the patient into the health care world and allowing them to present

their concerns while offering insight into what they believe will help them be better able to care for themselves and aid the clinician in helping them to complete their journey into a more healthy life. The promotion of wellness is an ongoing process that will always require tweaking at some point during the journey of maintaining a healthier lifestyle.

I believe, in the end, there will be a turn around and preventive medicine will become the norm rather than continuing with the medical model of treating the disease; it will come down to preventing the disease, as much as possible, in the first place. This will require much education on the part of all parties in the health care industry, but the outcomes should be worth the struggle of getting there.

Summary

Patient satisfaction, perception, and outcomes are here to stay, especially in this technological era. Empowering nurses, through certification, provides the opportunity to better care for the patient, which in turn has been shown to improve patient outcomes and satisfaction (Boltz, et al., 2013; Kendall-Gallagher & Aiken, 2011; Kendall-Gallagher & Blegen, 2009). At the same time, patient perception of their care and involvement therein must be addressed by the clinician before there can be a working relationship that is viable and able to move forward in a positive manner (Jeffries, 2013). The data pointed to the association of nurse certification and positive patient outcomes, whether directly or indirectly. Patient outcomes and nursing certification have repeatedly been reported as having a more positive effect on patients than those who are not certified; however, many of the studies indicated the need for further research because of the lack of direct

correlation between certification and patient outcomes (Boltz et al., 2013; Kendall-Gallagher & Aiken, 2011; Kendall-Gallagher & Blegen, 2009; Lundmark et al., 2012).

My hope has been that further research into nurse certification and patient satisfaction, perception, and outcomes may clarify and solidify the two aspects. The increased participation brought about through increased knowledge and participation by both parties was expected to validate the assumption that nursing certification directly provides improved patient outcomes. As the research continues in a more direct and concise manner, it should be interesting to see the outcomes and the effect it has on both the nurses and patients.

References

- American Association of Critical-Care Nurses. (2015). *Nurse certification benefits patients, employers and nurses*. Retrieved from <https://www.aacn.org/certification/value-of-certification-resource-center/nurse-certification-benefits-patients-employers-and-nurses>
- American Association of Critical-Care Nurses. (2017). Certification. Retrieved from <https://www.aacn.org/>
- American Board of Neuroscience Nursing. (2016). What should patients and families know about ABNN? Retrieved from <http://abnncertification.org/abnn/patients>
- American Board of Nursing Specialties. (2005, March 5). *A position statement on the value of specialty nursing certification*. Retrieved from http://cpanca.org/pdf/value_certification.pdf
- American Nurses Credentialing Center.. (2010, March 5). Why certify? The benefits of nursing certification. Retrieved from http://www.medscape.com/viewarticle/717805#vp_2
- Biel, M., Grief, L., Patry, L. A., Ponto, J. & Shirey, M. (2014). *The relationship between nursing certification and patient outcomes: A review of the literature*. Retrieved from <http://www.nursingcertification.org/resources/documents/research/certification-and-patient-outcomes-research-article-synthesis.pdf>
- Blegen, M. A. (2011). Does certification of staff nurses improve patient outcomes? *Evidence Based Nursing*, 18(2), 54. doi:10.1136/ebnurs.2011.100228

- Boltz, M., Capezuti, E., Wagner, L., Rosenberg, M., & Secic, M. (2013). Patient safety in medical-surgical units: can nurse certification make a difference? *MEDSURG Nursing*, 22(1), 26-32, 37. Retrieved from <http://www.medsurnursing.net/cgi-bin/WebObjects/MSNJournal.woa>
- Bonitis, N. (1999). Managing an organizational learning system by aligning stocks and flows of knowledge: an empirical examination of intellectual capital, knowledge management, and business performance. *MINT (Management of Innovation and New Technology) Research Centre Working Paper* (no. 86). Hamilton, Canada: McMaster University.
- Boyle, D. K., Cramer, E., Potter, C., Gatua, M. W. & Stobinski, J. X. (2014). The relationship between direct-care RN specialty certification and surgical patient outcomes. *AORN Journal*, 100(5), 511-528. doi:10.1016/j.aorn.2014.04.018
- Burns, N., & Grove, S. K. (2009). *The practice of nursing research: Appraisal, synthesis, and generation of evidence* (6th ed.). St. Louis, MO: Saunders.
- Coleman, E. A., Coon, S. K., Lockhart, K., Kennedy, R. I., Montgomery, R., Copeland, N.,& Stewart, C. (2009). Effect of certification in oncology nursing on nursing-sensitive outcomes. *Clinical Journal of Oncology Nursing* 1(32), 165-172.
- Corbett, L. Q., & Ennis, W. J. (2014). What do patients want? patient preference in wound care. *Advanced Wound Care*, 3(8), 537-543. doi:10.1089/wound.2013.0458

