The Changing Role of the Nurse Professional in Healthcare

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Abstract:

Competence development is an integral part of nursing education and sets a benchmark in practice and patient safety. The main purpose of the study is to identify the competencies that are prerequisite in nursing education and the importance of competence development in their ongoing profession. This narrows down to three main questions, firstly the competencies which are necessary among graduating nurses in Europe are analyzed. Secondly the focus is on the competencies required by the nurses in 2025 and the last question looks into the diversified roles in nursing career. Peplau's theory of Interpersonal Relations and Jean Watson's theory of Human Caring have been used as a theoretical framework for the study. The methodology of study was literature review and 20 full scholarly articles were collected from scientific databases of EBSCO, Pubmed, and Sciencedirect. The articles were analyzed and coded using Graneheim and Lundman qualitative content analysis in nursing research. The data from the analysis has identified competencies that are required for the graduating nurses in European Union. The findings of the study show that these competencies are a part of their current curriculum and registered nurse require continuous nursing education programmes to be competent in their practice. Nurses in the future have to be competent in informatics and technology as patient care is mostly dependent on machines. In conclusion, nursing roles have been diversified allowing them to practice independently and take on challenging roles with care and safety. Competencies like communication, teamwork, and evidence based practice promote patient safety and quality of nursing care among graduating nurses.

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CONTENTS

1 Introduction 4

2 Background 7

2.1 The Role of Nursing Professional in Health Care 7

2.1.1 The Shifting Paradigm of Nursing from Caring to Competence Development 8

2.2 Patient Safety 11

2.2.1 A Patient Model of Safe Care 12

2.2.2 Technology and Patient Safety 13

2.3 The relationship between patient’s safety and competency Development in the Digital Age 14

3 Theoretical Framework 15

3.1 Peplau’s Theory of Interpersonal Relations 15

3.1.1 Phases of Interpersonal Process 16

3.1.2 Role of Nurse during Interpersonal Phases 16

3.2 Theory of Human Caring 17

3.3 A Comparison of These Two Theories within the Context of Nursing 19

4 Aims and research questions 20

5 Methodology 21

5.1 Data Collection 21

5.1.1 Implying Inclusion and Exclusion Criteria 23

5.2 List of Articles Used for Study 25

5.3 Content Analysis 26

5.3.1 Step 1: Reading and Coding 27

5.3.2 Step 2, Listing and Categorizing the Codes 27

5.3.3 Emerging Sub- Themes and Theme 28

5.4 Ethical Considerations 28

6 Findings……………………..32

7 Discussions..35

7.1 Implying the Role of the Nurse through Theoretical Framework...35

7.2 Relationship between Competence and Patient Safety in the Digital Age 36

7.3 The Changing Role of Nurse Professional..36

8 Conclusion..38

9 Strengths,Limitations and Recommendations 40

10 References..41

Appendices…………………………………………………………………….....44

Figures

Figure 1 Safety model of patient care (IOM, 2001) 13

Figure 2. Implying the inclusion and exclusion criteria. 24

Figure 3: Main Competencies Promoting Patient Safety..44

Tables

Table 1. Illustration of the most common categories..28

Table 2. An example of Inductive Qualitative Content Analysis.......................................44

Table 3. Illustration of Findings..47

Table 4. The Answers to Three Research Questions 52

1 INTRODUCTION

The nursing profession has moved from a caring mode to prevention delivery system coupled with technology aimed at educating and creating awareness among members of society. The roles nurses have also changed from assisting doctors to highly specialized members of the healthcare system. With formal and comprehensive nursing education, they are able to handle patients more responsibly and efficiently. Earlier training methods were rudimentary and required less education as caretakers. As technology and health care needs changed globally, qualifications in nursing had to be specific and competencies broadened. As a result, roles were diversified, and special education, diplomas and certification were necessary to handle the changes in demographics and societies need. (Aein, 2018; Ruth et al 2014; Smith & Jones 2008)

Globalization has been a major factor in the changing face of the nursing profession. There has been a vast influx of foreign educated nurses migrating into Western countries to meet the health care supply demands. Often their respective education has been a barrier for these skilled laborers to find employment when immigrating. Delays due to the lack of standard protocols have delayed entry into the workforce for months or years in some cases. Moreover healthcare reforms, trends and advances in nursing practice have laid the foundation for developing competencies in nursing profession; they have also delayed decision-making that would allow qualified nurses from abroad smooth transitions into working life. Another change that globalization has influenced is within the realm of nursing education. Future nurses have to be educated in such a way that they are prepared for the future. Additionally, nursing education should prepare caregivers to work, with different levels of complexity among citizens who have different background, cultures and languages. (Jones, 2013; Kawi, et al 2009)

With the digital age, the caring role of the nurse is shifting from one who provides care to more technical aspects of care. There is more use of technological innovations to monitor and evaluate the patient than the caring aspect. So, a balance has to be created within nursing practice to provide a patient centered care. Patient databases are digitally stored and can be accessed at any point in time in any given place. This has helped nurses to communicate with other care providers in taking accurate decision thus minimizing

errors and providing quality care to patients. The modern patient care system has changed from a caretaker to an educator that will motivate patient to actively participate in their care needs with the focus of disease prevention. Technology has also helped nurses to step out into communities and limit visitation to hospitals. Nurses are actively engaged in creating awareness and disease prevention education in communities. At the same time, patient stays in the hospital have been reduced as technology improves resulting in patients receiving care at home. (Hussung, 2016; Jonsson et al, 2015).

With the current demographic changes, countries within the European Union are at risk as population demographics show the dramatic increase of persons entering the age of retirement. Therefore, meeting the health care needs of the future generation is challenging. Within the country of Finland, this also holds true as statistics show that by 2030, twenty- six percent of the population will be over 65 years old, in Finland. Additionally, there is a shortage of competent nurses to meet the health care requirements of ageing population. In order to bridge the gap, the EU signed the Bologna declaration, which has allowed increased movement of professionals within the European countries. This helps to bridge the supply demands to some extent. According to the Directive 2013/55/EU set by EFN, twenty- eight EU countries have cooperated to adopt a common framework in their nursing schools at national levels, which helps to provide a uniform level of competency among the neighboring countries. (Nieminen, 1999)

Even though competence development is crucial to providing safe, quality care, the attitude of the nurse and how he or she encounters the client is equally important. Long hours and work environments that do not support the wellbeing of employees have a large impact on the safety and quality of practice. When looking from the perspective of patient safety, quality of nursing care impacted by the changing trends in nursing practice such as newer innovations that assist clients freeing nurses to take on more client; however, this requires the nurse to continually upgrade their skills and competencies to practice safely. Clearly life-long competence development is required, which can be achieved by ongoing education and certification. Statistics have shown that nurses actively engaging in ongoing education had a better knowledge and provided safer care than their peers (Catherine, 2011; Stimpfel, et al, 2012)

The purpose of this study is to find out which competencies are considered crucial in the delivery of quality, safe care with the future needs of society in focus. This study is part of the Research and Develop Initiatives of Arcada University of Applied Sciences. The project title is, NurSim. In chapter two the authors introduce the key concepts of this investigation, which include the changing role of the nurse, competence development in line with patient safety. In chapter three theories of Peplau and Watson are brought forward. Chapter four describes the methodology and the selection criteria for the articles chosen for this literature review. Chapter five details the findings followed by the discussion and conclusion chapters where recommendations have been made for continued research.

2.BACKGROUND

In this chapter the history of nursing and, competence development within the profession is introduced followed by issues relating to patient-safety. Finally, the relationship between the two constructs within the nursing profession is delineated.

2.1 THE ROLE OF NURSING PROFESSIONAL IN HEALTH CARE

The word nurse is derived from the Anglo-French notice and the Latin nutria, which mean nourish. The International council of Nursing defined Nursing as a profession that encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings, Nursing includes the promotion of health, prevention of illness, and the care of ill, disabled and dying people. Advocacy, promotion of a safe environment, research, participation in shaping health policy, health systems management, and education are key nursing roles. (ICN, 2002).

In the 19th century" respectable women were not interested in hospital nursing because it was considered a menial job, consisting mainly of housework and cleaning up after the patients. In 1819, Dr Benjamin Golding represented a new view of nurses. Golding referred to nurses as. 'female domestics In 1938 John South, a senior surgeon at St Thomas" Hospital" , "thought the term "Ward servants" would be a better name for the women whom St Thomas' called' nurses or assistant nurses' In 18th and early 19th centuries nurses were thought of as domestic servants, not health care workers. Sick nursing was not listed as a separate occupation in the national census until 1861. Nursing practice in the early 19th century was not advancing as quickly as medicine and
Our idea of the nursing profession was not yet conceptualized. For example, punctuality was a main focus and was considered an essential skill necessary for good practice as well as a sign of good moral character (Helmstadter and Godden, 2011).

For early 19th century nurses to be punctual when they had no watches, there were few clocks in the hospitals and they depended on a series of bells to tell them when it was time for meals. Florence Nightingale, who is widely regarded as the mother of modern nursing, made her greatest impact when she served in the Crimean War from 1853 to

1856. Her sanitation efforts dropped the mortality rate dramatically. She went on to establish the Florence Nightingale School for Nurses in London. Between 1861 and 1865." Over 2000 nurses served in the Civil War. By the end of the century the so-called 'Nightingale nurse´ a respectable and proper person, had emerged as the standard model through the English-Speaking world (Helmstadter and Godden, 2011).

Today, nursing is conceptualized as a profession and one which attracts participants at all levels of society both male and female. According to Statistics Finland the number of Nurses is increasing .in Finland. In the year 2000 there were 59053 and that number continued to climb to 77459 in 2015. Finland has more than one thousand practicing nursing professionals per 100 000 inhabitants, which is similar to Sweden and Germany (2014 data Eurostat) This being true, the shortage of healthcare workers is still on the horizon making it essential for clear and predictable policies whereby foreign qualified nurses can immigrate to Finland and enter working -life without delay (2014 data Eurostat).

