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Perceptions of Basic Knowledge Needed by Perioperative Registered Nuses for Competency

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PERCEPTIONS OF BASIC KNOWLEDGE NEEDED BY PERIOPERATIVE REGISTERED NURSES FOR COMPETENCY

by

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Abstract

This paper is a study of current perceptions of perioperative nurses view of competency in the operating room. Perioperative education, competency standards, and competency assessment have been used to guide clinical and professional nursing behaviors. The need for a standardized education program and competency assessment tool has been identified, but inconsistencies and disagreement about the components that should be included for these areas still remains. A review of current literature was conducted to include topics involving perioperative education, competency assessment, and nursing perceptions regarding competency. A survey of current practicing perioperative nurses was also conducted; both qualitative and quantitative data was collected and analyzed. From the analysis of available literature and a survey of perioperative nurses, three themes were identified: perioperative nurse competency is essential for patient safety, communication and teamwork were perceived as strong characteristics of competency traits, and subspecialty education programs and the educational level of the nurse were not perceived as valuable for achieving competence. These findings indicate that teamwork and communication should be incorporated into perioperative nursing competency standards. Current accepted standards from the Association of periOperative Nurses does not currently address teamwork and communication as indications of perioperative nursing competency. It also revealed that the need for further research related to competency and the standardization of perioperative education.

Chapter I

Introduction

Nursing competence and the accurate assessment of nursing competency is becoming essential as the expectations of the nursing profession increase. Competency is what a nurse is capable of doing, and it is manifested in measurable actions and behaviors (Stobinski, 2008). The process of determining competency is difficult for nursing, and there is no set tool for assessment across the various nursing practice areas. The scope of this problem is far reaching as it affects student, novice, and expert nurses and impacts all practice areas of the profession. Although the state broads of nursing deal with the most obvious individual downfalls in order to protect the public's welfare, there is no systematic accepted means of ensuring competency in nursing (O'Neale & Kurtz, 2001).

This study will explore the topic of perioperative nursing competency and competency assessment through a review of recent literature on national standards for nursing competency and the perception of perioperative nurses related to important components necessary for competency. A survey of currently employed perioperative nurses was conducted to determine what topics they see are essential to competency. The results of this study provide recommendations for areas that could be strengthened related to perioperative nurse competency, as well as identifying future research that will illuminate components necessary for perioperative nurse competency.

Purpose

The purpose of this project is to explore competency of perioperative nursing. Very few undergraduate programs have a subspecialty education course in this area, and although many programs include a surgical experience in clinical rotation, but there is little in-depth education (Stobinski, 2008). Therefore the competency of the perioperative nurse is questioned throughout the course of their professional career (Stobinski, 2008). In this project, perioperative nurses' perceptions will be compared to the competency standards of the Association of periOperative Registered Nurses (AORN).

Through examination of current literature and comparing that to the perceptions of nurses and the national standards formulated by AORN in regards to competency, gaps in knowledge and applications of competency assessment in perioperative nursing were identified. The ultimate goal of competent nursing practice is patient safety (Chard, 2010). In today's health care systems, emerging technology and evidence-based practice have influenced how competency is assessed and evaluated (Chard, 2010). Nurses should be prepared to accept the role of lifelong learner to maintain a competent evidence-based and professional practice (Chard, 2010). Acquiring a deeper understanding of competency and competency based practice helps to provide safe patient care in a continuously changing environment. Recommendations presented in this project are meant to support this goal.

Significance

An examination of how competency is viewed and assessed shows that there are discrepancies between the way nurses perceive competency and that which is presented by current literature. Identifying these discrepancies is the first step to developing recommendations for areas necessary for further action and research.

According to the American Nurses Association (ANA) "Registered nurses attain knowledge and competency that reflects current nursing practice." (Chard, 2010). In most instances, regulatory agencies define minimal standards to protect the public, and health care facilities are accountable to the public by providing an environment that supports competent practice (Chard, 2010). However, safe care is not a given today, because in many healthcare organizations the pool of experienced perioperative nurses from which to recruit and retain permanent employees no longer exists (Courney, 2005). The manner that health care organizations provide an environment supportive of competency varies greatly in both education and assessment (O'Neale & Kurtz, 2001).

Regulatory agencies such as The Joint Commission (TJC) and Centers for Medicare and Medicaid Services (CMS) mandate that health care organizations conduct an initial assessment of staff competence as part of orientation, as well as define the competencies required of staff who provide care, treatment, or services (TJC, 2011). It is also important to differentiate between baseline and continuous competency assessment and evaluation (Chard, 2010). Baseline competency assessment occurs at the time of hire, where continuous competency assessment evaluates the knowledge, skills, attitudes, and behaviors that reflect specific practice requirements (Chard, 2010).

When a standard of competency is not established the result is varying nursing performance between a combination of skills, attitudes, values and abilities (Gillespie, Chaboyer, Wallis, Chang, & Werder, 2009). This is the same for assessment methods. Despite years of nursing research history into the development of a valid and reliable method of assessing the clinical performance of nurses, there are not universally accepted tools (Nicholson, Gillis, & Dunning, 2009). Problems of objectivity, validity, and reliability are experienced during the assessment of clinical competence in the nursing profession and this is compounded by the lack of approved assessment tools available for use (Nicholson, Gillis, & Dunning, 2009). This project shows that there is a need for further research and a standardized way in which competency should be assessed and measured at the baseline level, as well as through the ongoing professional nurses career.

Theoretical Framework

The theoretical framework used for this study is Patricia Benner's Novice to Expert theory. Benner's use of the Dreyfus Model of Skill Acquisition offers a basis for clinical knowledge development and career progression in clinical nursing (Benner, 1984). The Dreyfus model contends that during the acquisition and development of a skill, one passes through five levels of proficiency in order to master levels of competency:

- Novice
- Advanced beginner
- Competent
- Proficient
- Expert

The following is a brief explanation of the Novice to Expert Theory (Benner, 1984). The novice is a level of beginners. Beginners have no experience with the situations in which they are expected to perform tasks. The difficulty that the novice faces is the inability to use discretionary judgment. Since novices nurses have no experience with the situation they face they must use rules to guide their performance. But following rules may lead to unsuccessful nursing performance because no rule can tell a novice which tasks are most relevant in a real situation or when an exception to the rule is in order.

In the advanced beginner level and nurse is able to demonstrate an acceptable performance. This nurse is one who has coped with enough real situations to note the recurrent meaningful situations. The advanced beginner however is still in need of help in setting priorities and the care they provide will need to be backed up by competent level nurses to ensure that important patient needs do not go unattended.

The competent level nurse is one who is able to see his or her actions in terms of long-range goals or plans. The nurse is consciously aware of these plans, and these plans dictate which situations are to be considered most important and which can be ignored. Competence is evidenced by a feeling of mastery and the ability to cope with and manage the many contingencies of nursing. The competent nurse may lack the speed and flexibility of the nurse who has reached the proficient level, but the conscious, deliberate planning helps achieve a level of efficiency and organization. The competent level is supported and reinforced by institutions and many nurses may stay at this level because it is perceived as the ideal by their supervisors (Benner, 1984).

The proficient nurse performer is able to recognize situations as wholes and can now recognize when the expected normal picture does not present itself – that is, when the normal is

absent. The proficient nurse has holistic understanding and this improves his or her decision making abilities. Decision making for the proficient nurse is less labored and the nurse can consider fewer options for solutions as they are able to hone in on an accurate region of the problem.

Expert level nurses rely on analytical principles to connect his or her understanding of the situation to an appropriate action. It is difficult to describe expert level nurse performance as these nurses operate from a deep understanding of the situation. This may be evidenced by a "feeling" or "intuition" rather than being able to legitimize with facts or evidence. By studying both the proficient and expert performance it is possible to obtain a description of the kinds of goals and patient outcomes that are possible in excellent nursing practice. This knowledge of goals and possible outcomes can be useful in expanding the scope of practice of nurses who are less proficient.

A competent nurse will not approach or solve a clinical situation in the same way as a proficient nurse. Experience, in addition to education is required to develop to the level of competency. According to Benner, experience does not refer to the mere passage of time or longevity; rather it is the refinement of preconceived notions through encounters with many actual practical situations. A nurse who has dealt with many people acquires a rich basis on which to interpret new situations, but this knowledge cannot really be put into abstract principles or even guidelines. The level of the competent nurse however is different than that the terminology of competency. As Benner (1984) describes the competent nurse as one that possesses a feeling of mastery and the ability to cope with and manage the many contingencies of nursing the terminology of competency differs. The differences between the definitions of

competency create variation in interpretation and inconsistencies in assessment (Stobinski, 2008).

The Dreyfus Model of Skill Acquisition applied to nursing and combined with an interpretive approach to describing nursing practices, offers guidelines for career and knowledge development in clinical nursing practice (Benner, March 1982) and in this way may offer a framework to decrease the inconsistencies in competency assessment. Consistent with the Novice to Expert theoretical framework nurses participate in experiential learning and, in doing so, acquire a degree of clinical competency over time (Stobinski, 2008). This aligns with a central concept of Benner's Novice to Expert nursing framework, which is that experience is a prerequisite for expertise.