- Corbett, L. Q. (2012, October). *Wound care nursing: professional issues and opportunities*. Retrieved from *Advances in Wound Care* 1(5): doi: 10.1089/wound.2011.0329
- Covell, C. L., & Sidani, S. (2013). Nursing intellectual capital theory: Implications for research and practice. *Online Journal of Issues in Nursing*, 18(2), Manuscript 2. doi:10.3912/OJIN.Vol18No02Man02
- Cramer, M. E., High, R., Culross, B., Conley, D. M., Nayar, P., Nguyen, A. T. & Ojha, D. (2014). Retooling the RN workforce in long-term care: Nursing certification as a pathway to quality improvement. *Geriatric Nursing* 35, 182-187.
- Curley, M. A. (1998). Patient-nurse synergy: Optimizing patients' outcomes. *American Journal of Critical Care*, 7(1), 64-72. Retrieved from <https://search-proquest-com.ezp.waldenulibrary.org/docview/227899610?accountid=14872>
- Eggertson, L. (2013, September). The gap between clinical practice and education. Retrieved from *Canadian Nurse*: <https://canadian-nurse.com/articles/issues/2013/september-2013/the-gap-between-clinical-practice-and-education>
- Fife, C. E. (2014, September). *Reassessing your outpatient wound clinic: building tomorrow's wound care facility today*. Retrieved from *Today's Wound Clinic* 8(7): [www.todayswoundclinic.com/articles/reassessing-your-outpatient-wound-clinic-building-tomorrow's-wound-care-facility-today](http://www.todayswoundclinic.com/articles/reassessing-your-outpatient-wound-clinic-building-tomorrow-s-wound-care-facility-today)
- Harris, A. (2016). *Nursing to achieve organizational performance: consider the role of nursing intellectual capital*. *Healthcare Management Forum*, 29(3), 111-115.

doi:10.117/0840470416638365

Higgins, J. P. T., & Green, S. (Eds.). (2011). *Cochrane handbook for systematic reviews of interventions Version 5.1.0*. Retrieved from The Cochran Collaboration:

www.handbook.cochrane.org

Hoffman, T. C., Montori, V. M., & Chris, D. M. (2014). The connection between evidence-based medicine and shared decision making. *JAMA* 312(13), 1295-1296.

Ilioudi, S., Lazakidou, A. & Tsironi, M. (2013). Importance of patient satisfaction measurement and electronic surveys: methodology and potential benefits.

International Journal of Health Research and Innovation, 1(1), 67-87.

Jeffries, D. (2013). The public's perception of certification. *Nephrology Nursing Journal* 40(3), 211-216.

Kendall-Gallagher, D., & Aiken, L. H. (2011). Nurse specialty certification, inpatient mortality, and failure to rescue. *Journal of Nursing Scholarship*, 43(2), 188-194.

doi:10.1111/j.1547-5069.2011.01391.x

Kendall-Gallagher, D. & Blegen, M. A. (2009). Competence and certification of registered nurses and safety of patients in intensive care units. *American*

Association of Critical-Care Nurses, 18(2), 106-113. doi:10.4037/ajcc2009487

Koberich, S., Feuchtinger, J., & Farin, E. (2016). Factors influencing hospitalized patients' perception of individualized nursing care: a cross-sectional study. *BMC*

Nursing, 15, 14. doi:10.1186/s12912-016-0137-7

Krapohl, G., Manojlovich, M., Redman, R. & Zhang, L. (2010). Nursing specialty certification and nursing-sensitive patient outcomes in the intensive care unit.