2.1.1 The Shifting Paradigm of Nursing from Caring to Competence Development

The caring profession as stated earlier in this chapter. Caring now-days it seems that the focus has changed to competency development. Competence is a complex multidimensional term that is coupled with an individual's ability to perform successfully in a changing environment. The Institute of Medicine (IOM, 2003), defined professional competence as "the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individuals and community being served. The Canadian Nurses Association (CNA, 2000), Ottawa describes competence as "The ability of a registered nurse to integrate and apply the knowledge, skills, judgment and personal attributes to practice safely and ethically in a designated role and setting". The pioneer nurses were instrumental in treating wounded soldiers and prevent epidemic breakouts of diseases (Timby, 2009).

Nursing care was limited to these incidents and newer recruits for nursing were educated on these incidents. The need for competence development within the profession was limited to the early days of nursing. The 20th and 21th century witnessed major breakthroughs in the field of medicine with introduction of new antibiotics and modern technology to assist and improve patient life Technological innovations improved and advanced with respect to care providers and the role of nursing defined many aspects of patient care (Karen, 2009). Nurses had to be trained and educated and the profession diversified to equip nurses to be competent at their respective roles. Hence the need for competence development arose within the nursing profession to bridge the gaps in growing trend and advances in the profession. (Karen, 2009).

Nurses had to be trained and educated and the profession diversified to equip nurses to be competent at their respective roles. The role of nurse has diversified in hospital and has also shifted to community settings wherein they have to use technology and skills to prevent and promote safety in aging population (Fraher & Erin, 2016). This is so much required as the elderly population of Finland is set to hit its peak by 2030 and this will put the health care in demand to meet their services. As per the statistics the average lifespan of a Finnish citizen will increase to 89 years by 2030 which is a 12% increase in life span from 2010 (Mauri, 1999).

The nursing definition has moved from having a charge of somebody's personal health to caring, prevention, promotion of health, participation in research. (Finkelman & Kenner, 2013), (Blais, Kathleen, and Janice S. Hayes. 2011). The way nurse was trained in the early century doesn't meet the health care needs of 21st century. Health care and patient needs have become more complex and there is the need for higher skill, competence and attitude to practice with quality, safety and efficiently. Nursing has migrated from a bedside point to defining roles in hospital, community, management and organizations and hence the need for competence arises in this profession. (Gimenes and Faleiros, 2014).

Competence within a nursing framework addresses the limitation of knowledge, skill, judgement and interpersonal skills in a constantly changing work scenario (ANA 2013). A synergic balance between these four parameters makes a nurse competent in their

respective roles. Five main competencies are expected from a health care professional (IOM, 2003), (Cronenwett, Linda et al, 2007). Primarily a patient centered care has to be provided by engaging a dialogue with patient, caregivers and support staff. A nurse has to listen, clarify and communicate clearly through available means to ensure effective communication with clients, families and other healthcare professionals (Tabari-Khomeiran et al, 2007).

Competences in skills are essential to provide safe patient care. Teamwork is another competency that fosters open communication, self-respect and shared decision making to achieve quality care. This provides the best possible outcomes for patients and strengthening evidence-based studies (Denehy, 1998; Department of Health and Human Services, 1998; Lang, 1999; Zielstorff, 1998). Informatics is a competency that requires ongoing training with changes to technology used in nursing. Computer knowledge, informatics knowledge and informatics skills are some components of competency required in informatics (Darvish and Asieh et al, 2014).

Evidence based practice and quality management are the other competency expected out of a health professional. Evidence based practice requires a nurse to integrate recent evidence practice along with clinical expertise to provide optimum patient care thereby reducing cost (Melnyk et al, 2014). Technical skills can be sharpened with ongoing education programmers from the hospital setting or short-term programmers conducted by medical universities (IOM 2003).

According to the Nursing and Midwifery Council (NMC, UK), the standard of competence development is applicable to all aspects of nursing role thereby augmenting their professional values as an individual, polishing their communication and interpersonal skills, preparing them to be robust in their decision making and nursing practice and equip them to handle leadership and management roles in hospitals. This will help the registered nurse to deliver high quality of patient care and handle complex situation in their field of practice. They will be accountable and responsible to provide a safe practice while improving evidence-based practice with interest to public safety (Michelle, 2005). As an agreed professional the need to work within the regulatory framework and process is addressed thus upholding the dignity and wellbeing of the

nursing community. The opportunity to promote health and prevent illness is done by partnering with other health and service providers and agencies along with the consent from families and relatives. Leadership skills accomplished with competence development contributes to delivering and improving the future services. (Michelle, 2005)

The professional and regulatory bodies are responsible to the public to provide in promoting safe and ethical care by competent nurses throughout their career. It is their duty to monitor, evaluate and maintain the highest standards of practice in their country. Thus, arises the need to develop and educate competence development programs which has to be revised according to the developments and changing trends in nursing care. Every nurse registered within the regulatory framework and role setting need to undergo competence development programs their by improving their professional skills and enhancing the need of evidence-based practices (CNA, 2004).

2.2 Patient Safety

"To err is Human" was quote in an article by IOM in 1999 which highlighted the lack of safety and mortality rates due negligent care in medical organizations. Error is possible within the medical fraternity, but at what cost is often a questioned that needs to be reviewed now and then. Patient safety is a vital aspect of clinical care. It comprises teamwork of safe practice administered to a patient within a clinical system. Apt definition for patient safety is "Patient safety is a discipline in the health care sector that applies safety science methods toward the goal of achieving a trustworthy system of health care delivery. Patient safety is also an attribute of health care systems; it minimizes the incidence and impact of, and maximizes recovery from, adverse events" (Emmanuel, 2008).

Safety as a regulation in medical practice stemmed up due to adverse event that were widespread at work places. Florence Nightingale introduced the need of hygienic in hospitals during the late 1800s which reduced the mortality rate of wounded soldiers and cross infection in the hospitals. Wandelt MA in 1970 cautioned the need of a quality and standard of practice in hospitals and a few years later Norma Lang, 1976 introduced a

“Quality Assurance Model” to assist nurses in implementing programs for quality care (Lang, 1984).The model was used to study the flaws in patient care, organizational setting and conduct of nurses. (WHO, 2001). WHO in 2001 released an article on patient safety which cited administration of drugs without regard for patient’s article on patient safety which cited administration of drugs without regard for patients underlying condition, misuse of technology, poor communication between health providers and the delay in receiving treatment as some of the adverse factors in patient safety? Patient safety is a broad subject integrating technology, hospital design, service rendered, practices of a staff and being a team player. It is the duty of the staff to cross check procedures and involve the fraternity so that error can be minimized and reported so that they can investigate and rectify the contributing factors. (WHO, 2001).

IOM has also proposed six aims for improvement, and ten rules for redesign of the health care system, to make it safer. Safety is the primary concern which raises the awareness to avoid injuries to patients from the care that is intended to help them. The treatment should be based on scientific knowledge and be provided to all who could benefit from the service and withheld from patients who are unlikely to benefit from it. The care provided should be patient centered that respects the rights, preferences and needs of a patient ensuring their values guide all clinical decisions. Waiting time should be reduced and delays should be avoided which can be harmful to those who receive and give care. Resources are to be efficiently used to minimize avoid waste, waste of supplies, equipment’s, ideas and energy. Equitable care has to be provided that does not vary in quality because of personal characteristics of a patient (IOM, 2001).

2.2.1 A Patient Model of Safe Care

A simple safety model of patient care was designed to review four main domains in the health care review which constitute of workers in the health system, health care receiver, health delivery process and methods for feedback which aims at continuous improvement. IOMs Patient Safety: A new standard of care list out the necessary elements that is vital in improving patient safety. Injury and near-miss detection- analyzing Epidemiological analyses, Generation of hypotheses for change—develop a

List of system fixes that could potentially improve safety results Prioritization of improvement opportunities, Rapid-cycle testing, Deployment and implementation, Holding the gains. Each element is sub classified to identify the root cause analysis of the harm, rationalize the effects, construct hypothesis, prioritize, deploy changes and monitor the final outcome of the safety procedure. Various models have been created to study the outcome of mishaps occurred in hospice care. (IOM, 2001).

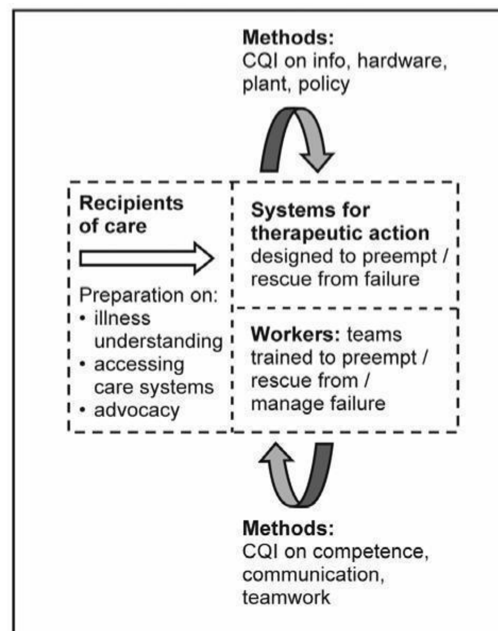


Figure 1: Safety model of patient care (IOM, 2001)

2.2.2 Technology and Patient Safety

As technology advances it is integrated into the medical system to diagnose, evaluate and give quality care to the patients. The public is blinded by the fact that technological advances are future to a safe practice. The potential danger of technology in medical practice and the human inhibition to understand the sense of patient vitals is diminished due to the use of modern technology (Gail Powell et al, 2008). Earlier nurses relied heavily on their senses to record blood pressure using a sphygmomanometer, but technology has introduced digital monitors to check the blood pressure. Technology offers many improvements to nurse’s productivity, efficiency, patient satisfaction and

safety but the research to prove the outcomes of these advance technologies as safe are limited. The four-pronged strategy developed by the World Health Organization Medical Devices and Equipment team expresses the need of hospital to train nurses regarding new instruments and practices. Moreover, to protect the safety of patients they needed to be monitored, evaluated and educated on reporting adverse incidents arising from technology. The patient safety is not solely limited to technology as the need to minimize human errors and to work within a safe and regulatory framework is also important. (Powell et al, 2008). The theory of Technological Competency as Caring in nursing identifies "caring" as an attribute in a nurse which should be imbibed into technology to communicate, evaluate and diagnose a patient and be proficient in practice (Locsin, 2017).