In linking Benner's Novice to Expert theory to this project clinical competence of the perioperative nurse cannot be viewed as a static measurement, rather a continuum of change which must be assessed at given points in time (Stobinski, 2008). As a nurse is presented with a new skill or task they may revert temporarily to a lower level of competency on the novice to expert continuum. Therefore, the assessment of competency is a snapshot in time and the importance of understanding competency and the perceptions surrounding competency become an essential factor for providing safe quality nursing care.

Definitions

- *AORN:* a non-profit membership association that represents the interests of perioperative nurses by providing nursing education, standards, and clinical practice resources, including a peer-reviewed monthly AORN Journal publication, to enable optimal outcomes for patients undergoing operative and other invasive procedures.
- *Competency assessment:* evaluates the knowledge, skills, attitudes, and behaviors that reflect specific practice setting requirements (Chard, 2010).
- *Nursing competency:* the application of knowledge and the interpersonal decision-making and psychomotor skills expected for the practice role, within the context of public health (Decker, Utterback, Thomas, Mitchell, & Sprotsman, (2011).
- *Perioperative nursing:* The practice of nursing directed toward patients undergoing operative and other invasive procedures (Perioperative Standards and Recommended Practices, 2011).
- *Professional nursing certification:* the formal recognition of the specialized knowledge, skills, and experience demonstrated by the achievement of standards identified by a nursing specialty to promote optimal health outcomes (American Board of Nursing Specialties, 2012).
- *Simulation:* clinical practice through a variety of delivery methods including role play, case studies, software packages, interactive manikins, and actors (Bland, Topping, & Wood, 2011).

Assumptions

This subsection describes the two primary assumptions that were made while designing and conducting this project. The first assumption was that nurses need a formal educational process to acquire competence for the perioperative area. Current academic programs may provide some insight into the role of the perioperative nurse; however they do not provide an in-depth education to prepare for the specialized nature of the perioperative environment (Stobinski, 2008). Subspecialty educational programs are needed in order to prepare nurses for performing in the perioperative role (Stobinski, 2008).

The second assumption made in this study was that those surveyed answered honestly. The data gathered through the survey was essential in this project to either support or dispute the conducted literature review. It was assumed that the survey contained questions that were understood by respondents and would gather sufficient data to support the conclusion.

Limitations

There is no clear definition of the term competency. In conducting the literature review, as well as the survey the lack of this definition posed a limitation in discerning what information was truly relevant to this project. In addition there was a limited amount of literature available for review in regards to competency in relation to the perioperative environment. The few relevant articles available were not able to produce a large variety of empirical evidence in order to either support or dispute the purpose of this project. The majority of the literature was also qualitative in nature and few quantitative studies were present limiting the generalization of the findings.

The survey constructed was used to gather basic perceptions of perioperative nurses in regards to competency as well as demographic data. The survey was not tested for reliability and validity, which places limitations on the outcome of the data analysis. The low sample size that responded to the survey also limited the data analysis that was presented.

Chapter II

Literature Review

Introduction.

In order to better understand competency and examine research that has been conducted in regards to perioperative nursing competency, a literature search was conducted. The primary literature search focused on key terms that were the basis of this project. The search also included supporting key terms in relation to the overall objective and examination of perceptions of perioperative nursing competency. The conducted search provided both qualitative and quantitative data for analysis and review.

Process.

A literature search was performed for English-language articles using the CINAHL and Ovid Medline databases. Search terms that were used included a combination of "Nursing" AND "Competency" AND "Surgery" this resulted in thirty-one (31) articles with the majority on competency based orientation and specific clinical specialty competencies. A search combination of "Operating Room" AND "Competency" resulted in forty-four (44) results with a variety of topics presented. The combination of search terms "Nursing" AND "Competency, Assessment" AND "Surgery" resulted in 13 articles in which most addressed advance practice nursing topics.

The search was expanded to include the search terms "Education, Nursing, Continuing" AND "Hospitals, Urban" resulted in nine (9) articles pertaining mostly to orientation and retention. And the terms "Competency, Assessment" in MH Exact Subject Heading, AND "Nursing" AND "Testing" resulted in 28 results which many related to the topic of competency in various areas of the nursing profession. A search of the terms "Education, Nursing,

Continuing" AND "Hospitals, Rural" resulted in 23 articles with some overlap from the prior search and topics related to the challenges of rural communities.

A literature search was also performed for English-language articles using the CINAHL database for articles pertaining to the theoretical foundation of this study. The search terms "Benner, P" in AU Author AND "Competency" resulted in one (1) article. The terms "Benner, P" in AU Author AND "Novice" resulted in two (2) articles and one (1) book relevant to the subject matter of this study.

The articles were reviewed and screened. Only articles providing sufficient detail regarding perioperative nursing competency were selected. The reference list of each article was also screened for pertinent articles related to the topic of perioperative nurse competency. The literature search produced a list of 17 articles relevant to this study.

The professional organization of AORN was also used to provide expert resource in the field of perioperative nursing for consultation. AORN is committed to improving patient safety in the surgical setting and is the premier resource for periOperative nurses (About AORN, 2011). The mission of the Association of periOperative Registered Nurses is promote safety and optimal outcomes for patient undergoing operative and other invasive procedures by providing practice support and professional development opportunities to perioperative nurses (About AORN, 2011).

Overview.

The available literature regarding perioperative nursing competency is limited. Several articles that were found were more than ten years old and the majority of recent articles are qualitative in nature. There were three themes identified within the acquired literature, they include perioperative education/orientation, perioperative competency assessment, and

perception of perioperative competency. The following review of literature relates to each of these themes.

Perioperative education.

Perioperative education is often not part of a nursing curriculum and education programs are usually offered in conjunction with orientation to the operating room. Subspecialty education programs provide a critical foundation upon which eventual clinical competency will be built (Stobinski, 2008). In a 2008 article by Stobinski the topics of nursing competency and competency assessment were explored and a literature review was provided on perioperative nursing subspecialty education.

Stobinski (2008) conducted a comprehensive literature review and analysis of perioperative nursing subspecialty education in relation to competency and competency assessment. The search produced 14 articles detailing 13 education programs (Stobinski, 2008). Only articles providing sufficient detail regarding a subspecialty education program were included. Articles that contained commentary on subspecialty education and letters and comments on previous articles were excluded (Stobinski, 2008). The stated purposes for the programs and the approach to perioperative education showed considerable diversity (Stobinski, 2008). The topics that were examined included: (a) focus of the program, (b) course length, (c) course documentation, (d) theoretical framework, (e) program evaluation methods, and (f) evaluation of student learning (Stobinski, 2008). In addition to the literature search Stobinski (2008) compared the findings to perioperative nursing competency.

Stobinski's (2008) examination of perioperative nursing subspecialty education reveals inconsistency among the identified programs. The content of educational programs and the entrance requirements for the various subspecialties of nursing were poorly defined, and there

was little documented oversight from professional organizations (Stobinski, 2008). In summary Stobinski (2008) recommends that there is a need for further research in the efficacy and cost-effectiveness of the diversity of approaches to nursing education and their ultimate effects on the competency of perioperative nursing. Stobinski (2008) presented an in-depth overview of the issues surrounding perioperative subspecialty education and it's relation to competency. Its main theme was that although many education programs exist, and competency is assessed or examined, it is inconsistent throughout.

Stobinski (2008) also pointed out that from the perspective of Benner's Novice to Expert theoretical framework, post licensure education programs are a critical source of the theory based knowledge for the beginner entering a nursing subspecialty such as the perioperative area. Although Benner's theory speaks to the importance of this knowledge as a foundation for further learning, there are great gaps and inconsistencies with course/orientation length, content, and evaluation methods (Stobinski, 2008).

The AORN has a comprehensive perioperative sub-specialty education program available for use. The AORN Periop 101: A Core Curriculum program provides course materials and training to guide the orientation process in the operating room (AORN, 2012). This peer reviewed material was developed by 32 expert nurse authors and is based on the AORN standards and recommended practices (Stobinski, 2008). The rationale for the program is that it provides an efficient and consistent course of instruction, however it is not mandatory and not all programs or institutions follow the AORN guidance (Stobinski, 2008). Therefore there is still no standardized educational preparation for the technology-intensive field of perioperative nursing which leads to a wide diversity of methods and structure in employer based programs (Stobinski, 2008).

Academic influence or lack thereof is another facet of perioperative education. Although academic involvement is not typical, one example is the development of a program to provide perioperative education in association with a university (Latz & Nordbye, 2004). An article by Latz & Nordbye (2004) compared two programs in relation to perioperative competency. The two programs were both constructed in cooperation with an academic institution but differed in structure and delivery. The article presented a 10 week perioperative nursing course that has been offered in an urban area for approximately 30 years and compared it to a two-weekend on-line course (Latz & Nordbye, 2004). The two courses were compared in terms of content, structure, student feedback, and student assessment, using formal and informal feedback provided by the instructors, to an alternative program that was developed in the late 1990's that provided the course content in a two-weekend on-line format instead of the 10 week on campus format (Latz & Nordbye, 2004). The first on-line program allowed for self-paced didactic content where the student arranges their own clinical experiences, while the second was offered through a university. This approach required clinical experiences on campus, while this offered structure; it also limited the scope of the program to the region in which it is offered (Latz & Nordbye, 2004). The two courses were compared in terms of content, structure, student feedback, and student assessment using formal and informal feedback provided by the instructors.