American Journal of Critical Care 19(6): doi: 10.4037/ajcc2010406

Kravitz, R. (1998). Patient satisfaction with health care: critical outcome or trivial pursuit? *Journal of General Internal Medicine* 13(4): doi: [10.1046/j.1525-1497.1998.00084.x](https://doi.org/10.1046/j.1525-1497.1998.00084.x)

Kutney-Lee, A., McHgh, M. D., Sloane, D. M., Cimiotti, J. P., Flynn, L., Neff, D. F. & Aiken, L. H. (2009). Nursing: a key to patient satisfaction. *Health Affairs* 28(4): doi: [10.1377/hlthaff.28.4.w669](https://doi.org/10.1377/hlthaff.28.4.w669)

LaMorte, W. W. (n.d.). Diffusion of innovation theory. Retrieved from <http://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehavioralChangeTheories/BehavioralChangeTheories4.html>

Lohr, K. N. (1990). *Medicare: a strategy for quality assurance*. Retrieved from The National Academies Press.: www.nap.edu/read/1547/chapter/1

Lundmark, V., Hickey, J., Haller, K., Hughes, R., Johantgen, M., Koithan, M., & Unruh, I. (2012). *A national agenda for credentialing research in nursing*. Retrieved from American Nurses Credentialing Center (ANCC): www.nursecredentialing.org/2012-CredentialingResearchReport.aspx

Martin, L. C., Arenas-Montoya, N. M. & Barnett, T. O. (2015, December). *Impact of nurse certification rates on patient satisfaction and outcomes: a literature review*. Retrieved from *Journal of Continued Education in Nursing* 46(12): doi: 10.3928/00220124-20151112-06

Melnyk, B. M., & Fineout-Overholt, E. (2011). *Evidence-based practice in nursing & healthcare: A guide to best practice* (2nd ed.). Philadelphia, PA: Lippincott

Williams & Wilkins.

Niebuhr, B. & Beil, M. (2007). The value of specialty nursing certification. *Nursing Outlook* 55(4), 176-181.

Ofilo, O. U. (2014). Patient satisfaction in healthcare delivery-a review of current approaches and methods. *European Scientific Journal* 10(25), 25-39.

Rogers, E.M. (1962). *Diffusion of innovations (1st edition)*. The Free Press. New York.

Sahin, I. (2006). *Detailed review of Rogers' diffusion of innovations theory and educational technology-related studies based on Rogers' theory*. Retrieved from The Turkish Online Journal of Educational Technology:
<http://tojet.net/articles/v5i2/523.pdf>

Siegrist, R. B. (2013). Patient satisfaction: history, myths, and misperceptions. *Virtual Mentor* 15(11): <http://journalofethics.ama-assn.org/2013/11/mhst1-1311.html>

Stein-Parbury, J. (2007). Understanding collaboration between nurses and physicians as knowledge at work. *American Journal of Critical Care* 16(5):
<http://ajcc.aacnjournals.org/content/16/5/470.long>

Stevens, K. (2013). The impact of evidence-based practice in nursing and the next big ideas. *OJIN: The Online Journal of Issues in Nursing* 18(2).
doi:10.3912/OJIN.Vol18No02Man04

Straka, K. L., Ambrose, H. L., Burkett, M., Capan, M., Flook, D., Evangeliswta, T.,Thornton, M. (2014). The impact and perception of nursing certification in pediatric nursing. *Journal of Pediatric Nursing*, 29(3), 205-211.

Ugur, E., Scherb, C. A., & Specht, J. K. (2015). Decisional involvement among staff

nurses based on educational level and certification status. *Western Journal of Nursing Research*, 37(5), 619-633.