2.3 THE RELATIONSHIP BETWEEN PATIENT'S SAFETY AND COMPETENCY DEVELOPMENT IN THE DIGITAL AGE

As mentioned earlier, the nurse's role in the delivery of care is increasingly focused on clinical skill development. According ANA (2008), Competence can only be achieved by continuous education programs in the hospice or educational setting. The regulatory framework of most of the developed countries make it mandatory for nurses to undergo continuing education which involves training, monitoring and evaluating the nurse on competence. The objective of these programs is to give safe and better-quality care.

Nursing informatics is an important construct in modern nursing profession. It integrates nursing science, computers and information knowledge to manage and communicate data, information and knowledge in patient care (ANA, 2008). All entry level nurses are supposed to be competent in informatics as it helps to assess and evaluate clinical data (Hebda.T & Czar.P, 2013). Educating and training in patient safety research is to create research that improves patient safety on a long term (Andermann, 2011)・ It a nurse professional responsibility to practice safe and be competent by being a lifelong learner (Ballard, 2003).

3 THEORETICAL FRAMEWORKS

In this chapter we will look into two nursing theorists whose concepts and propositions have reinforced the patient care and treatment in nursing. 1952 marked an important year in nursing history; Hildegard E. Peplau introduced the "Interpersonal Theory" which later spawned a new generation of Psychiatric nurses. Her theory focuses on the interpersonal process and therapeutic relationship across the patient and nurse. She is often referred to as the Mother of Psychiatric Nursing. Jean Watson is an American nurse theorist and professor who are known for her "Theory of Human Caring". According to Jean's theory a person attains harmony through body, mind and spirit. This is achieved through transpersonal process which are guided by carative factors and corresponding caritas process.

These two models in Nursing have been chosen as a framework to our study. Both the theorist stress on the importance of communication being vital to provide a patient centered care. Our study focuses on the role of nurses where communication is a skill that needs to be mastered within graduating nurses and is directly promotes patient safety in practice. Peplau aptly describes about the role of communication which helps us in data collection and diagnosis of a patient. The modern approach to communication might vary of different levels but it forms the basis of patient diagnosis and treatment plan. Another important aspect is the need for a patient centered care. This helps us to promote safe practice and engage safely with patients while maintaining the quality of care given to patients. The new challenges in nursing practice revolve around these two parameters and our study focuses on their importance in nursing roles in future.

3.1 PEPLAU'S THEORY OF INTERPERSONAL RELATIONS

Peplau's theory focuses on the relationship between the nurse and client. The interpersonal relation consists of communication, nurse-client relationship, role of the nurse and pattern integration. This helps the nurse to understand and assess the patient's psychological, emotional, and spiritual needs with their learned skills and an overall study of human behavior. This process also builds a confidence and trust in the client – nurse relationship and through this the nurse feels empathy towards the client.

3.1.1 Phases of Interpersonal Process

Orientation is the initial phase between the nurse and client. The client understands that he needs assistance and identifies the nurse as a qualified person who can help him. Trust is established between the client and nurse in this phase. The nurse collects data, assess patient needs, interests, and inclination to experience fear or anxiety. A boundary is established within the relationship which has to be maintained throughout the phases of the process (Masters, 2012, pp.163-173; Senn &Joanne, 2013).

The next two phases are mainly the working phase of the theory. Identification is the second phase, the client works interdependently with the nurse, expresses feelings and the trust is developed further. The nurse identifies the problems faced by the clients and initiates appropriate professional assistance. Client fosters the feeling of belonging and develops the ability to cope with the problem. Exploitation is the next part of the phase wherein the trust and confidence level between the client and nurse is established. The client takes advantage of the services offered and the nurse assists the client to strike a balance between need for dependence and independence. The clients are assessed and further assisted as new needs emerge during the process. A discharge plan is activated towards the end of the phase (Masters, 2012, pp.163-173; Senn & Joanne, 2013).

Lastly termination is the final phase the process where the client is discharges, alternative source of support is identified, and problem prevention is explained to the client. The nurse slowly disengages from the client. The discharge plan is summarized. New goals are explained to the client and actions are engaged outside therapeutic relationship. The client feels independent and confident to adapt to new environment (Masters, 2012, pp.163-173; Senn & Joanne, 2013).

3.1.2 Role of Nurse during Interpersonal Phases

According to Peplau nurses have to assume different roles during the client relationship phase. Primarily the nurse acts as a stranger to the client. The nurse should respect and have a positive approach on the client condition. As a resource person the nurse answers

to specific questions formulated on their health conditions which are integral to identifying the major issues faced by the client. The nurse must explain the treatment care and plan to the client and be constructive in their answers. The nurse assumes a teaching role by educating the client formally and informally. Leadership role is directed to assist the client to follow the nursing process implemented during the treatment plan. The nurse acts as a surrogate if the client is in infant or adolescent stage based on their past relationships. Considerable importance is given to the nurse as a counsellor to give guidance and encouragement to the client (Ramesh C, 2013; Johnson & Webber, 2010, pp.125)

Peplau theory is often classified as a middle-range theory. She believed that nurse had to interact with the client purposefully so that it would lead to a better outcome. Her theory focused mainly on the psychological aspect of human life than physiological. Communication is an essential element in the relationship as it favored changes to the behavior of the client. One of the drawbacks of the theory was it could not be used in patients with altered mental status, infants and young children. They could collect pertinent data and formulate a care than rather than involving with the client (Masters, 2012, pp.163-173).

3.2 Theory of Human Caring

Jean Watson's theory of Human Caring mainly focus on the existential side of caring. This means caring the patients mind, body and soul so that healing can be at the optimal level. Watson’s theory is interconnected with science, humanities, spirituality and the trinity of mind-body and spirit. She states that “caring goes beyond an intellectualization of the topic inviting us into a timeless; yet, timely space to revisit the perennial phenomenon of the human condition”. Abstract concepts such as love, faith, hope and trust and inculcated into nursing role to better human care. Moreover, there is the need to create a caring environment that will allow the person to choose the best action for themselves

The Theory of Human Caring consists of four processes: healing process, transpersonal caring relationships, caring moments and awareness of healing. The caritas process and

the carative factors provide us the guide to implement the theory involved in promotion of faith, love, hope, caring, spirituality. (Okoye Nneka, 2012), (Yeter et al ,2015). Watson used the word “carative” so as to emphasize the need for “attainment” of health. A ten-step process forms the guide to the process. Human altruistic values such as love, kindness. Forms the base of the process. They are followed by instilling faith and hope in patients, creating a positive environment, being sensitive to their feelings.

These processes could only be followed by showing kindness, care and love for self and others. It is the duty of the nurse to instill faith and hope in the patient by understanding their feelings and cultural background. A conducive environment had to be created so support the patient well being physically and spiritually. (Watson, 2007) These processes could only be followed by showing kindness, care and love for self and others. It is the duty of the nurse to instill faith and hope in the patient by understanding their feelings and cultural background. A conducive environment had to be created so support the patient well being physically and spiritually. (Watson, 2007).

Another element of the theory is “transpersonal care relationship”. Watson said, “to move beyond ego self and radiate to spiritual, even cosmic concerns and connections that tap into healing possibilities and potentials”. Care could be given within a holistic approach. Nurses had to explore within themselves and use their experiences to meet the need and benefit the patient while being benefited mutually. “Caring moments” concludes the concept where in the nurse had to create an occasion to for human caring (Watson, 2007). It involved sharing experiences, feelings, thoughts, spiritual beliefs, expectations and perceptions based on their past, present and imaginative future. The caring occasion becomes “transpersonal” when “it allows for the presence of the spirit of both—then the event of the moment expands the limits of openness and has the ability to expand human capabilities” (Watson, 1999).

3.3 A Comparison of These Two Theories within the Context of Nursing

The main objective of both the theories is to establish a caring relationship with the patients by showing them unconditional love and communicating with compassion thereby establishing a healing environment that promotes health and wellness. The fundamentals of these theories are incorporated in many hospitals around the world. Nursing care contains the same steps as a research process. Both the theories provide a framework for decision making. Peplau's theory describes the roles a nurse can assume in their career and the Watson's theory stresses on unconditional care that has to be given at all times. Whether a nurse or manager in a nursing station, Watson explains the need to love oneself and their duties. Nursing leaders and managers will find it easy to delegate work in a harmonious manner. They will work with better trust, care and responsibility. As nursing care becomes complex with technological advancements, both the theories readdress the need to give individual attention to the clients to provide a healthy environment. Technology can monitor physical status of the patient but only a caring touch can understand the psychological condition. (Vicki ,2012).

Peplau's and Watson's theory have laid the foundation of nursing care. As hospital care becomes advanced these theories remind and assure us of the fact that nursing care lies beyond technology. The Nursing role and care works on human principles than technology. Even though these theories elevated the importance of caregiving in nursing the source of problem is not treated (Luciane et al, 2009).