The results of the comparison showed that all of the original course content is covered in both class formats (Latz & Nordbye, 2004). The two weekend structure although different received increased positive student and faculty feedback. Interest in the on-line two weekend course has been high. In addition the demand for the 10 week program has decreased to the point that there have not been enough registrants to hold a class (Latz & Nordbye, 2004). These

courses were both based on the AORN standards and recommended practices, but did not utilize the Periop 101 offered curriculum. Latz & Nordbye (2004) concluded that the two weekend courses provided students an introduction to perioperative nursing in a timely format so they can be integrated quickly into the perioperative area. They also concluded, based on student evaluations, that the content was better retained in the weekend course because laboratory sessions immediately followed didactic sessions (Latz & Nordbye, 2004).

Another way in which perioperative education is being utilized is through the development of extern-intern programs. These programs involve collaboration between universities and healthcare organizations (Courney, 2005). It can take as long as six months to train novice inexperienced nurses to provide safe, quality, competent care in the operating room (Courney, 2005). This is very time-consuming and expensive, making the costs of recruitment and retention significant.

Courney (2005) presented a description of a perioperative nurse extern-intern program. This program was aimed at decreasing orientation costs, while increasing with the availability of new talent in the specialty of perioperative nursing, and strengthening the partnership between the healthcare organization and the local universities nursing program (Courney, 2005). Courney (2005) discussed the following program topics: (a) rationale, (b) program goals, (c) conceptual framework, (d) program structure and design, (e) program rules, and (f) program evaluation.

In this educational program students are recruited directly from the nursing program. There is an extensive application process and grade point average and student's future goals are examined. This program was designed with three job levels extern, intern I, and intern II, each stage matching with progression of the nursing program, and each with increased responsibilities and salary. The nurse internship ends with graduation but the student remains with a preceptor

until licensure is achieved and the student is then considered a full practicing nurse (Courney, 2005). Based on collected evaluations from staff nurses, preceptors, and interns, curriculum changes were implemented to strengthen the program (Courney, 2005). In addition evaluations collected from the interns reported that the program design was well-constructed, this allowed them to enter into independent practice earlier than their colleagues in other areas of nursing. They also reported a greater confidence and decreased levels of uncertainty when providing care to surgical patients (Courney, 2005). Courney (2005) does not outline the sample size or offer the findings of the evaluations from staff nurses and preceptors. Even though this study has limitations, this form of educating perioperative nurses was viewed as successful based on lower orientation costs and retention of interns post licensure, and is another example of the differences among educational programs that are available (Courney, 2005).

Dumchin (2010) proposed a conceptual framework that might be used to provide structure to address the previously identified inconsistencies of the traditional, online, and on-the-job, educational programs for preparing nurses. The framework Dumchin (2010) offered combines social constructivism, Benner's Novice to Expert theory, and the principles of adult learning to provide a basis for the design and implementation of future perioperative curricula. The conceptual framework is composed of three components: the student, the factors influencing the learning, and the instructor (Dumchin, 2010).

The first component related to the student is the process in which the student acquires perioperative competencies, from easiest to hardest within the curriculum. This component is important because it emphasizes the developmental aspect according to the "Novice to Expert" framework that Benner (1984) described. It is important that the level of the student be

considered when designing perioperative curricula because every individual nurse is at a different level of nursing experience in addition to their level of academic achievement.

The second component focuses on the factors and theoretical underpinnings that support and influence the curriculum design and implementation, eg. social constructivism, principles of adult learning, and advanced technology (Dumchin, 2010). Social constructivism is a philosophy of learning founded on the premise that, by reflecting on our experiences, we construct our own understanding of the world we live in (Dumchin, 2010). This type of learning is simply the process of adjusting our mental models to accommodate to new experiences (Dumchin, 2010). Principles of adult learning involve andragogy, the art and science of helping adults learn (Dumchin, 2010). Principles of adult education emphasize the importance of identifying learning needs and taking responsibility and control over self-learning (Dumchin, 2010). In the principles of adult learning students are able to guide their own learning and take accountability for their educational needs (Dumchin, 2010). These learning theories guide the role of both students and instructors.

The third component relates to the instructor. In this model the instructor is viewed as a facilitator of self-directed learning. The role of the instructor is a partner in the mutual reciprocal process of learning and sharing (Dumchin, 2010). This role is no more or less important that the role assumed by the student; however, the level of knowledge is what differs in the members of the learning partnership. This conceptual framework incorporates the principles social constructivism and adult learning in an attempt to conceptualize a perioperative curriculum and propose an innovative way to educate future nurses in a more student centered environment (Dumchin, 2010). Although Dumchin (2010) presents a strong premise for the involvement of

theory in perioperative education, the model would need to be further evaluated if it is to guide the future of perioperative nursing education.

One of the greatest challenges in perioperative nursing education is addressing the rural arena. Rural health care facilities lack resources to provide formal perioperative nursing education programs or a perioperative nursing educator. In an attempt to standardize perioperative education for rural hospitals Murphy (2002) discussed her involvement in the collaboration between 15 small rural hospitals with the development of one education program applied to each site.

Murphy (2002) identified that there was a need for standardizing education between 15 hospitals in a 13,000 square mile area. These hospitals were small, rural institutions with only two to five operating rooms (Murphy, 2002). Murphy (2002) presented a vision of standardized education to the group of hospitals and all approved the idea, but were concerned about the financial implications. Grant funding supported the goal of the collaboration to provide a standardized educational program for ongoing staff member competency. Murphy (2002) defined the success of this program as the ability to create and fund standardized education. On the other hand, outcomes of increased competency or even a discussion of competency were missing from this article.

This past section of the literature review has related to education efforts toward development of essential competencies necessary for safe and effective perioperative nursing practice and standardized perioperative educational programs. Few programs were identified and the ones that were identified failed to provide evidence of outcome measurement. Furthermore, the wide variance and inconsistency in the approach to educating the perioperative nurse has compounded the gap in understanding how education would best prepare nurses for practice in

this specialty. This is particularly cited because education is the foundation of perioperative nursing competency (Gillespie, et al., 2011).

Perioperative competency assessment.

Competency in nursing is a term that is heard often in health care organizations. This is driven by the need to meet regulatory measures of TJC and CMS (TJC, 2011). Stobinski (2008) states that competency is a determining factor of assessing nursing performance. Stobinski goes on to state that if professional competency is closely related to performance, then competency assessment has great practical value from a management perspective. Competency assessment and validation is a requirement for accreditation requirements, but it is the employer who is responsible for determining the best method to measure, sustain, and ultimately improve competency to meet accreditation standards (Stobinski, 2008). Competency assessment examines nursing performance but also evaluates the success of the education that was provided to that nurse (Stobinski, 2008). Current methods of defining and measuring clinical competency, much like perioperative education programs, are not optimal or consistent in nursing (Stobinski, 2008).

Chard (2010) examined the topic of assessing perioperative registered nurse competency and presented several methods that can be used to assess and measure competence. Chard (2010) described the components of competency evaluation to include assessing a registered nurses ability to act in his or her scope of practice, an evaluation of general knowledge, and an evaluation of the nurses' expertise in a specified area of practice. Chard (2010) also expressed that competency evaluations should be based on best practices grounded by evidence.

The assessment methods used included knowledge assessment tests, skills laboratories, review of written or visual material, verbalization of the desired skill or knowledge, scenario-based training or controlled simulation, and demonstration or direct observation (Chard, 2010).

Chard (2010) stated that the assessment method, as well as the frequency, is either determined by regulatory requirements or the employer's guidelines. Although Chard (2010) presented options for competency assessment there were no suggestions for how the proposed assessments would be implemented. In addition, no evidence was presented to substantiate a rational use of the methods. The lack of evidence showing how these methods translate for use in certain topics and subject matter further supports the inconsistencies surrounding development of perioperative competency assessment because assessment is an essential component toward that end.

Unlike Chard (2010) who presents many different options for evaluation and assessment of competency, Nicholson, Gillis, and Dunning (2009) evaluated perioperative competency using one tangible method of establishing a scoring rubric. The scoring rubric was developed to determine clinical performance in the operating room. This article was one of the few quantitative studies found in regards to perioperative nursing competency assessment. Nicholson, et al. (2009) developed both holistic and analytical rubrics, which aligned to the Australian College of Operating Room Nurses (ACORN) standards and used the Dreyfus model as their theoretical support.

The rubrics were used to analyze 10 minute video clips of varying performance of nurses performing in the scrub nurse role (Nicholson, et al., 2009). These video-clips were then shown to subjects using the rubric tools for evaluation. An analysis of the patterns of the ratings was conducted for the analytical rubric as well as the holistic rubric. The study found that the holistic rubrics led to more consistent judgments than the analytical rubrics, yet the analytical rubrics provided more diagnostic information for intervention purposes (Nicholson, et al., 2009). The holistic performance level rubric was comprised of a four-point behavioral rating scale, with the beginner nurse at a scale rating of one and four equaling the effective or expert nurse in relation

to the Dreyfus model in connection with Benner's (1984) Novice to Expert levels (Nicholson, et al., 2009). Among the participants ninety percent who chose to rate the nurse as a beginner agreed that the performance indicated that the practitioner was not yet competent (Nicholson, et al., 2009). There was one hundred percent agreement among rater participants that the performance levels of three and four represented competent performance, which indicates a rating of three suggesting the nurse is competent (Nicholson, 2009). This overall rating method of the nurses' performance found that more consistent judgments were made regarding the competency level of that nurse (Nicholson, 2009).