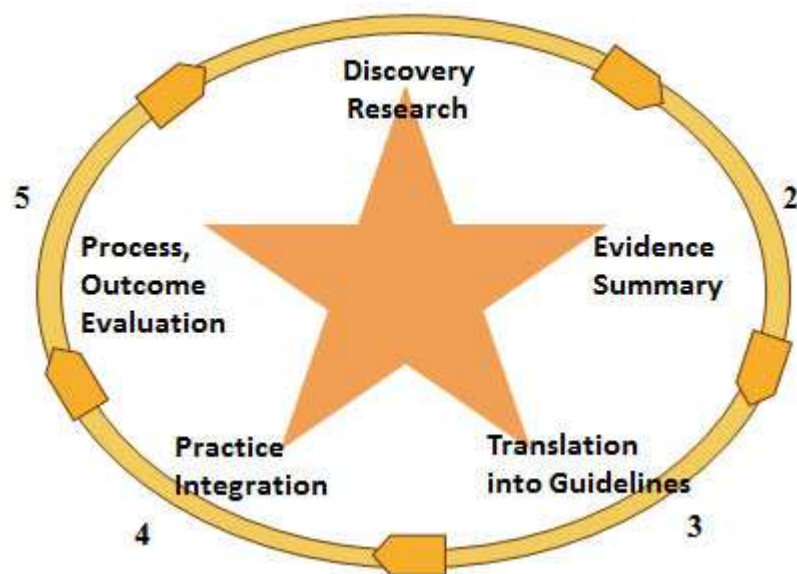
Unger, P. G. (2011, November/December). *Improving patient satisfaction in the clinic setting*. Retrieved from Today's Wound Clinic 5(9):
<http://www.todayswoundclinic.com/articles/improving-patient-satisfaction-clinic-setting>

Urden, L. (2002, September/October). Patient satisfaction measurement: current issues and implications. *Lippincott's Case Management*, 194-200. Retrieved from Lippincott's Case Management Vol 7(5).

Van Den Heede, K., Lesaffre, E., Diya, L., Vleugels, A., Clarke, S. P., Aiken, L. H. & Sermeus, W. (2009, February 7). *The relationship between inpatient cardiac surgery mortality and nurse numbers and educational level: analysis of administrative data*. Retrieved from International Journal of Nursing Studies 46(6): doi: [10.1016/j.ijnurstu.2008.12.018](https://doi.org/10.1016/j.ijnurstu.2008.12.018)

Wilkerson, B. L. (2011). Specialty nurse certification effects patient outcomes. *Plastic Surgical Nursing* 31(2), 57-59.

Appendix A: ACE Star Model of Knowledge Transformation



(Stevens, The impact of evidence-based practice in nursing and the next big ideas., 2013)

Appendix B: Evaluation Table

Author & Year	Title, aim or framework	Level of evidence	Purpose of literature	Design & methods	Findings	Evaluation/Conclusions
Urden, 2002	Patient satisfaction measurement: current issues and implications.	IV	Present an overview of consumer and/or patient satisfaction instruments, satisfaction measurement issues, research instruments, and commonly used vendor patient satisfaction survey programs.	Utilizing both qualitative and quantitative approach to evaluate patient satisfaction through a survey questionnaire using a focus group in the preliminary phase.	Discovered the need for hospitals and health care systems to invest in programs to determine how patients evaluate their experiences to be able to make the necessary changes in care and delivery of services.	The use of outside vendors (if used by multiple entities) can provide an excellent benchmark measurement for comparing patient satisfaction among the different entities. This will allow each to see steps needed to be taken to improve their own care and outcomes. It was also determined to be more accurate in benchmarking if the same survey instruments were used. This is made easier if an outside vendor with their own survey instrument

						were used.
Cramer, et al., 2014	Retooling the RN workforce in long-term care: nursing certification as a pathway to quality improvement	VI	A project for improving nursing care quality in long-term care by retooling registered nurses' geriatric clinical competence.	Used a mixed methods approach using qualitative methods to conduct a process and outcomes evaluation of the project.	RN certification can reduce persistently high RN turnover rates that negatively impact patient safety and Long Term Care quality.	Certification, job dissatisfaction, competency, and changes in empowerment all were factors in RN turnover rates which were alleviated by nurses becoming certified which led to improved empowerment, satisfaction, and competence.
Ugar, et al. 2014	Decisional involvement among staff nurses based on educational level and certification status.	VI	To determine the difference between actual and preferred decisional involvement of staff nurses on the overall decisional involvement scale based on its subscales and education and certification.	A descriptive comparative study focused on BSN and masters prepared nurses or specialty certification in which the studies addressed the effects of education and certification on decisional involvement.	Although education and certification provided increased knowledge and competency in a specific area resulting in a rewarding practice environment and quality patient care; this study found no statistically significant difference in overall actual and	Although this study found no significant difference concerning the DI scores, other studies did find a positive relationship between certification and empowerment. Although the purpose of this study was not focused on certification and empowerment per se, the combination of the two were