Peplau focuses more on verbal aspects of communication between patient and the nurse. Through this a healing environment has to be created to bring healing to the patient. Watson uses communication to understand the patient in a spiritual context. Both the theories identify communication as the key tool in connecting to the patient and caring as a process to heal the patient (Fitzpatrick, J. & Whall, A). Both communication and caring form the parameters of competence in modern nursing. With changing demographics competence in communication plays a vital role to patient safety. (Fitzpatrick & Whall, 2005)

4 AIMS AND RESEARCH QUESTIONS

This thesis builds on the knowledge that the role of the nurse is changing as population demographics shift and advancements in technology are made within the health care sector. However, there seems to be a gap in the types of competencies nurse professionals should have upon graduation and those that may be needed in the future. Therefore, this paper will investigate the link between the roles of the nurse professional and identify the core competencies that will be needed for safe, quality care in the future. The questions below will be used to guide this investigation.

1. What are the core competencies the nurse professional should have upon graduating from a nursing program within the European Union?
2. What are the competencies the nurses will need in the future 2025?
3. What role will the nurse professional have within healthcare?

5. METHODOLOGY

This is a literature review wherein data is collected from different sources and then analyzed with respect to the fundamental question. The first part of the chapter consists of the sources and methods used to extract data and later the collected data will be analyzed using the (Graneheim & Lundman, 2004) method.

5.1 DATA COLLECTION

Data was collected from multiple search engines using keywords and phrases related to the core question used for the study. Keywords were taken from each question and searched to narrow down adapt articles for review. Pre-Inclusion criteria included articles with keywords, Competence, Nursing profession, Europe and Patient safety, Role of nurse, Articles considered for study was published within 10 years. A few articles were taken into consideration for competence outside European Union as this will help us to understand the drawbacks and further consideration that future researchers would require on review of this article. Exclusion criteria had all the articles that were less than 10 years and didn't provide an abstract on competency in nursing practice. Further filters were used to narrow down on specific articles for inclusion criteria. The databases used to retrieve articles were mainly from EBSCO, Sage Journal, PubMed, and Science direct.

Primarily "Academic Search Elite (EBSCO)" was the engine used for search and it resulted in 46 articles. Some of the articles were relatively abstract to study, hence advanced search option was used to arrive at precise articles. The key words typed in were "Competence" AND "Nursing Education" AND "Future". Because of 46 number of hits that were retrieved on the advanced search it had to be filtered again. The articles selected were within 10 years' time frame and had to be within the EU and this resulted in 10 articles.

As the number of articles reviewed were not sufficient to conduct a reliable literature review, the search was broadened to get more results. Using the same search engine with the same search conditions as mentioned in the initial search the last word of three search words was changed to Future AND Role of Nurse AND skills AND 2025.Resulted in 25

hits. The same pre-inclusion and exclusion criteria were used to choose the most relevant articles to research questions. In this phase another 7 articles were chosen, so the number of the all chosen article reached to 17 hits.

Sage Journals was the second choice for data collection. Since the term "competence" was abstract term rather than a medical condition, advanced search option was used to arrive at conclusion. The primary search was conducted using the key words "Competence "AND "Nursing education" AND "Patient safety" Results 12 hits. Advanced search was "Competence AND" Future Nurse" Results 10 hits. Same inclusion criteria were followed for the first part of the study. Only full articles studied from EU were primarily included for study. The time was frame of ten years was selected mainly for two reasons as the core components of patient safety were fundamental principles of practice which needed less revision in research and the latter to study the new directions and approaches in patient safety with advances in modern technology and changing predicaments.

The third search was conducted using the same processes as mentioned in the initial phase, but this time with choosing "PubMed database". In PubMed database the advanced search was used with the following search words "Nursing AND Technology AND 2025 which resulted in 20 hits. Searching full text in 10 years result 15 articles.

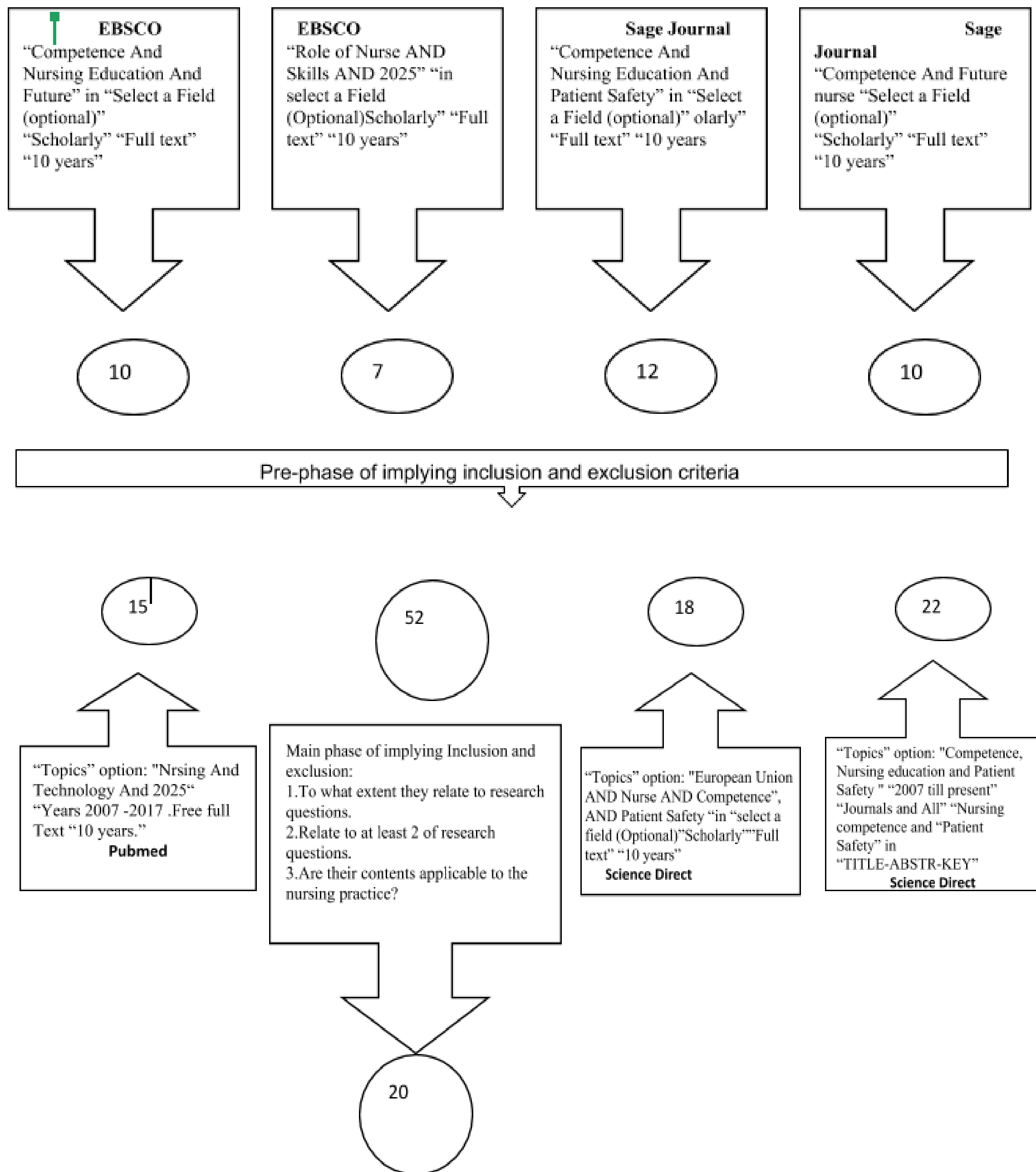
The fourth and the final search was done with Science direct. In advanced search with the keyword "European union" AND "Nurse" AND "Competence" AND "Patient safety". The keywords gave a hit of 50 articles and advanced search resulted in 18 hits. This number of articles not sufficient for the literature review, the search was more broadened to get more results. Using the same search engine using the key word "Competence" AND" Nursing education" AND "Patient safety ", resulted 30 articles, and limited to years 2007 -2017, resulted 22 hits. The total number of articles used from Science direct was 40 hits.

5.1.1 Implying Inclusion and Exclusion Criteria

The total number of articles which were filtered for inclusion and exclusion was 52 hits. In this section each article was read carefully and the articles which did not match or meet the inclusion criteria were eliminated were 42 articles, and only 20 were handpicked for analysis. The final articles which were chosen for study had to fulfil three criteria's.

1. To what extent they were related to research questions.
2. They should be related to at least two of research questions.
3. To what extend this articles content are applicable and interpretable to the nursing practice.

Figure 2. Implying the inclusion and exclusion criteria.



5.2 LIST OF ARTICLES USED FOR STUDY

The following twenty articles were chosen based on the inclusion and exclusion criteria, which was applied in two phases as mentioned earlier:

1. Clarke,R.john and Lerner,C.Jeffry and William, Marella (2007).*The Role for Leaders of Healthcare Organizations in Patient Safety*,American Journal of Medical Quality, Vol 22, Issue 5, pp. 311-318

2. Allison Brandt Anbari, Amy Vogelsmeier, et al 2017, *Safety communication among differently educated nurses, Converging and Diverging Meaning Systems,*Western Journal of Nursing Research, Volume 8,page 39,

3 Deleise, S Wilson 2012, *Registered nurses collective safety organising behaviours:the association with perceptions of patient safety culture*.Journal of research in Nursing,Volume 18, 4 Pages 320-333.

4. Richard, B. Hovey, Mitchell, L. Dvorak,et al,2011. *Patient Safety: A Consumer's Perspective,* Qualitative Health Research,Vol 21, Issue 5, pp. 662 – 672.

5 .Tony, Butterworth, Eloise Carr, Jane Reid, et al 2011, *a core value of nursing - so why is achieving it so difficult?*Journal of research in nursing,Vol 16, Issue 3, pp. 209 – 223,

6. Annette, Nygårdh, Gwen, Sherwood, Therese, Sandberg, Jeanette ,Rehn, Susanne Knutsson 2017,*The visibility of QSEN competencies in clinical assessment tools in Swedish nurse education.* Nurse Education Today, Vol.59, Pages 110-117.