The analytical rubric analysis found that certain items revealed certain trends. There were twelve individual items rated on a scale of zero to four. The scale represented behaviors where 0 = not observed, 1 = requires continual prompting, 2 = requires some prompting, 3 = able to perform the task, and 4 = able to adopt appropriate behavior modifications (Nicholson, et al., 2009). There was less consistency among certain items, and some items appeared to have a high level of consistency (Nicholson, et al., 2009). Despite being less consistent the analytical rubric has sufficient construct validity to satisfy high internal consistency and greater inter-rater reliability (Nicholson, et al., 2009). This research evolved out of the need to examine the validity and inter-rater reliability of using a performance based scoring rubric designed to measure competencies within the operating room (Nicholson, et al., 2009).

The limitations of this study were that the rubrics were limited to one unit of competency within the perioperative setting, and that the use of video required editing many of the clips in order to meet ethical and personal identification agreements resulting in some ratings being labeled as "not observed" (Nicholson, et al., 2009). For example lack of sound due to editing made it difficult to identify the subject and members of the sterile team wore green gowns and

therefore certain movements of the subject in the video clip made the observation more difficult (Nicholson, et al., 2009).

Nicholson, et al. (2009) and their use of a rubric may provide an option for moving toward consistency in perioperative nursing competency assessment. The Nicholson, et al. (2009) study provides us with a method for competency assessment that enhances the content, construct and validity, as well as the inter-rater reliability. It also minimizes the costs associated with the assessment because it enables the same evidence to be used to report a range of assessment outcomes and the performance level achieved in terms of the Dreyfus model embedded in Benner's Novice to Expert theory (Nicholson, et al., 2009). Further research needs to be done to determine if the rubrics can be used for a variety of competencies, however they can provide a method for assessment in relation to specific competencies as described by Nicholson, et al., (2009).

Another evaluation or assessment of perioperative nursing competency involves the examination of three fundamental concepts: the performance or behavior approach, the generic approach, and the holistic approach (Fahy, Tuohy, McNamara, Butler, Cassidy, & Bradshaw, 2011). These three fundamental concepts were derived from a literature review conducted by Fahy et al. (2011). Fahy et al. (2011) did not provide how the literature review was conducted or what criteria were used for inclusion or exclusion in their study. Their main focus was examining the three fundamental concepts and their relationship to perioperative nursing competency, but without a clear description of the methods, the validity of the examination was questionable.

Competence in context of the performance or behavior approach incorporates both a psychological component and an ability to perform physical tasks, and involves the integration of cognitive, affective and psychomotor tasks (Fahy, et al., 2011). This description is compared to

the generic model in which competence is defined as of transferable general attributes essential for effective performance, such as knowledge, problem-solving, and critical thinking capacity (Fahy, et al., 2011). The final concept defines competence as a holistic integrated approach which is context-bound and draws on knowledge, skills, attitudes, values, and professional judgment to perform in specific situations (Fahy, et al., 2009). The concepts formed the framework for the Irish Board of Nursing in relation to competence and consist of five domains representing the key functions of all registered nurses regardless of subspecialty. They were the professional/ethical practice, holistic approaches to care, interpersonal relationships, organization and management of care, and personal/professional development.

Fay et al. (2011) evaluated how these five domains are used in the measuring of clinical competence for nursing students. The study sought to evaluate clinical competence assessment and to describe students' and preceptors' experiences of the competence assessment process through the use of a survey (Fay et al., 2011). Two focus groups were audio taped and facilitated by two research team members to examine views on the assessment process (Fay et al., 2011). The interviews from the groups were thematically analyzed and from the analysis a survey was developed (Fay et al., 2011). The survey was distributed to students and preceptors. The primary outcome of this examination revealed inconsistencies not only in the content presented, but also in the manner the preceptor used to determine the level of achieved competence for the nurse (Fay et al., 2011). The study also revealed that the competence tool used focused on the knowledge gained more than the performance of the actual skill.

The findings of Fay et al. (2011) align with the previously presented literature in showing the various inconsistencies regarding competency. Students and preceptors both indicated that the language used throughout the study regarding competency lacked clarity, was too broad,

vague, open to interpretation, and that is required definition (Fay et al., 2011). This project has further emphasized the importance for further clarification and understanding of competency.

Assessment of learning does not stop with graduation; rather assessment of staff nurses is also quite common. Shaneberger (2008) discussed on-going staff nurse assessment in the perioperative environment related to the following topics: (a) the competency assessment process, (b) developing competencies, (c) setting priorities for competency assessment, (d) verifying competencies, (e) communication with staff, and (f) remediation.

Shaneberger (2008) suggested that competency assessment is an evolving process in which the measurement of competencies will change based on modifications in the strategic direction of the organization and on changes in the environment. Competencies can be broadly developed on a subject such as diversity, or they can be specifically focused on the details of how to use a piece of equipment (Shaneberger, 2008). Once the list of competencies is complete priorities are given to each one in order to keep the number of competencies manageable (Shaneberger, 2008). Three areas need to be assessed with each of these competencies and include, technical, critical thinking, and interpersonal components (Shaneberger, 2008). Shaneberger's work was focused on the boarder overall perioperative competency program and how it related to its parent organization. Shaneberger (2008) also stressed that following an assessment; individual remediation should be provided if needed, considering the cost of orientation and the difficulty with filling some positions, the time spent remediating a staff member to complete a competency pales in comparison. Overall Shaneberger (2008) stated that a successful competency program should be based on the strategic direction of the organization as well as a review of new or changed processes, which incorporates significant input from the staff. There was no validation tool, or suggested tool for what Shaneberger proposed. This

limitation of the study further reinforced the lack of consistency already identified related to competency assessment..

A recent study in Ireland developed and examined the use of an assessment tool and explored the preceptor's views and experiences when using the tool. Similar to the presented article by Fahy et al (2011), Butler, et al. (2011) used a survey format to collect data, but their work focused more on the preceptor's point of view rather than the differences between viewpoints of student and preceptor. There were two components to this study, a competency assessment tool, and a survey. Both of these items were given to the preceptor in order to collect data. The competency assessment tool was in a checklist format and learners were evaluated by preceptors as they performed skills. The items listed on the competency assessment tool were checked off as the learner completed them satisfactorily (Butler, et al., 2011). The survey was used to assess the effectiveness of the assessment tool, preparation for the preceptor role, and support (Butler, et al., 2011).

The analysis of the survey results found that preceptors assessed students' knowledge (90%), attitudes (89%) and to a lesser degree skills (77%) but that the use of the competency assessment tool gave guidance in assessing students (Butler, et al., 2011). Over half of the preceptors (67.4%) had a competency assessment with a student in which a different competency assessment was undertaken by another preceptor (Butler, et al., 2009). These findings support the conclusion that the preceptors liked the use of the competency assessment tool, and that the processes of competency assessment should be standardized and consideration should be given to matching preceptor and learner to support continuity of the learning experience (Butler, et al., 2011). Although Butler, et al. (2011) provided an example of consistency in competency assessment in the form of a competency assessment tool, this tool was not provided within the

context of the study in order for the results to be replicated and did not provide any reliability or validity. Butler, et al. (2011) also does not discuss sustainability or plans for further research in regards to the use of a competency assessment tool.

The last form of competency assessment that was present in the literature was the use of simulation. The literature illustrates longstanding concerns with continued competency evaluation of health care workers (Decker, Utterback, Thomas, Mitchell, & Sportsman, 2011). The Texas Nurses Association Task Force on Continued Competence indicated that competency can be documented through identified pathways, such as continuing education, certification, validation by approved organizations, completion of professional portfolios, and simulation (Decker, et al., 2011). Simulation as a relatively new technology is now coming to the forefront for continued staff development (Decker, et al., 2011). Simulation would integrate objectives that correspond to expected core competencies with an overlay specific to the nurses' domain of practice (Decker, et al., 2011). Furthermore the simulated experience for competency assessment would replicate a real-life situation (Decker, et al., 2011).

Decker, et al.'s (2011) article is conceptual in nature however it proposes that simulation has potential as a method to validate critical and reflective thinking skills and continued competency of registered nurses (Decker, et al., 2011). It also supports the need to acquire more knowledge and recognize the challenges and benefits for using simulation in assessing competency (Decker, et al., 2011). Decker, et al.'s (2011) concept of simulation as a means for competency assessment is an example of a way to measure continuing competence that is objective and fair to providers while leading to better patient care.

In spite of the benefits that simulation could provide, any implementation of a technology based process there are challenges. Simulation is costly; there are time commitments in order to

develop the program, and the need to validate if the proficiencies seen in simulation are barriers to utilizing this method in the practice setting (Decker, et al., 2011). Even though challenges are present, simulation has the potential to be used as a method to validate critical and reflective thinking skills can greatly contribute to the continued competency of the registered nurse (Decker, et al., 2011).

Like education, assessment methods utilized to ascertain the competence of nurses practicing in the perioperative area is inconsistent at best and could be dangerously ineffective. Problems with assessing competence may well be the result of nurses who do not hold necessary competence and perhaps even worse do not perceive that they are lacking the knowledge and skills essential for safe care of the perioperative patient (O'Neale & Kurtz, 2001).