					preferred DI scores between certified and non-certified nurses	shown to improve nursing outcomes because of this relationship.
Boltz, et al. 2013	Patient safety in medical surgical units: can nursing certification make a difference?	III	Examine the relationship between nurse certification in any specialty practice and unit-level, nursing sensitive quality indicators in units primarily serving older adults.	A retrospective descriptive design using multivariate regression techniques obtained from a sample of 44 medical and medical surgical units in a Nurses Improving Care for Health system Elders hospitals.	Binary logistic regression modeling yielded a significant relationship between certification in any specialty and falls.	Nursing-sensitive outcomes in hospitalized older adults may be influenced by nurse certification.
Boyle, et al. 2014	The relationship between direct-care RN specialty certification and surgical patient outcomes.	IV	To explore the relationship between direct care, specialty certified nurses employed in perioperative units, surgical	Retrospective, repeated measures analysis of secondary data from the NDNQI (national database of nursing quality indicators). Patient outcomes, staffing, and	The results of the study are supportive of promoting specialty certification among RNs who care for surgical patients.	Certification of nurses is linked directly to specific patient outcomes; however, further research is needed utilizing process variables and more extensive structure variables to be

			intensive care units, and surgical units on nursing sensitive patient outcomes.	RN education and national specialty certification and perceptions of the unit practice environment were used through the selection of administrative and outcome date from the same quarter the RN survey was taken.		able to clarify the nature of the relationship of specialty nursing certification with patient outcomes.
Wilkinson, 2011	Specialty nurse certification effects patient outcomes.	V	To report on various studies that have shown specialty nurses with certification contribute to quality patient outcomes and satisfaction.	Review of the literature concerning certification and examinations which are based on the scope and standards of practice approved by the American Nurses Association Congress of Nursing Practice and Economics and the relationship	Nurses that are certified in their specialty have increased confidence level and self-perception exemplifying an attitude of empowerment, quality collaboration with the healthcare team, confirmation of competence, and	Nurse certification provides personal satisfaction, affirmation of skills, potential opportunities for advancement, positive marketing tool for the institutions, and confirmation to the patient they are being cared for by a highly trained professional; indicating specialty

				to patient outcomes and satisfaction.	validation of clinical expertise. Management sees an overall more well rounded nurse and the higher the certification rate, the further ahead the organization would be in obtaining Magnet status. The patient benefits from improved safety, satisfaction, and positive outcomes.	certification benefits the consumer, provider, and professional nurse.
Straka, et al., 2014	The impact and perception of nursing certification in pediatric nursing.	VI	Explore nurse perception of certification and measured response to a high fidelity simulated scenario by certified and noncertified	A cross sectional descriptive correlation design was used to test the clinical hypothesis that certified nurses recognize and respond earlier to deteriorating patients in	No difference found in recognizing and responding to a simulated deteriorating pediatric patient between the certified and noncertified nurses, but	Nursing certification is a measure of an individual's skill and competency in a specialty area and the evidence has shown a link between certified nurses and patient outcomes. However, further studies

			ed pediatric nurses to a deteriorating patient through simulation and self assessment.	a simulated environment , have a higher perception in the value of becoming certified, and score higher on knowledge tests.	did show a significant difference in knowledge questions and a higher perception of the value of certification in some certified groups.	addressing the direct link between certified nurses and patient care must be explored.
Jeffries, 2013	The public's perception of certification.	VI	To provide an overview of public perception of certification and how it relates to nephrology nursing and hemodialysis technician certification.	Review of the literature to determine the public perception of certification and address any misconception of certification .	The public is often unaware of what certification is, what is entailed in obtaining certification , and the value of certification to the public, organizations, and individuals who become certified.	It is the responsibility of the nursing profession and certifying bodies to inform the public of the values of certification and the level of care one should expect to receive from the certified nurse. It is also important for the nurses to understand and be aware of how consumers and the general public perceive certification so they may provide a more complete knowledge base for each party that will