7. Leslie, W.Hall, Shirley, M.Moore, Jane H.Barnsteiner (2008)*, Quality and Nursing: Moving from Concept to core Competency.* Urologic Nursing, Vol.28, Issue 6, Pages 417-426

8 .Anita Davis Boykins 2014, *Core communication competencies in patient centered care,* ABNF Journal,Vol. 25 Issue 2, Pages 40-45

9. Kajander-Unkuri, Satu & Salminen, Leena & Mikko, et al 2013,*Competence areas of nursing students in Europe,*Nurse Education Today,Volume 33, Issue 6, 625 – 632,

10 .Theander, Kersti et al, 2016, *adjusting to future demands in healthcare: Curriculum changes and nursing students' self-reported professional competence,* Nurse Education Today, Volume 37, 178 – 183,

11. Howell,Whitney 2012 ,*The changing role of nurses,*,volume 86(3):3V6-49 .(14pp)

12 Pia cecilie Bing -jonsson, Christina Foss, Ida Torunn Bjork et al, 2016, The *competence gap in community care: Imbalance between expected and actual nursing staff competence,*Volume 36(1)27-37,

13. Salmond S.W,Echevarria 2010,*Health care transformation and changing roles for nursing,*Orthop Nurse,Jan/Feb;36(1):12-25.

14 Hanna, Repo , Tero Vahlberg , Leena Salminen,et al 2017,*The Cultural competence of graduating nursing students*, Journal of transcultural nursing, Vol. 28(1) 98–107,

15. Risling, Tracie 2017, *Educating the nurses of 2025: Technology and trends of next decade,*Volume 22,Pages 89-92,

16. Leena, Minna, stolt 2010, *Future challenges for nursing education-A European perspective,* Volume 233-238,

17. Gregory A.De Bourgh, 2012, *Synergy for patient safety and quality: Academic and service partnerships to promote effective nurse education and clinical practice,*Volume 28,issue 1.Pages 48-61,

18. Danica zeleznik,Peter kokol,Helena,2017,*Adapting nurse competence to future patient needs using checkland's soft system methodology*, Volume 48,Pages 106-110,

19. Lacasse, Cheryl 2013, *Developing Nursing Leaders for the Future: Achieving Competency for Transformational Leadership,*Oncology nursing forum,Volume 40. 431-433,

20Stevene&, pearson, paulin etal 2016, *Patient safety in nursing education: contexts, tensions and feeling safe to learn,* Volume 34,277-284 Issue 2.

5.3 CONTENT ANALYSIS

There are several different approaches for performing qualitative content analysis. According to Hsiu-Fang & Shannon (2005) have there are three approaches to an analysis. Conventional content analysis- refers to an open coding of the empirical materials so that there are nil defined categories for coding. This approach emphasizes that the analysis should be done based on grounded theory. Directed content analysis is more organized than an open coding approach and has a deductive approach and can be used to compare and discuss the outcomes of various researches or theories. Summative content analysis

identifies or assesses the quality of existing specific words or phrases inside the text. This approach is used to precept the words' meaning in the context of the text. (Hsiu-Fang & Shannon 2005)

Another approach to qualitative content analysis is introduced by Graneheim & Lundman (2004). This approach is more concerned about qualitative content analysis in Nursing researches which uses an inductive way through by reading through the whole texts, a couple of times to obtain a wider picture of the context. Meaning units are condensed, coded and classified under categories which will contain the main points of the unit of analysis (the text) and manifest its content (Graneheim & Lundman, 2004).

5.3.1 Step 1: Reading and Coding

After reading through 52 articles and filtering those through the inclusion and exclusion criteria 20 articles were chosen which were relevant to the thesis subject. Later on the articles (the unit of analysis) were read more carefully and at the same time notes were made on the margin of the papers when relevant and interesting data was found. In the notes, the main keywords of the meaning units were used as labeling codes, so that the next time that author read the text or search for the same subject he could easily find it. In this stage different colors were used for different codes, keywords were underlined, and stars or other signs were used beside the codes. Putting stars or other signs beside the codes helped to show the degree of importance or the degree of relevance to this thesis' subject.

5.3.2 Step 2, Listing and Categorizing the Codes

In this stage the notes which had been made in the margins were reviewed and the different types of information that had been found were listed. Later on, reading through the list each piece of information was categorized according to the relevancy of the codes in such a way that all codes had to get into a relevant category, but no code could fall into more than one category

5.3.3 Emerging Sub- Themes and Theme

The final stage of the content analysis was minor and major categories gathered to form a sub theme and theme. Table one shows the major and minor common categories and their distribution among the above mentioned twenty articles.

Table 1. Illustration of the most common categories

Theme	Changing core competencies of nurse professional in health care							
Sub theme	Core competencies				Patient safety		Role of Nurses	
Major and Minor Categories	Non-Technical	Technical	Competence Development		Human Factors	System Factors	Leadership	Quality care
	Communication Attitude, Teamwork, Culture	Informatics Skills,	Curriculum	C.N.E	inter professional Collaboration Risk Reporting, Patient Centered, Safety practices,	Staffing, E.H.R, Organization, Evidence Based Practices, Technology	Coordinator Educator, Managers, Consultants, Matrons	
Unit of Analysis	6,8,9,10,12,14,16,	9,10,15,18,19	2,6,8,9,10,14,15,16,17,18,20	7,11,12	2,4,5,7,13,20	1,3,5,7,12,19,20	1,2,11,13,15,16,17,18	3,4,5,7

5.4 ETHICAL CONSIDERATIONS

Bryman and Bell (2007) has laid out ten principles which have to be followed while doing a research. These principles help us to minimize the amount of harm which may Occur during the research. Information from other sources are documented unbiased so that the authors opinion and views are not manipulated. The topic intended for study had only few hits related to the question framed for review. This paper is written under the guidelines of the Arcada University. The author refers from (TENK) The Finnish National

Board on Research Integrity. The authors have reviewed the guideline for responsible conduct of research in order to maintain the standards of this research. The topic for thesis was chosen after discussion with the supervisor at Arcada University, Helsinki. The data has been collected through official academic databases so that no use of pirate or unofficial electronic sources to avoid copyright issues. Quotes, statements and graphs have been sourced from primary sources and they have been referenced to avoid plagiarism. Data has been collected through primary sources and then secondary sources when content were not available. This has been done according to the university guidelines.

6 FINDINGS

This chapter discusses the major categories emerged during data analysis process. Numbers are given in bracket corresponding to the articles from which data is sourced. Table 3 in Appendix 3 illustrates how qualitative inductive analysis of twenty articles resulted in major and minor categories. There are seven major categories uncovered through this thesis. The first major category was, non-technical competence. It is described as competence in nursing skills and intervention demonstrates the nurse's ability to plan accurate actions, integrate knowledge, clinical decision making and technology into practice. Communication is a competence that is vital and plays a major role in career and care. Effective communication is essential for patient centered care. Skilled communication has been described as effective, appropriate and therapeutic and involves a two-way process of expression and reception. teamwork and inter professional collaboration requires communication skills to foster mutual respect and engage in shared decision making. Cultural competence is another requirement among changing demographics in EU. Curriculums have introduced Cultural studies and exchange programs among students to prepare future nurses to meet the challenges of newer population. (6, 8, 9, 10, 12, 14, 16,)

The second major category was, technical competence. It is described as Informatics is a competency that is prerequisite to graduating nurses seeking license to practice. Patient data is electronically stored and easy for access across health care providers which help in shared decision making. Wearables, patient monitoring devices, management systems, staffing solutions are technology based. Students need to be competent in use of computer and minimal operational functionality of equipment's during their educational years. (9, 10, 15, 18, 19)

The third major category was, competence development**.** These studies show that competence development is required for graduating nursing students. In order to facilitate mobility of nurses across EU the competence areas in nursing have been identified by three working groups across 11 years and introduced into the curriculum to harmonies nursing education. The proposed competence areas identified should be demonstrated by student nurses through their curriculum and be consistent across all Europe. Six main competencies have been identified with respect to QSEN

competencies from US. They are patient centered care, teamwork and inter professional collaboration, evidence-based practice, quality improvement, safety and informatics. These can be classified into curriculum based and continuing education. (2,6,7,8,9,10,11,12,14,15,16,17,18,20)

Nursing education and curriculum has to be competent based and uniform throughout the European Union. This helps for mobility of nurses across the union with respect to supply demands in the labor market. Student nurses should also be competent in professional values, policies and guidelines while participating in lifelong learning and upgrading of professional standards. The Swedish Society of Nursing has identified six competencies by QSEN and included them in their curriculum and practice for the development of safety and quality care in Sweden.

The new curriculum for Swedish nursing students introduced after 2011 was to conceptualize knowledge by integrating subject matter, theory and clinical practice thus making them prepared for challenging situations in practice. NPC scale used to assess the competence level of Swedish nursing students under the revised curriculum reported higher competence compared than the previous one. Patient centered care, teamwork and inter professional collaboration received the highest visibility when students were assessed.

Clinical learning environments have great importance in achieving the desired learning outcomes in student nurses. Students should involve with patients to develop skills required for nursing care. Training in medical care units is essential for nursing students to learn about patient safety, quality standards, roles and responsibilities, their potential influence and outcome on the patients. Nursing colleges have to partner with tertiary care units to prepare competent nurses for the future. Patient safety is a competency required in graduating nurses and clinical training is crucial to how the nurse conveys safety in practice. Patient safety in theoretical context is different from an organizational point of view. Clinical exposure is instrumental in understanding the wider concept of patient safety at different levels.

Core competency in communication should be met by all the nursing students at their education level. It is the duty of the Nursing educators to prepare the future workforce to communicate effectively and provide patient centered care. Cultural competence is an

essential in providing health care services diversified cultures. Cultural competency is required with respect to migration of people from different countries. One of the easiest methods of cultural education is through student exchange programs. Theory classes and online virtual communities help students to understand about different communities.