Perception of perioperative competency.

Perceptions regarding perioperative competency was the last theme within the acquired literature search. There were only two relevant articles that related to perceptions of competency in relation to perioperative nursing. O'Neale and Kurtz (2001) present a conceptual discussion of the perception of certification in relation to competency. Professional certification for the perioperative nurse at the time of this article was provided through the Certification Board of Perioperative Nursing, which most recently changed its name to the Competency & Credentialing Institute (CCI) (Home Page, 2011). Certification for the perioperative nurse is achieved through testing once a nurse has met the eligibility requirements. Each health care organization must actively participate in nursing competency assurance (TJC, 2011). Nursing has determined that certification is one method to show competency (O'Neale & Kurtz, 2001). The Nurse Credentialing Research Coalition (NCRC) is a group that supports the mission of establishing a scientific basis for understanding the credentialing of nursing professionals

(O'Neale & Kurtz, 2001). Most certifying agencies that belong to the NCRC recognize that there is no significant research that provides evidence that certification equates to professional competency (O'Neale & Kurtz, 2001). However, the CCI and other certifying agencies believe that professional certification demonstrates competence, but there is little research to support this position (O'Neale & Kurtz, 2001). O'Neale & Kurtz (2001) provide no research to dispute that certification demonstrates competence; instead they describe the commitment of CCI to support research to prove that certification does show competence. A research committee appointed by the CCI has begun their own research project that will attempt to quantify the "value of the credential" (O'Neale & Kurtz, 2001). It is hoped that the research conducted will eventually show concerned parties that the certified registered nurse is indeed a competent registered nurse. If this evidence is attained, the development of a certification program must ensure that the quality and performance of the examination will meet the highest standards in order to validate competency (O'Neale & Kurtz, 2001). Showing competence in practice is taking on an even more important role with quality health care at the forefront of public concern. If certification is proven as a valid form of competency assessment, a standardized form of competency assessment can be utilized (O'Neale & Kurtz, 2001).

While this first article looks at the broad perspectives of perioperative nursing competency the second article by Gillespie, et al. (2009) looked at the perspectives of front line staff related to competency within the operating room. The aim of this study was to better understand nurse competence as it is applied to nursing practice in the operating room. Data was collected from 27 registered nurses in three focus groups using interviews that were videotaped. Thematic analysis of the interviews and notes were conducted to identify key concepts related to competence and each interview was analyzed the same way (Gillespie, et al., 2009). Three

themes emerged from the analysis: (a) the extensive knowledge needed to work in the operating room, (b) the importance of highly developed communication skills among team member with different personalities and within different situations, and (c) the ability to organize and prioritize human and material resources (Gillespie, et al., 2009). The findings provided a critical link between the three identified themes and perioperative nursing competency.

For example the theme of possessing extensive knowledge essential to work in the operating room and the ability to anticipate and plan, meant that procedures went smoothly and therefore represented a level of competence within that area (Gillespie, et al., 2009). This is also the case for the importance of communication skills among team members with different personalities. Communication was perceived as fundamental for competence within the operating room. Novice level nurses were not seen as competent because even though they have some basic clinical skills, they don't have a communication style that changes according to the needs of the persons and the situation (Gillespie, et al., 2009). They were finally deemed competent when they actually strengthened their communication (Gillespie, et al., 2009). The ability to organize and prioritize was also linked to competency, as it was believed that skills in management and coordination were essential features of an operating room nurses level of competence (Gillespie, et al., 2009). This characteristic related to the ability to handle conflicts between nursing staff in the team and appropriately delegate duties within the operating room suite (Gillespie, et al., 2009). The links between these three themes and perceived competency suggested that focus in these areas may improve patient care and outcomes in the operating room environment (Gillespie, et al., 2009).

However this study had a number of limitations. There were only three focus groups ranging from 4 to 15 participants and it is unclear on how exactly the authors linked the

perceptions to competency (Gillespie, et al., 2009). The article did identify that there are implications for further research in clarifying components of competence as it applies to the operating room (Gillespie, et al., 2009). The authors' suggested the findings may be useful information in the development of a self-assessment measure that may be useful to assess nurses' level of perceived competence (Gillespie, et al., 2009).

Although the necessary knowledge, attitudes, and skills were identified, it remains unclear how these are reflected as competencies specific for perioperative nursing. The literature revealed limited information about the perception of nursing competency in the care of perioperative patients, but left more questions than were answered about how perceptions might be evolved into standardized assessment. While there is a credentialing process that is available, it is unclear how credentialing equates to nurse competency.

Summary.

The current available literature regarding competency and how it relates to perioperative nursing is limited at best. Through the inconsistencies identified in the literature, the need for a strong educational program is evident. Competency assessment also needs to be standardized. However, it is also essential that the perceptions of nurses who practice in the perioperative area must be assessed to determine attitudes toward achieving and maintaining competency. These issues and problems surrounding competency in the perioperative area were described throughout the literature, but few articles provided solutions other than recommending further research. Although it is evident that little research in this area has been conducted, the work done thus far provides a foundation for further research into perioperative competency and education.

Chapter III

Methods

Introduction.

An important part of this project was to examine perioperative nurses perceptions of competency. Competency standards for the operating room have been used to guide clinical and professional behaviors (Gillespie, et al., 2009). The need for competence assessment is guided by regulatory agencies and health care institutions (Decker, et al., 2011). But the agreement among nurses about what signifies competence in the operating room has been missing (Gillespie, et al., 2009). In addition to the literature search a survey was conducted to further examine nurses' perceptions of perioperative nursing competency. The specific objectives were to:

- Determine if perioperative nurses feel that certification translates into competency
- Identify the educational areas that perioperative nurses feel are most crucial when looking at competency
- Examine the demographic, educational, and practice setting variables that may be related to how perioperative nurses view competency

The purpose of the survey was to examine the current perceptions of various perioperative nurses working both in urban and rural environments to compare the perceptions of the participant nurses with that of current literature findings. Approval for the survey was granted by the University of North Dakota's Institutional Review Board as well as the health care organization's Institutional Review Board in which the survey was conducted.

Survey.

Perioperative nurses from two health care organizations were selected as potential participants. The subjects were informed of the research by the principal investigator via e-mail. No consent form was required because return of the survey indicated informed consent. The data

Methods

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The research tool was developed by the author in conjunction with faculty from the University of North Dakota College of Nursing. The evidence used to develop the tool was based upon perioperative competencies outlined by the Association of periOperative Registered Nurses for inpatient and ambulatory settings (Chard, Burlingame, Denholm, Holm, Root, & Tapia, 2010), as well as the perioperative standards and recommended practices provided by AORN (Conner, Blanchard, Burlingame, Chard, Denholm, Giarrizzo-Wilson, Maxwell-Downing, Mitchell, Ogg, & Peterson, (2011). The tool was not formally validated and gathered data through an internet based survey. The survey was sent via e-mail to the targeted population of registered perioperative nurses working in the circulator role in the operating room. The participants included both male and female nurses with various levels of expertise from the newly hired to the expert. The use of the internet based survey allowed for complete privacy and submission of results anonymously, maintaining confidentiality of the participants.

The survey gathered demographic data, such as educational level, age, gender, years in perioperative nursing, and the number of operating rooms in the facility in which the participant works. This data was important in order to identify the types of nurses responding to the study. The participants were asked to list the characteristics that competent perioperative nurses possess, and to submit their thoughts in regards to certification as it relates to competency. The

collection instrument was in the form of a survey which was distributed and collected via the internet service Survey Monkey. No compensation was provided. Estimated participation was 15 minutes or less to complete the survey. The survey was available for a three week time period. The directors of Perioperative Services at each health care facility were contacted and agreed to participate. The data that was obtained were personal opinions and perceptions of the elements that nurses felt determine competency in the perioperative setting.

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participants were also asked to rate the importance of 18 educational topics as they related to perioperative competency.

The survey was sent to 80 perioperative nurses in two different geographical locations located in the Midwest, one rural facility and one urban. Criteria for inclusion required that the participants were currently practicing registered nurses working in the operating room. Participants were ensured anonymity and their participation was completely voluntary. There was no stipend for participation. The total number of participants was 30 nurses, 11 from the facility containing 5 – 10 operating rooms (rural), and 19 from the facility containing 15 or more operating rooms (urban), indicating a 37 percent response rate.

Both qualitative and quantitative methods were used for data analysis. Quantitative methods were used to address demographic data, and the item ranking of educational topics. Qualitative thematic analysis was used to address the open text fields for thoughts on certification and characteristics of competency. The themes identified from the qualitative data were ranked in order of importance by the frequency in which they occurred.

Results.

Examination of the demographic data revealed the following. In regards to gender three participants were male, twenty were female, and seven did not respond to this question (Figure 1). The age range of the participants was 23 to 62, with an average age of 43; again 7 did not respond (Figure 1). The average amount of time the participants had worked as perioperative nurses was 16 years with a range from 6 months to 41 years (Figure 1). Although the average perioperative experience was 16 years, the majority of respondents either was relativity new to perioperative nursing and fell into the 0-5 year range (n= 7) or had several years of experience and fell into the over 20 years of experience category (n= 8) (Figure 1). Educationally 61% of

respondents held an associate or diploma degree, 39% held a bachelor's degree, and none of the respondents that participated held a masters' degree (Figure 2).