						aid them in making better decisions.
Koberich, et al. 2016	Factors influencing hospitalized patients' perception of individualized nursing care: a cross sectional study.	III	To identify the individual and organizational factors influencing hospitalized patients' perception of individualized care.	A cross sectional study conducted from 20 wards from 5 hospitals with individualized care and potential influencing factors being assessed via structured questionnaires.	Self-rated health, length of ward stay, educational level and shared decision making process about nursing care were perceived to influence individualized care.	Of the factors influencing patients' perception of individualized care, only the decision-making process can be actively influenced by nurses; thus nurses are encouraged to promote shared decision-making regarding patients' nursing care.
Corbet and Ennis, 2014	What do patients want? Patient preference in wound care.	V	Patient preferences and/or involvement in their healthcare continues to occupy a prominent place in clinical decision making. This article aims to introduce the reader to the issues, begin a	Review of the literature looking at patient centered care, patient centered perspectives, patient centered care framework, and patient decision support aides. A Cochrane systematic review of 86 randomized controlled	Patient and clinicians are at odds concerning the care provided. For example, patients identified wound recurrence, quality of treatment for wound care, maintenance of independent living personal interactions	Indications are that the disconnect between the patient and provider lead to the need for each party to be involved in their care when designing clinical research and health policy. Further research is indicated on the preference tools described in the article, while challenges

			dialogue on patient preference in wound care, and suggest opportunities for future discovery.	trials was looked at utilizing the above criteria.	with doctors and healthcare professionals, living a normal life, and receiving appropriate skilled care for their non-healing wound. These were not the characteristic identified by the clinicians and the patients did not place a high priority on characteristic of the wound dressing.	remain to bring together a common ground for the clinician and the patient to begin improvement of outcomes and continuation of direct care.
Krapohl, et al., 2010	Nursing specialty certification and nursing sensitive patient outcomes in the intensive care unit.	IV	To determine whether the proportion of certified nurses on a unit is associated with the rate of nurse sensitive patient outcomes.	A nonexperimental, correlational, descriptive design was used to anonymously survey 866 nurses working in 25 intensive care units.	No significant relationship was found between the proportion of certified nurses on a unit and patients' outcomes. However, nurses' perception of overall workplace	No link was established between certification and nurse sensitive outcomes. However, the association between workplace empowerment and the proportion of certified nurses on a unit does

					empowerment and certification was positive and statistically significant.	underscore the importance of organizational factors in the promotion of nursing certification.
AACN, 2015	Certification benefits patients, employers and nurses.	VII	Validating mastery skills, knowledge and abilities through nursing certification and meeting ongoing learning and practice requirements through recertification.	A report/opinion of the AACN.	Patients and families, employers, and nurses all benefit from certification.	Patients prefer hospitals that employ nurses with specialty certification and adhere to the assurance that the healthcare professionals caring for them are competent. Employers are supportive as it differentiates them from competitors and demonstrates that they have attracted the most skilled and experienced nursing professionals. The nurses are able to validate their skills and expert knowledge, while positioning themselves for recognition, advancement and gaining a

						critical sense of confidence and achievement.
Ofli, 2014	Patient satisfaction in healthcare delivery-a review of current approaches and methods.	VI	To explain what constitutes satisfaction in the perspective of the consumers and methods that can be adopted by healthcare providers and/or researchers to unveil factors that are responsible for consumer satisfaction.	A review looking at the perceived value a patient derives from going to a medical care center for treatment, utilizing the right tools used for the treatment, concern with the qualification of the practitioners, and the service delivery process within the organization.	Qualitative research is both effective and efficient for use in medical research. Design of the research should be customer centric. The questions and methodology should be such that it seeks to get out the desired information from respondents.	Ensure the research instruments and design are such that they present through the findings reasonable validity and reliability while being reproducible.
Lundmark, et al. 2012	A national agenda for credentialing research in nursing.	VII	To propose a framework to organize the concepts and variables that inform credentialing	A report proposing a conceptual model and providing example research questions for investigating the impact of credentialing	Organizational credentialing in nursing is impressive and continues to grow and yet, much remains to be studied and	Defining terms became a high priority as a first step in organizational credentialing. Proposal of a research agenda was second, and developing a set of example research