Curriculums have to be revised to educate graduating nurses about cultural importance in practice. Finnish education stresses on the importance of an additional language in their student programs. The overall competence level of Finnish nursing students was reported well after their final clinical placement. Along with informatics, student nurses have to be educated on e-health, artificial intelligence, and robotics, tele-nursing which are a requirement for the future nurses. (2,6,8,9,10,14,15,16,17,18,20)

Nursing involvement is likely to increase with focus on high quality care and technological advancements. They have to display competency in their practice to ensure patient safety. By undergoing C.N.E programs and participating in improvement activities nurses can enhance their effectiveness to improve quality and wellbeing of patients. Continuous learning is necessary in community care. The required competency to work with old age patients differ from the actual competencies the nursing staff have when assessed. Community care nurses should be competent in areas of rehabilitation, early intervention, active living, multi-cultural understanding and integrating technology into community-based settings.

Nurses graduating with a BSN degree have the skills required for critical thinking and evidence-based practice. Enhanced education from evidence-based practice to technology is required for nurses to take individual care roles in nursing profession. They can easily collaborate with other professionals and team work to create a culture of quality and safety**.** Nurses participating in cardiac training programs with other health professionals have been successful in reducing their cardiac patient visiting the ER by 92 %. (7, 11, 12)

The fourth major category was, human factors. It is explained as nurses in health care are moving from an episodic, provider based to team based, patient centered care across the continuum. Patient centered care is a priority of a patient and is entitled to receive quality care and be a part of the decision making. Communication and teamwork are instrumental in keeping a patient safe. The patient communication has to be bi directional with patient

and other health care providers to have a positive outcome in treatment plan. Only through an effective communication the nurse can build a level of trust with the patient.

The fifth major category was, system factors. It says that teamwork and communication are key elements for improving the outcomes of practice and reducing errors at work. Teamwork and communication are necessary for improving the outcomes of practice and reducing errors at work. Teamwork develops a learning process between practice and reflection on practice that promotes higher performance on the short run and building a learning culture on the long term. Inter professional collaboration is required to achieve a patient centered and coordinated care as health care transformation occurs across the globe.

Patient safety is determined by interdependent factors and most crucially shared vision and goals. Interdependence of these systems requires assessment, individual judgement, organizational culture and transparency. Even though the perception of patient safety differs with education, it can be nurtured in a healthy environment where the above two competencies can be work efficiently. (2, 5, 7, 13, 20)

Culture of patient safety is important to the positive outcome of a patient. Organizations have a major role in minimizing system factors that risk the safety and quality of care. Organization policies and clinical nursing staff play an important role in creating awareness of patient safety in student nurses. Hospital policies, workspace and equipment, systems of work, maintenance, training and process were some of the factors that affected the culture of safety in a hospital.

Safety has to be a priority and responsibility in nursing leadership. Staffs have to be regularly trained on individual and team capacities to review their objectives and task at work. Effective communication is competency that plays a major role in promoting patient safety. Organizational policies should allow nurses to report error and risk events so that risks can be minimized. Communication, teamwork and evidence-based practice play a major role in promoting culture of safety other than system factors. Integrating evidence-based practice reduces the risk of patient falls and help to create safer environments that minimizes injury for patient. (1, 3, 5, 7, 12, 19, 20)

The sixth major category was, leadership roles. It described as nursing educators have a major role in preparing students with knowledge, skills and attitudes to meet the current performance standards. They should pave the way for technological evolution through curriculum-based training and be adept at new technologies and embrace the change and not be limited to current practice paradigms. They also have a key role in identifying competency deficits in nursing undergoing transition from associate to bachelor's degree.

Nursing educators hold a key role in improving the communication skills of a student. Other than verbal interaction the nurse has to be a good listener and build a trust through communication. Another area which educators have to be competent is in cross cultural research and in teaching evidence-based practice. This is an area which needs attention in nursing profession. More over educator competence needs to be assessed on their education, skills, evidence-based practice and technological knowledge.

Nurses holding administrative roles have the responsibility to promote safety in practice. They are responsible for identifying and training talents in their hospitals which will lead to quality improvement. Such nurses can transition from floor to care coordinators, community liaisons, disease managers etc. Nurses working as care coordinators have to be skillful in management of patient rights, navigating complex system, ensuring meaningful communication with patient, family and other health care disciplines to facilitate an efficient plan of care that spans within and between the family, patient and health care providers.

Technological advancements will change the role of nurses from ward to being consultants, advanced nurse practitioners, community matrons etc. Nurses in community have an advantage as technologies aid them in meeting patient in community setting than in institutions. (1,2,11,13,15,16,17,18)

The seventh major category was, quality care. It is explained as nurses have unique role in creating a culture of safety in their organizations. Adapting to evidence-based practices; communicating effectively and with transparency along with teamwork reduces risk and improve the outcomes of care. Nurses are to partner with other healthcare partners and

educational institutions to advance professionally and improve the lives of the patients. (3, 5, 7)

7 DISCUSSIONS

The analysis of the 20 articles identifies the competencies that are required for the graduating nursing students in Europe and the requisite for continuing education, vital to meet the demographic challenges and patient needs in the future. It also highlights the liaison between the competencies promoting patient safety and quality care.

7.1 Implying the Role of the Nurse through Theoretical Framework

Hildegard Peplau and Jean Watson’s theories were used as a back frame to study about the competencies required for the current graduating students. Peplau’s Theory of Interpersonal Relations expresses the need for an interaction between the patient and the nurse through a set of roles that will help the patient in his recovery process. Each role had a specific objective which had to build trust, confidence, encouragement and later independence. Jean Watson’s Theory of Human Caring/Science had a more holistic approach practiced through a set of carative factors requiring the nurse to be involved deeply with the client by building faith and hope and expression of feelings which could be achieved through a strong level of communication. And later scientific approaches and care planning had to be initiated to bring healing in the client. Both the theories express the need for a strong level of communication which is required by the nurse in their designated role.

According to the above mentioned theories nurses have to be effective in communication to achieve quality and safety in their practice. Peplau identified roles in the process which can be related to the current nursing practice. Firstly, nurses have to learn the importance of communication at their graduation level which is currently a required competency. The curriculum has to educate the student the processes in communication which can be between client, care taker, other professionals, informatics etc. Secondly communication is a multi-directional process. It involves the whole system and process that the nurse practices. The nurse has to express confidently, at the same time is a good listener with the client and team and caretakers. This is crucial when it comes to decision making and providing quality care. Moreover, inter disciplinary programs are effective in promoting

communication skills among newly recruits. Thirdly nurses need to continue education with respect to skills and other roles that require them to communicate at different setting. With changing demographics additional language and cultural education would be favorable when treating clients from different backgrounds.

It is obvious that nurses have a major role to play in providing quality care. A patient centered care can be given when there is effective communication between client, team and caretakers.

7.2 Relationship between Competence and Patient Safety in the Digital Age

Parameters of nursing competence have a direct relationship with patient safety. While competence is a prerequisite in nursing graduation and ongoing professional career, it directly promotes the safety and quality care in practice. Patient safety depends on the competence of a nurse. 10 of the 20 articles indicate a direct relationship with patient safety. Figure 1 illustrates the major competencies that have a direct relationship with patient safety. The below competencies are crucial to achieve quality care and promote safety within individual practice, care and system. Figure (1) shows in appendix

7.3 The Changing Role of Nurse Professional

Pioneer nurses have been identified by the white clad gown treating the sick and wounded, although this perspective has changed with advances in medicine, technology, and demographics. Nurses have evolved to handle complex situations and take on challenging roles in their profession. Every now and then they are breaking boundaries and pushing into newer frontiers in their practice which requires them to be competent in their profession and roles. 10 of the 20 articles identify the required competencies for a nursing graduate. Competency starts within the graduating years and nursing councils of EU countries have identified competencies that are prerequisite to graduating students which are being reviewed from time to time to meet the growing health care demands. Registered nurses have to undergo mandatory clinical programs to meet with newer trends and practices. Nursing roles have shifted to complex task and duties which require the nurse to work with inter disciplinary professionals to provide safe and

quality care. 60 percent of the articles have explained the roles and challenges of a modern nurse. They have addressed the major competencies that influence the profession and impact the quality care of the patient.

While patient information is made accessible through hospital management system, this helps in decision making and monitoring of patient across the team. Working with team builds respect, fosters open communication which engages in identifying the best evidence-based research in decision making. Nurses working in teams have a safer approach to complex situations than their counterparts. Communication has to be effective, appropriate and therapeutic, also accurate in written, electronic and verbal forms. All hospitals and hospice settings use informatics to maintain clinical records, inventory, billing and other databases. Nurses require competency in this area to integrate and coordinate care. This also aids in health teaching, health promotion and disease prevention to a variety of patient setting. With these technological advancement nurses are required to take up new roles as educators, counselors and managers. Informatics has helped the new age nurses to move into communities as community nurses equipped to carry on primary care to patients who are immobile and within the reach of hospital setting. In conclusion, nursing care has moved on from treating the sick to prevention and promotion of health. Newer roles and responsibilities are identified, and this requires nurses to be more competent in their practice.

8 CONCLUSIONS

This chapter draws to the conclusion on the research as a whole. The aims of the study are reviewed, drawbacks are mentioned, recommendations and the further need to research the study is given. Primarily the aim of the research was to identify the competencies required for the graduating nurses and the importance of continuous nursing education during their career. Secondly it analyzed the role competency had to play on the patient safety in nursing profession. The literature gathered to study these were closely related to the primary and secondary areas of studies and provided relevant information to the questions. A qualitative, secondary data analysis was conducted with 20 full scholarly articles to study the research. Other books and internet were used to collect data for background and theoretical framework.

The topic narrowed down focused on the competency stage of a nurse in her graduating years and nursing career. This gave a good opportunity to distinguish between the competencies the nurse need in her novice stage and ongoing career so that the author could stay focused on the research aim. Repetitions were avoided because both stages had remarkable difference in the competency the nurse required, and the articles selected for study had relevant information about them and few similarities. Articles selected were full scholarly under ethical consideration and their sources are mentioned at relevant places and plagiarism is avoided.