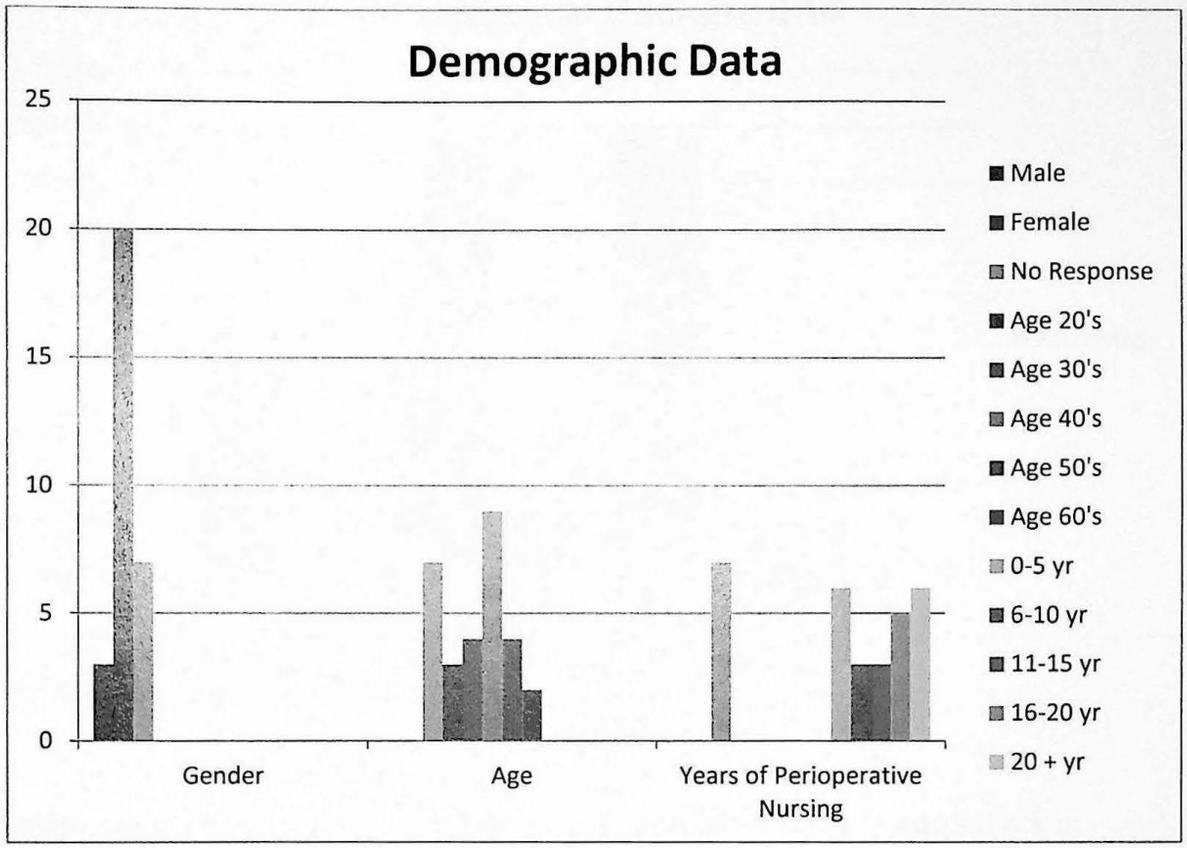

Figure 1 - Demographic Data

When asked to rate the importance of educational topics as they relate to competency the participants indicated that the most important educational topic was safe patient positioning (Figure 3). Other topics that were rated with high importance were (a) safe patient handling and movement, (b) sterilization methods/quality control, and (c) reducing surgical site infections (Figure 3). Topics that were deemed least important by the participants included the (a) nursing process (assessment, diagnosis, planning, implementation, and evaluation) as it pertains to the surgical patient, (b) anatomy/physiology, (c) preceptor training, and (d) pre-operative patient

care. Also ranked with low importance were professional behaviors, such as maintaining regulatory requirements, and supporting organizational goals (Figure 3).

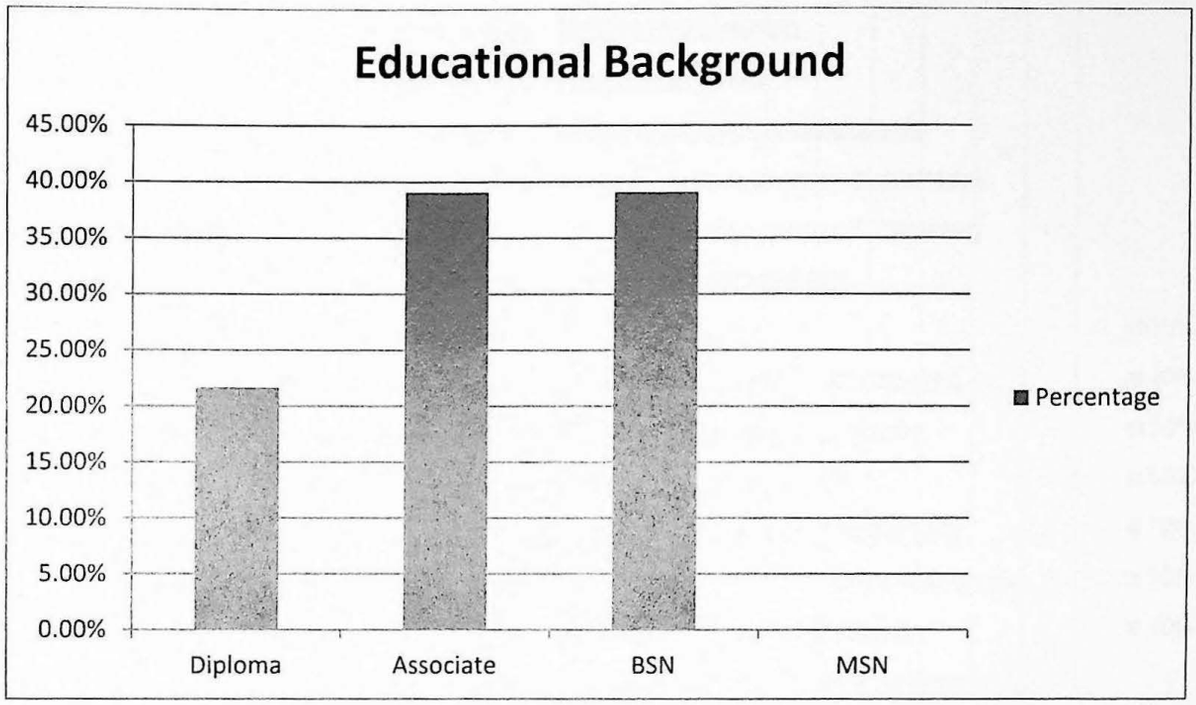

Figure 2 - Educational Background

The participants were divided on whether the level of education makes a difference in perioperative competency with 40% stating that they felt it made a difference and 60% stating that it does not. This question also had a qualitative section that asked the participants to express why they felt that education makes a difference in competency if they indicated that it did. The comments provided by the participants are addressed in the examination of the qualitative data below.