			research in nursing.	g and credentialing variables on healthcare outcomes for nurses, patients, and organizations.	understood. The studies to date have relied on cross sectional surveys of nurses and have included few variables to represent the potentially influential factors in the healthcare setting.	questions was third. This was followed by the development of a graphic model for credentialing research.
Biel, et al., 2014	The relationship between nursing certification and patient outcomes: a review of the literature.	V	To bring nursing certification organizations and key partners together to identify and agree upon priorities for a unified, international research agenda supporting nursing certification.	A search of the literature that examined nursing certification and patient outcomes followed by the ABNS research committee conducting a systematic review of the literature was done.	The results of the studies varied in terms of effectiveness of nursing certification on patient outcomes. The studies did not set out to isolate and examine certified nursing practice, the study designs were mostly quantitative, no model or diagram	There were mixed results in that some studies indicated specialty certification had a positive impact on patient outcomes, while others showed no such relationship. Focusing on future research concerning patient outcomes requires improved theoretical and methodological

					currently exists concerning certified nursing practice and its relationship to outcomes, sampling techniques are limited which may increase the limitations of the studies, and there is a lack of clarity regarding a unified definition of what constitutes certification .	issues be identified by this research synthesis.
Kendall Gallagher, et al. 2011	Nurse specialty certification, inpatient mortality, and failure to rescue.	II	To determine if hospital proportion of staff nurses with specialty certification is associated with risk adjusted inpatient 30 day mortality	Secondary analysis of risk adjusted adult general, orthopedic, and vascular surgical inpatients discharged from nonfederal hospitals controlling for state,	Hospital proportion of BSN and certified BSN staff nurses were associated with mortality and failure to rescue; no effect of specialization was seen in the absence of	Nurse specialty certification is associated with better patient outcomes; effects on mortality and failure to rescue in general surgery patients is contingent upon BSN education; however, investment in a

			and failure to rescue.	hospital, patient, and nursing characteristics by linking outcomes, administrative, and nurse survey data. The nurse data was categorized by education and certification status and aggregated to the hospital level. Logistic regression models were used to estimate effects of specialty certification and other nursing characteristics on mortality and failure to rescue.	BSN education. A 10% increase in hospital proportion of BSN and certified BSN staff nurses, respectively, decreased the odds of adjusted inpatient 30 day mortality by 6% and 2%; results for failure to rescue were identical.	BSN educated workforce and specialty certification has the potential to improve the quality of care.
Kendall Gallagher and Blegen, 2009	Competence and certification of registered nurses	III	To explore the relationship between the	Hierarchical linear modeling was used in a secondary data	Unit proportion of certified staff registered nurses was	Specialty certification and competence of registered nurses are

	and safety of patients in intensive care units.		proportions of certified staff nurses in a unit and risk of harm to patients.	analysis of 48 intensive care units from a random sample of 29 hospitals to examine the relationships between unit certification rates, organizational nursing characteristics (magnet status, staffing, education, and experiences), and rates of medication administration errors, falls, skin breakdown, and 3 types of nosocomial infections. Medicare case mix index was used to adjust for patient risk.	inversely related to rate of falls, and total hours of nursing care was positively related to medication administration errors. The mean number of years of experience of registered nurses in the unit was inversely related to frequency of urinary tract infections; however, the small sample size requires that caution be exercised when interpreting results.	related to patients' safety; however, further research on this relationship is needed.
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Appendix C: Evidence-Based Practice–Rating System for the Hierarchy of Levels of

Evidence

- Level I — Evidence from a systematic review or meta-analysis of all relevant RCTs
- Level II — Evidence obtained from well-designed RCTs
- Level III — Evidence obtained from one well-designed controlled trials without Randomization
- Level IV — Evidence from well-designed case-control and cohort studies
- Level V — Evidence from systematic reviews of descriptive or qualitative study
- Level VI — Evidence from single descriptive or qualities study
- Level VII — Evidence from the opinion of authorities and/or reports of expert committees

(Melnyk, B. M. & Fineout-Overholt, E., 2011)