After analysis we can clearly state that competency in nursing is a requirement for graduating nurses and 5 to 6 competencies are included in majority of the nursing curriculum in European Union. These graduating nurses were able to demonstrate quality care and reported less error at work and these nurses required less training to be active in their duties. On the contrary continuous nursing education was mandatory for nurses in their professional career. This had to do with the trends and advancements in nursing technology and the current demographic changes in the European Union where competency in communication will play a major role in meeting the health care challenges future. The early theorist Watson and Peplau emphasized on communication as a tool of diagnosis and role play, at the same time in modern nursing it also promotes the safety and quality of patient care. Moreover, nursing roles have diversified into management; supervisor and educator roles and these nurses are required to be undergoing certain level

of training and competency to meet these challenging roles. Research has shown that continuous nursing education has improved the professional behavior, knowledge of patient care and practice. Informatics is a major area that needs expertise by the current nurses as nursing care is transitioning into a digital era.

Nursing culture has moved on from individual roles to team work and this is crucial to evidence-based practices. Patient safety can be practiced to an extent individually, but it is efficient and safe when practiced within a team of different professionals. Working in teams fosters a healthy learning environment and provide the best decision on patient care. Even though patient safety itself is reviewed as a competency currently, it is a combination of competencies that promote patient safety. These are acquired in the training years and later upgraded through ongoing education and training programs. Both patient safety and competencies in nursing education are revised according to challenging in health care. While certain competencies remain the foundation of a nursing career a few are revised and upgraded over a period of time.

Based on the study we can understand that competence is required for the graduating nurse while certain skill and roles in nurses require ongoing education and alternative competencies. Continuous education is important to professional nurses to promote quality, safe care and the growth of their career. Meanwhile patient safety is an attribute of competencies, which are revised periodically.

9 STRENGTHS, LIMITATIONS AND RECOMMENDATIONS

The author had limited experience in conducting a research study and was new to the Arcada thesis. Moreover, the thesis is of 15 credits and will be published only in English. Had it been 30 credits the author could have done an elaborate study on this research. Keeping these in mind the author has collected a maximum of 20 articles to study this research. Only the information related to the aim of the study was collected from these 20 articles and the major part of the data which did not meet the aims of the research had to be excluded. The thesis will be published in the author’s name, under the university guidelines in an open platform which will help other researchers to read and further study the competencies and relationship to patient safety.

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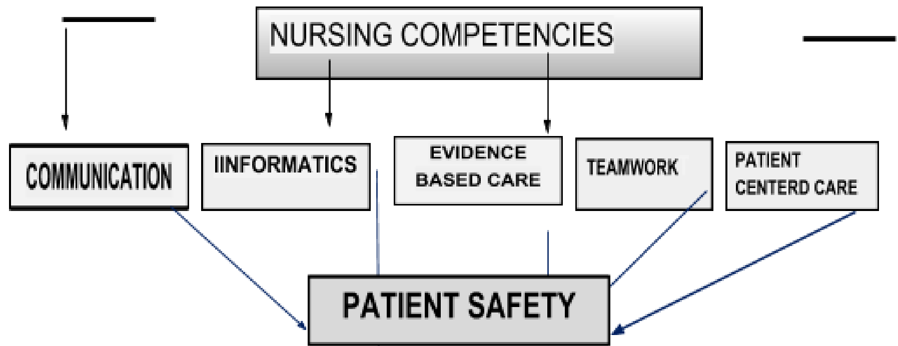
APPENDICES

Appendix 1

Figure 3: Main Competencies Promoting Patient Safety



Appendix 2

Table 2. An example of Inductive Qualitative Content Analysis

Meaning unit	**Condensed meaning unit, using the words from text**	**Condensed meaning units latent meaning**	**Codes**	**categories**
1.Research shows that institution managers need to promote a culture of patient safety	Patient safety is related to the culture and competence	Hazardous work environments reduce competence thus affecting patient safety	Patient safety, competence training	non-technical competence
2. Patient safety education among differently educated nurses.	Patient safety depends on communication and teamwork	Adversely affected by systemic or contextual understanding	Patient safety, communicati on, teamwork	
3.Patient safety culture is essential for patient safety	Positive attitude, communication and teamwork created a good safety culture	Management problems, working hours, staffing issues affected the safety culture of an organization	Patient safety, Nurse	

4.Patients perspective on patient safety	Listening, trust and communication are important in patient centered care	Lack of attention to patient problems results in wrong diagnosis, patient mortality	Patient safety	
5.Patient safety is a core value in nursing	Patient safety depends on team work, communication, reliable systems and shared vision	Human errors and organizational policies constitute to decrease in patient safety	Patient safety, Nurse	
6.QSEN competencies in Swedish education	Six competencies have integrated into the Swedish nursing curriculum	Technology, informatics skills, evidence based practice need lifelong learning.	Competence, Nurse, European Union	Competence development
7. Quality of nursing care improves with active participation.	Teamwork and active participation is important to remain competent in nursing practice.	Competence improves from building knowledge and applying it.	Competence , Nurse	
8. Communication is important in patient centered care.	Inter professional collaboration, communication and informatics are important in practicing efficiently	Nurses need to be technically savvy to communicate verbally and use digital means to exchange information and learn new strategies.	Competence ,Nurse	
9.Competence among nursing students In Europe	Competence based education has been introduced into the learning systems in Europe.	Graduate nurses have to be competent and require license to practice within regulatory frameworks	Competence, European Union, Nurse, Education	Competence development
10. Curriculum changes are adapted to meeting future demands in health care.	Different curriculums have impact on the competence of graduating nurses.	Unified curriculum is necessary to bridge the gap in EU.	Competence, European Union, Nurse, Education	
11. Role of nurses are changing in hospitals.	Nurses have to follow up from admission to discharge on a 1-1	Hospitals prefer competent nurses than graduating nurses.	Nurse, Role , Future	

	basis to provide efficient and minimize cost in quality care			
12.Adequate competent staffing is essential in providing quality care	Nursing staff possess competence for complex health care demands and this should be evaluated	There is lack of proper competence studies to assess RN nurse competence.	Competence , Nurse, European Union	
13.Nursing roles change with health care transformation	Nurses are supposed to be competent in their respective roles to meeting the future challenges.	Patient centered care is the focus of the future.	Future, Role, Nurse	Quality Care
14. Cultural competence is a prerequisite in graduating nurses.	Graduating nurses need to be changed on migrating population in Finland to provide effective care	Continuous learning measures have to be initiated in hospices to meet the migrant population in the Nordic	Competence, Nurse, European Union	
15.Future nurses should be educated on technology	Information and communication technology is changing the health care system	Future nurses should be trained in information technology. This should be a part of the curriculum.	Future, Nurse, Competence	Technical competence
16.Competence based curriculum is the future challenge for nursing education in Europe	Competence based education system has been adapted in EU.	Proficient and skilled nursing educators are required for the future	Future, Nurse, Competence	
17.Nursing schools have to have partnership with hospitals to improve quality and safety competence	Education has be partnered with organizations to benefit students to graduate with competence	Nursing schools having association with tertiary units have competent students.	Education, Nurse, Patient safety	Curriculum

18.Using SSM various shortcomings in nursing education can be addressed to improve competence in graduating nurses	Nursing education has to include newer curriculum with changes to demographics and arising health needs.	There should be collaboration of professionals among various disciplines prepare the nurses of the future	Competence, Education, Europe Union	Continuous nursing education
19. Ongoing leadership training has to be given form education to professional entry	Nurses having a strong vision and clear goals in communicating the plans and requirements among inter-disciplines need to trained as leaders for the future,	Health care leaders should be actively involved in the organization to mentor leaders for the future.	Nurse, Roles, Future	
20. Nursing students have to be educated on Patient safety on all areas.	Curriculum should cover safety issues with practice, organization and license association	Students should be engaged in classes and practice from licensing authorities, organization and service partnerships.	Nurses, Education, Patient Safety	

Appendix 3

Table 3. Illustration of Findings

Article Number	***Categories condensed meaning units according to Graneheim and Lundman (2004)*** *(Category names in Bold and Italics)*
1	***System Factors:*** Safety has to be a priority and responsibility in nursing leadership. Staffs have to be regularly trained on individual and team capacities to review their objectives and task at work. Effective communication is competency that plays a major role in promoting patient safety. Organizational policies should allow nurses to report error and risk events so that risks can be minimized. *Leadership Roles:* Nurses holding administrative roles have the responsibility to promote safety in practice.
2	***Curriculum:*** The perception about communication and patient safety differ with differently educated nurses. Nurses holding bachelor's degree communicated efficiently and demonstrated better safe practice compared to nurses with associate degrees.

	Human Factors: Communication and teamwork are instrumental in keeping a patient safe. Even though the perception of patient safety differs with education, it can be nurtured in a healthy environment where the above two competencies can be work efficiently. *Leadership:* Nurse educators have a role in identifying competency deficits in nursing undergoing transition from associate to bachelor's degree
3	***System Factors:*** Culture of patient safety is important to the positive outcome of a patient. Organizations have a major role in minimizing system factors that risk the safety and quality of care .Communication, teamwork and evidence based practice play a major role in promoting culture of safety other than system factors. *Quality Care*: Nurses have unique role in creating a culture of safety in their organizations. Adapting to evidence based practices; communicating effectively and working in a team reduce risk and improve the outcomes of care.
4	***Human Factors:*** Patient centered care is a priority of a patient and is entitled to receive quality care and be a part of the decision making. The patient communication has to be bi directional with patient and other health care providers to have a positive outcome in treatment plan. Only through an effective communication the nurse can build a level of trust with the patient. *Leadership Roles:* Nursing educators hold a key role in improving the communication skills of a student. Other than verbal interaction the nurse has to be a good listener and build a trust through communication.
5	***Human Factors:*** Patient safety is determined by interdependent factors and most crucially shared vision and goals. Interdependence of these systems requires assessment, individual judgement, organizational culture and transparency. Teamwork and communication are key elements in minimizing errors at work. *System Factors:* Organization policies, workspace and equipment, systems of work, maintenance, training and process were some of the factors that affected the culture of safety in a hospital. *Quality care:* Nurses have to work as teams and communicate with transparency so that errors can be minimized at work.
6	***Competency**:* Graduating nurses should have sufficient knowledge to provide care, promote safety, quality, health and wellbeing of the patients. *Curriculum:* The Swedish Society of Nursing has identified six competencies by QSEN and included them in their curriculum and practice for the development of safety and quality care in Sweden. Patient centered care, teamwork and inter professional collaboration received the highest visibility when students were assessed.
7	***Continuous Nursing Education**:* Nursing involvement is likely to increase with focus on high quality care and technological advancements. They have to display competency in their practice to ensure safe practice. By undergoing C.N.E programs and participating in improvement activities nurses can enhance their effectiveness to improve quality and wellbeing of patients.