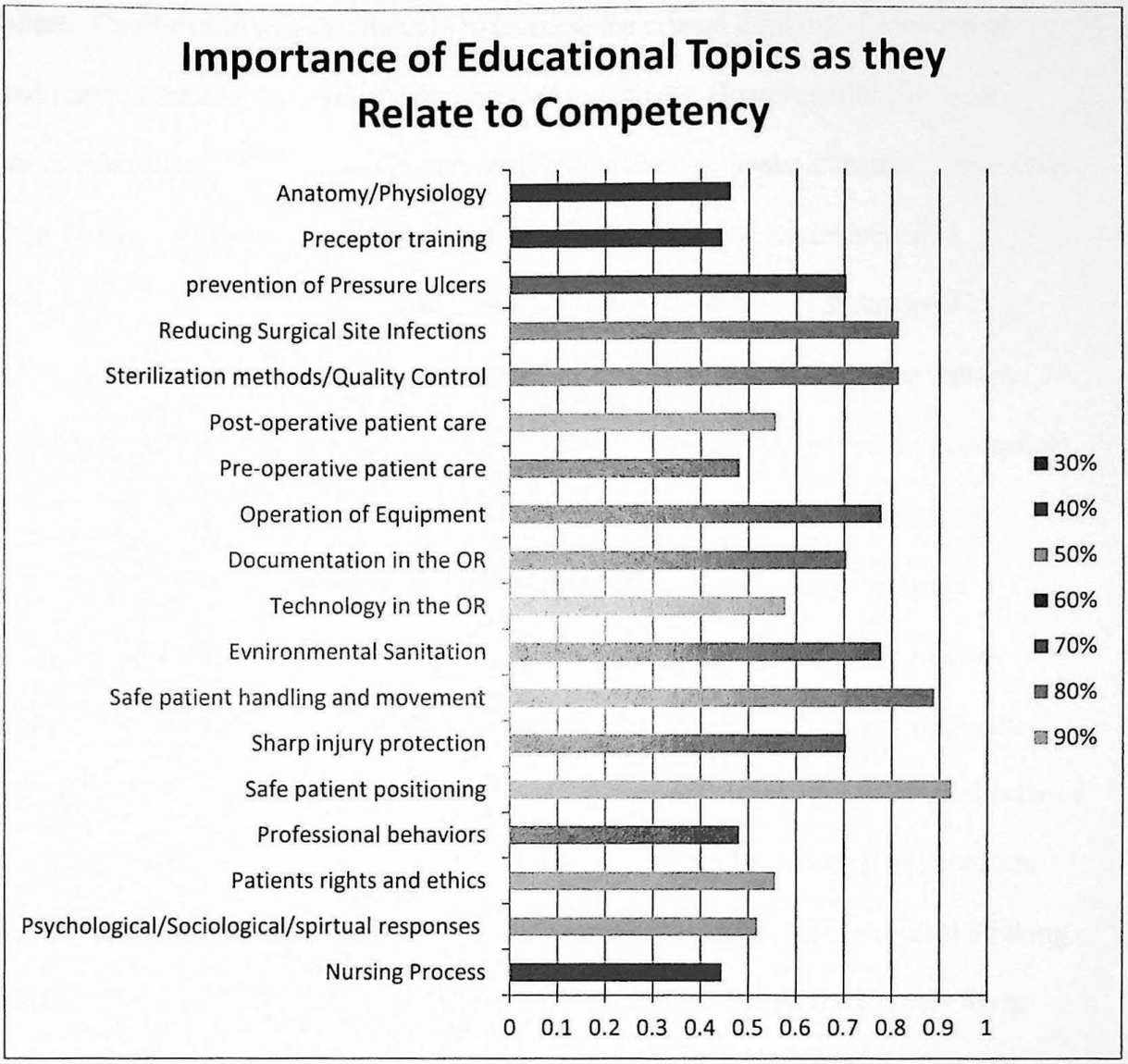

Figure 3 - Importance of Educational Topics as they relate to Competency

Following analysis of the demographic and quantitative data, the qualitative data was then analyzed. There was a mixed response to the question if certification makes a difference in the competence of perioperative nurses. The themes were analyzed by first determining a yes or no answer to this question and then looking at the stated reasons for each answer. The stated reasons were then categorized by using key words of professionalism, validation, commitment, and level of care. The main themes that emerged from this data were that certification is viewed as a nurse's commitment to providing a higher level of care to the patient, and to professional

development. Certification was also thought to increase the critical thinking, discussion of issues, and improvement in the level of care provided to patients. However although these themes were evident participants also felt that certification does not make a "better" nurse. Only 3 out of the 23 responding participations stated that certification made no difference in perioperative nursing performance. Overall, certification was viewed as a validation of knowledge and a stronger sense of professionalism within the perioperative nursing culture.

The participants were also asked to describe what characteristics they felt made a competent perioperative nurse. This question was analyzed by identifying keywords throughout the responses and the frequency in which they occurred. Two major themes identified were communication and teamwork. The ability for critical thinking, understanding the process, organization, and time management were also present but less frequent among the responses.

As presented in the quantitative data 40% of respondents felt that the education level makes a difference in perioperative nursing competency. Qualitatively an increased level of education was perceived as a commitment to the profession of nursing, and an increase in critical thinking and clinical reasoning skills. Education of the respondents also influenced the answers to the survey. Responses indicated that those that hold a bachelor's degree or higher are more willing to seek out evidence based practice and accept changes based on research of best practices.

Although there were many strong themes identified, there were some limitations to the study. The sample size of participants was relatively small with a response rate of 37%. A larger sample size could have resulted in significantly different findings. However smaller sample sizes are typical among qualitative studies. The use of mixed methods helped to strengthen this study. The number of nurses invited to participate from urban and rural regions differed with 12 of the 80 nurses from the rural population source. Although this unequal distribution could have resulted

in a different outcome, the differences in sample size might also be representative of the ratio of rural to urban perioperative nurses.

Finally the reasoning behind the ranking of the quantitative data regarding the educational topics could have been further explored and perhaps illuminate how the particular topics were valued and thus given more insight into these nurses' perceptions regarding competency. These limitations could be addressed in future research with a valid and reliable survey constructed to explore the topics in increased depth, in an effort to provide more insight into the attitudes and perceptions of nurses about perioperative nursing competency.

Discussion

Interpretation.

Perioperative education programs for nursing exist, but are inconsistent. This is illustrated by the many different approaches to education found throughout the literature. In addition to the inconsistencies found within perioperative education, unreliable and unpredictable methods for competency assessment were also illuminated. It is no surprise that with the presence of these inconsistencies found throughout the literature that the perceptions of perioperative nurse competency also vary.

The survey results provided further insight into the perceptions of perioperative nurses. The results showed that the respondents varied in age, level of education, and years of perioperative experience. The ranking of educational topics placed patient safety at high importance, while professional behaviors were ranked low. The certification of perioperative nurses was felt to increase the level of patient care, validate knowledge, and increase professionalism. However certification was not seen as an indication of competence. The results showed that the respondents felt that communication and teamwork were two main components

of perioperative nursing competency. Educationally the respondents were split as to whether a nurse's level of academic education affects perioperative competency. Those that did feel that education made a difference responded that an increased level of education was perceived as a commitment to the profession of nursing, and an increase in critical thinking and clinical reasoning skills.

Nursing subspecialty education provides a critical foundation upon which clinical competency is built (Stobinski, 2008). Latz & Nordbye (2004) presented the involvement of academic institutions, Courney (2005) examined extern-intern programs, and Stobinski's (2008) review and analysis of perioperative subspecialty education supports that inconsistencies are present. The development of AORN's Periop 101 program has provided some standardization of perioperative nursing education. However, until a program is adopted to standardize education for the perioperative area the inconsistencies remain. Each nurse has a different level of knowledge in the perioperative area, as well as differing academic qualifications. This puts each nurse at a different level along the "Novice to Expert" continuum provided by Benner (1984). This creates an even greater challenge when trying to develop a standardized perioperative education program. This was evident in the result of this current survey, as well as in the literature.

One recommendation to address the inconsistencies within perioperative education would be to require nurses hired into the perioperative area hold a BSN degree or higher. This may also encourage of nurses already working in the perioperative area that do not hold a BSN to pursue higher education. The Institute of Medicine (IOM) launched an initiative to respond to the need to assess and transform the nursing profession. Through this initiative the committee developed four key messages, one which states that nurses should achieve higher levels of education and

training (IOM, 2010). The reasoning behind this is that patient needs have become more complicated, and nurses need to attain requisite competencies to deliver high-quality care in order to respond to these increasing demands (IOM, 2010). In addition results from this current survey indicated that respondents perceived an increased level of education as commitment to the profession of nursing, and also as an increase in critical thinking and clinical reasoning skills. The findings also indicated that those that hold a bachelor's degree or higher are more willing to seek out evidence based practice and accept changes based on research of best practices.

Stobinski's (2008) work identified that subspecialty education is essential for nursing success in the perioperative area and is related to the competencies that nurses are expected to perform. A theoretical framework incorporated into a standardized perioperative curriculum can only enhance the education of future perioperative nurses. Benner's "Novice to Expert" is an example of this type of theoretical framework. In particular this theory provides an underpinning for the importance of education for future learning. The "Novice to Expert" theory is focused on the gap between theory and practice (Benner, 1984). Benner asserts that theoretical knowledge is not enough to explain complex nursing situations and that nurses should have both mastery and experience to transform their skills into a higher level of performance (Benner, 1984).

Dumchin's (2010) conceptual model clearly illustrates the integration of essential perioperative competencies as core components with Benner's theory to provide a systematic and structured framework for the learning process for acquiring necessary practice competencies. Thus, incorporating a conceptual framework, such as Benner's "Novice to Expert" theory, into perioperative nursing education provided a strong theoretical ground for lifelong learning for nurses. This framework may also be applicable to nursing practice, research, and education (Dumchin, 2010). Embracing a conceptual framework, will eliminate inconsistencies in

perioperative nursing education and will also achieve a broader goal, which is contributing to the present and future of nursing science (Dumchin, 2010). In order for education and competency to be linked and standardized, further work needs to be done throughout the subspecialty of perioperative nursing. The development of AORN's Periop 101 program has also provided some gains in this area, even with the absence of a stated theoretical framework. Since 1999 the Periop 101 education program has been used by over 800 hospitals (Periop 101, Perioperative Information Packet, 2011). Although the use of this program has increased, there is still much effort needed to establish standardized education for the perioperative nursing specialty. Perhaps the recommendation for embracing a theoretic framework would improve the consistency and effectiveness of this course.

In addition to recommending the incorporation of a theoretical framework in perioperative education programs, this paper also seeks to clarify the purpose of certification in relation to competency. The intent of certification is to assess competence using questions that have been deemed statistically significant and defensible through peer review or qualified testing companies (O'Neale & Kurtz, 2001). It is unclear if this testing validly assesses every competency necessary to function in a nursing subspecialty. The Competency and Credentialing Institute (2011) states that nurses have used certification as a way to gain credibility and recognition, not as an indication of competence.