	Human Factors: Teamwork and communication are necessary for improving the outcomes of practice and reducing errors at work. Teamwork develops a learning process between practice and reflection on practice that promotes higher performance on the short run and building a learning culture on the long term. *System Factors:* Integrating evidence based practice reduces the risk of patient falls and help to create safer environments that minimizes injury for patient. *Quality care:* Nurses are to partner with other healthcare partners and educational institutions to advance professionally and improve the lives of the patients.
8	***Non-Technical Competency:*** Effective communication is an essential requirement for patient centered care and practice. It has to be effective, appropriate and therapeutic. Inter professional collaboration and communication go hand in hand. Nurses are responsible to foster open communication with other disciplines at work to engage in a shared decision making which is vital for the safety of the patient. Informatics technology is another competency that has to be integrated with communication to provide health promotion, teaching and disease prevention information to patients in different settings. *Curriculum:* Core competency in communication should be met by all the nursing students at their education level. It is the duty of the Nursing educators to prepare the future workforce to communicate effectively and provide patient centered care.
9	***Competency:*** Nursing being a global profession requires graduating nurses to be competent which is vital to patient care outcomes. ***Curriculum:*** Nursing education and curriculum has to be competent based and uniform throughout the European Union. This helps for mobility of nurses across the union with respect to supply demands in the labor market. Student nurses should also be competent in professional values, policies and guidelines while participating in lifelong learning and upgrading of professional standards.
10	***Competency:*** Nursing competence is of significant important and the design of nursing curriculum will have an impact on newly graduated students. ***Curriculum:*** The new curriculum for Swedish nursing students introduced after 2011 was to conceptualize knowledge by integrating subject matter, theory and clinical practice thus making them prepared for challenging situations in practice. The overall competence level of Finnish nursing students was reported well after their final clinical placement. NPC scale used to assess the competence level of Swedish nursing students under the revised curriculum reported higher competence compared than the previous one.
11	***Continuous Nursing Education:*** Enhanced education from evidence based practice to technology is required for nurses to take individual care roles in nursing profession. Nurses graduating with a BSN degree have the skills required for critical thinking and evidence based practice. They can easily collaborate with other professionals and team work to create a culture of quality and safety. Nurses participating in cardiac training programs with other health professionals have been successful in reducing their cardiac patient visiting the ER by 92%.

	Leadership Roles: Nursing administrators are responsible for identifying and training talents in their hospitals which will lead to quality improvement. Such nurses can transition from floor to care coordinators, community liaisons, disease managers etc.
12	***Non-Technical Competence:*** Professional competence is a key issue to provide quality health care while nurses require ongoing competence to meet challenges in complex health care needs. Competence in community care is vital to meet the health care demands of the large population of older generations living in EU. ***Continuous Nursing Education:*** Continuous learning is necessary in community care. The required competency to work with old age patients differ from the actual competencies the nursing staff have when assessed. Community care nurses should be competent in areas of rehabilitation, early intervention, active living, multi-cultural understanding and integrating technology into community based settings.
13	***Human Factors:*** Nurses in health care are moving from an episodic, provider based to team based, patient centered care across the continuum. Inter professional collaboration is required to achieve a patient centered and coordinated care as health care transformation occurs across the globe. ***Leadership Roles:*** Nurses working as care coordinators have to be skillful in management of patient rights, navigating complex system, ensuring meaningful communication with patient, family and other health care disciplines to facilitate an efficient plan of care that spans within and between the family, patient and health care providers.
14	***Non-Technical Competence:*** Nurses encounter patients from varying demographics. Cultural competence is gaining momentum with changing demographics across EU. It has been identified as a requirement in nursing education as the cultural competence among graduating nurses was moderate and other learning process to be culturally competent. ***Curriculum:*** Cultural competence is an essential in providing health care services diversified cultures. One of the easiest methods of cultural education is through student exchange programs. Theory classes and online virtual communities help students to understand about different communities. Finnish education stresses on the importance of an additional language in their student programs.
15	***Technical Competency:*** Informatics is a competency that needs curricular revision with the changing technological advancements. Curriculum should include EHR modules, information on technology wearables, data analytics and instructing patients in managing and directing care through technology. ***Leadership Role:*** Nursing educators should pave the way for technological evolution through curriculum based training. They have to be adept at new technologies and embrace the change and not be limited to current practice paradigms. Nurses in community have an advantage as technologies aid them in meeting patient in community setting than in institutions.
16	***Competency:*** Various reforms in Europe have led to developments in harmonizing education throughout the Union. Competency among registered nurses should be demonstrated within their curriculum.

	Curriculum: Clinical learning environments have great importance in achieving the desired learning outcomes in student nurses. Students should involve with patients to develop skills required for nursing care. ***Leadership Roles:*** Nursing educators need to be more competent in cross cultural research and in teaching evidence based practice. This is an area which needs attention in nursing profession. More over educator competence needs to be assessed on their education, skills, evidence based practice and technological knowledge.
17	***Curriculum:*** Training in medical care units is essential for nursing students to learn about patient safety, quality standards, roles and responsibilities, their potential influence and outcome on the patients. Nursing colleges have to partner with tertiary care units to prepare competent nurses for the future. ***Leadership Roles:*** Nursing educators have a major role in preparing students with knowledge, skills and attitudes to meet the performance standards.
18	***Technical Competency:*** Nurses of the future have to competent in informatics, advancing technologies and changing demographics. ***Curriculum:*** Cultural competency is required with respect to migration of people from different countries. Curriculums have to be revised to educate graduating nurses about cultural importance in practice. Along with informatics, student nurses have to be educated on e-health, artificial intelligence, and robotics, tele-nursing which are a requirement for the future nurses. ***Leadership Roles:*** Technological advancements will change the role of nurses from ward to being consultants, advanced nurse practitioners, community matrons etc.
19	***Technical Competency:*** Competence is a lifelong learning process in a nurse's career. Nurses with leadership qualities should demonstrate strong qualities to work in teams and collaborate with different professionals to achieve optimal outcomes in care and management. Competence in informatics, biometrics, EHR is mandatory for leadership roles. ***Continuous Nursing Education:*** Nurses moving into leadership roles and responsibilities need to undergo C.N.E programs to achieve competence in different perspectives compared to the graduating nurses. Here more importance is stressed on global perspectives, training and organizational policies, evidence based practices, working knowledge of technology, biometrics which are aimed at minimizing operational cost to institutions and risks to patients.
20	***Curriculum:*** Patient safety is a competency required in graduating nurses and clinical training is crucial to how the nurse conveys safety in practice. Patient safety in theoretical context is different from an organizational point of view. Clinical exposure is instrumental in understanding the wider concept of patient safety at different levels. ***System Factors:*** Organization policies and clinical nursing staff play an important role in creating awareness of patient safety in student nurses.

Appendix 4

Table 4. The Answers to Three Research Questions

Articles	***What are the core competencies the nurse should have upon graduating from a nursing program within European union?***	***What are the competencies the nurse will need in future 2025?***	***What role will the nurse professional have within health care?***
1		Communication and teamwork are important competencies that nurses have to focus on the future.	Nurses in charge as managers and association leaders should be active in creating a healthy work environment for patient safety
2			Nursing educators have to be professionally equipped to educate student nurses the importance of communication by means of verbal, technical and digital use.
4			Nursing educators should engage the graduate students in real life scenarios to understand patient centered care
6	Patient safety, teamwork, Evidence based practice, Informatics, Patient centered care, quality improvements have been identified as the key competence required for a graduating nurse.	Technology and informatics skills are key competences that nurses need to have along with evidence based practice.	
8		Informatics is a key skill that is required by all future nurses.	
9	Six areas of competence have been identified for graduating nurses.	Future nurses need to learn life long and practice research based evidence to stay	

		competent in profession	
10	Eight competencies have been identified by a research in 2013		
13			Nurses are poised to assume roles, advance health and improve care,
14	Cultural competence is important in graduating nurses.	Continuous education is needed to train nursing staffs in cultural competence.	
15		Nurses should be competent in information technology.	
16	6 main competencies have included in the curriculum for graduating nurses.		Skilled nursing educators are required in the future
17	Academic schools should have partnership with tertiary units to give exposure to increase awareness of patient safety quality		Nurse educators and nurse managers have to develop a synergy among future that helps them to be competent upon graduation.
18	New competencies can be included in Nursing curriculum to bridge the gap of competent nurses graduating in the future.	Future nurses have to be competent with virtual technologies and AI.	
19	Leadership qualities should be developed in graduating students through training programs.	Leadership qualities are essential for future nurses.	Nurse can take on the role of executives, managers and organizational heads.

20	Patient Safety is a key construct in competence education among graduating nurses.	Patient Safety is a competency that requires academic revision and engaging programs to educate students’ nurses with context to all areas of patient safety in professional career.	