The same assumption currently held by most boards of nursing that nursing licensure indicates competence (Stobinski, 2008), could apply to the certification process. There are five methods of recertification in order to maintain perioperative certification status. They are (a) contact hours, (b) points, (c) exam, (d) portfolio, and (e) extension (CCI, 2011). Each method has different requirements and none of them address specific competencies. For example for

recertification that requires contact hours for certification a nurse only has to provide proof of completing a stated number of contact hours with a certain percentage required to be perioperative based. The subject matter of these contact hours could range in variety or focused on one particular subject. This does not provide evidence for ensuring that essential competencies are met over time. If certification is to be accepted as an indication of perioperative nursing competency, proof of ongoing and specific competency assessment must also be incorporated as part of the recertification process.

Subspecialty education alone will not ensure competency of nurses practicing in each area. Similarly, there is no solid evidence that certification equates to nursing competency. Therefore an alternative approach may be to embrace, competency assessment as a positive part of the nursing practice. Unfortunately, unreliable and unpredictable methods of competency assessment have contributed to the varied perceptions regarding nursing competency. There is an assumption that nurses are competent when initially licensed and remain so unless proven otherwise (Stobinski, 2008). The concept of competence has to be interpreted properly in order for it to be assessed (Meretoja & Koponen, 2011). With the lack of a unified definition for nursing competency, interpretation is left open creating a widely diverse perioperative nursing workforce. The lack of consistency in regards to competency assessment across the continuum has a direct effect to the various aspects of effective job performance (Meretoja & Koponen, 2011).

The current focus of competency assessment has been on the technical aspect of nursing. Topics such as communication, teamwork, time management, and critical thinking are not routinely assessed as components of competency. On the other hand, the participants in this survey study identified these topics as important. Nevertheless, although these components were

valued by the participants there is no clear method to assess the achievement of them relative to the competence of the nurses. Competency assessment has been performed in many different ways in order to satisfy the needs of regulatory and accrediting healthcare bodies. Varied methods for competency assessment, as well as the frequency utilized are determined by employer guidelines along with regulatory requirements (Chard, 2010). However, most were not structured through a guiding conceptual framework (Fahy et al., 2011). The inconsistencies present in competency assessment may be related to the absence of any theoretical or conceptual framework.

In order to address unreliable and unpredictable methods of competency assessment, research is needed to link important abilities, such as communication and teamwork to competency. This research may distinguish the abilities necessary for competent nursing practice in the perioperative area. Those abilities could then be integrated into routine competency assessment. The absence of a valid and reliable measurement tool intensifies the lack of standardization of competency assessment. Even when an agreement has been reached defining competence, and the performance identified to demonstrate it, the assessment requires some form of measurement (Nicholson, et al., 2009). The development of a competency assessment tool would help the nursing profession and organizations alike by setting competency standards on which to build upon. However, until there is consensus of what components should be required in a competency assessment the development of a comprehensive assessment tool is unattainable.

Assessment methods must also consider the nurse's development of clinical judgment and skills according to a continuum of the novice to expert theoretical framework (Benner, 1984). Benner's use of the Dreyfus Model of Skill Acquisition offers a basis for clinical knowledge

development and career progression in clinical nursing (Benner, 1984). Clinical competence of the perioperative nurse cannot be viewed as a static measurement, rather a continuum of change which must be assessed at given points in time (Stobinski, 2008). Based on the location of the nurse on the novice to expert continuum, they will not approach situations in the same way. As a nurse is presented with a new skill or task they may revert temporarily to a lower level of competency along the continuum (Benner, 1984). Therefore, the assessment of competency is a snapshot in time based on where the nurse is on the novice to expert continuum and assessment methods must take that factor into consideration.

Outcome/Dissemination

As stated in the purpose of this project, the ultimate goal of competent nursing practice is patient safety (Chard, 2010). Acquiring a deeper understanding of competency and competency based practice will help ensure safe patient care in a continuously changing environment. The current nursing work force has several perceptions regarding competency and the role that it plays in quality patient care. It is essential for nurses to clarify this point through future research.

Not only has there been inadequate research conducted to explain competency, the conceptual literature has been infrequent. The subject of competency is not a high priority in the literature, but does remain a priority with regulatory agencies and facilities. In order to reach the ultimate goal of increased patient safety as the outcome of competent nursing practice there needs to be an increased focus on competency and competency research.

To make others aware of these findings a poster presentation was created and shared at a local level with the two facilities in which the survey was conducted. Perioperative staff and leadership as well as nursing leadership from other areas were invited. A copy of the poster can be found in Appendix A.

Implications for Nursing

It is obvious that further research needs to be conducted to further define perioperative nursing competency. Stobinski (2008) defined competency as what a nurse is capable of doing, and it is manifested in measurable actions and behaviors and yet O'Neale & Kurtz (2001) define competency as a blend of knowledge, skills, attitudes, and judgment. The lack of the definition of competency found throughout the literature does not provide nursing with any consistency in achieving an accepted and standardized assessment process. Nursing competency and an accurate assessment of competency is essential as the expectations for nursing practice increase (Stobinski, 2008).

Despite research into the development of a valid and reliable method of assessing competencies, there are no universally accepted tools for use (Nicholson, et al., 2009). In addition assessment methods chosen based on the ease of implementation only increases inconsistencies across the nursing profession (Chard, 2010). Perioperative education should be standardized through the structure provided by a conceptual framework, such as "Novice to Expert" (Benner, 1984). This solution can also be generalized to educational programs in other subspecialties. A clear understanding of competency will allow nurses to feel more in tune with the service they provide and how competency relates to performance expectations. Nurses practicing in all areas may perceive competency differently. Therefore, it is essential that nurses are educated about the importance of competency, ongoing competency assessment and the central role that competency plays in their profession.

The purpose of certification and how it is applied in perioperative nursing also needs to be examined. The link between competence and certification should be researched, as there is

little support to conclude that certification does indeed indicate competence. If research provided empirical evidence that certification is a true indication of competency, there may be more support for mandated nurse certification, which would improve compliance with the standards set by organizations and regulatory agencies.

Summary/Conclusions

Retaining a strong nursing presence in the operating room is important for continued safe patient care. To provide the highest level of safe patient care, nurses should be prepared to accept the role of lifelong learner to maintain a competent evidence-based and professional practice (Chard, 2010). Given the goal for patient safety, competency should also become a priority for the nursing profession, and not left to be solely determined by regulatory bodies and employment organizations. The competence of perioperative nurses should be developed and maintained through standardized educational methods that are guided by a cohesive conceptual framework.

Consideration of nursing perceptions and the integration of a theoretical framework should be incorporated into the development of subspecialty education. Implementation of an education program, in conjunction with a standardized competency assessment process may help develop a more in-depth understanding of competency in perioperative nursing. Nursing needs to take the lead role in determining what abilities are essential for competent nursing practice in the perioperative area. Competence assessment for nurses working in the perioperative subspecialty must validly reflect knowledge; skills and attitudes expected for practice in this area and provide a reliable measure that will promote patient safety.

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Appendix A

Perceptions of Basic Knowledge Needed by Perioperative Registered Nurses for Competency

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Introduction

- Nursing competence and the accurate assessment of nursing competency is becoming essential as the expectations of the nursing profession increase. The process of determining competency is difficult for nursing, and there is no set tool for assessment across the various nursing practice areas.
- This study will explore the topic of perioperative nursing competency and competency assessment through a review of recent literature on national standards for nursing competency and the perception of perioperative nurses related to important components necessary for competency.

Purpose

- To explore competency of perioperative nursing
- Compare perioperative nurses perceptions with the competency standards of the Association of periOperative Registered Nurses

Methodology

Literature Review:

- Nursing
- Competency Assessment
- Surgery
- Benner
- AORN (Association of periOperative Registered Nurses)

Survey:

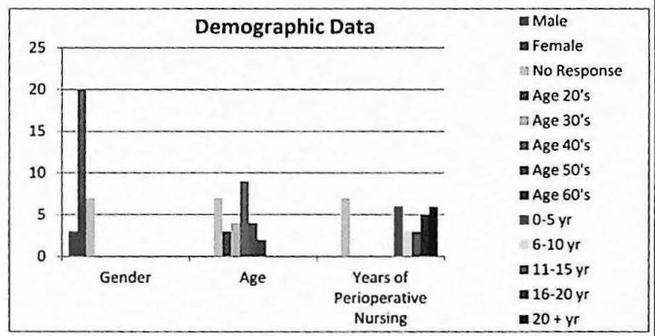
- 80 perioperative nurses were recruited in two different geographical locations in the Midwest, one rural facility and one urban.
- n= 30, 11 from the rural environment and 19 from the urban environment
- Qualitative and quantitative methods were used for data analysis.

Findings

- Literature review found that perioperative education programs for nursing exist, but are inconsistent.
- In addition to the inconsistencies found within perioperative education, unreliable and unpredictable methods for competency assessment were also illuminated.
- Literature review also found that there is a lack of empirical evidence to support that certification relates to competency
- The survey results provided that certification was felt to increase the level of patient care, validate knowledge, and increase professionalism, but was not seen as an indication of competence.
- The survey results also showed that communication and teamwork were two main components of perioperative nursing competency.

Clinical Practice Implications

- Further research needs to be conducted to further define perioperative nursing competency.
- Perioperative education should be standardized through the structure provided by a conceptual framework
- A valid and reliable method of assessing competencies needs to be developed
- The purpose of certification and how it is applied in perioperative nursing also needs to be examined.



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