INSTITUTIONEN FÖR VÅRDVETENSKAP
OCH HÄLSA

FROM NOVICE TO COMPETENT

A qualitative literature study of the experiences of nurses new in intensive care units

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Uppsats/Examensarbete:	15 hp
Program och/eller kurs:	Examensarbete i Omvårdnad med Inriktning mot intensivvård
Nivå:	Avancerad nivå
Termin/år:	VT/2023
Handledare:	Sepideh Olausson
Examinator:	Mona Ringdal

Titel svensk:	Från Novis till Expert: En kvalitativ litteraturstudie om sjuksköterskors erfarenheter av att arbeta på IVA
Titel engelsk:	From Novice to Competent: A qualitative literature study of the experiences of nurses new in the Intensive Care Unit
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Sammanfattning

Bakgrund: Internationella rapporter framhåller att det råder stor brist på sjuksköterskor inom vården ur ett globalt perspektiv, detta anses vara en fara särskilt på intensivvårdsavdelningar (IVA) där svårt sjuka patienter vårdas. Intensivvård som vårdform kräver en högre kompetens och en högre bemanning än normal vård för att inte äventyra patientsäkerheten. Det föreligger ett behov av specialistutbildade och erfarna sjuksköterskor inom intensivvården, något som krävs för att man skall kunna bedriva intensivvård av god kvalitet, trots detta är det få länder som erbjuder specialistutbildning inom intensivvård.
Syfte: Syftet med litteraturstudien är att belysa nya intensivvårdssjuksköterskors upplevelser av att arbeta sina första tre år på en intensivvårdsavdelning.
Metod: En systematisk litteraturstudie baserad på kvalitativa studier användes för att besvara studiens syfte. Systematisk litteratursökning gjordes på följande databaser: CINAHL, PubMed, PsykINFO och Scopus. Nio kvalitativa studier inkluderades i litteraturstudien och analyserades med hjälp av Bettany-Saltikov (2016) 9 steg av tematiska dataanalys.
Resultat: Litteraturstudien resulterade i tre teman: Verklighetschock; Transitionen i yrkesrollen, Utmaningar i kliniskt lärande och utveckling och Utveckling i yrkesrollen, med tillhörande subkategorier. Det framkommer att nya intensivvårdssjuksköterskor upplever verkligheten chockartad när de börjar introduktionsprogrammet och inser sitt ansvar men också att de upplever att de inte besitter tillräckligt med kunskap för att vårda kritiskt sjuka patienter. Det kliniska lärandet kantas av många utmaningar och många nyutexaminerade saknar

tillräckliga tekniska färdigheter och är i behov av ytterligare kompetens. Stödjande kollegor tillsammans med klinisk erfarenhet spelar en avgörande roll för den professionella utvecklingen.
Slutsats: Specialistutbildning inom intensivvård är en garant för god vård och patientsäkerhet. Specialistutbildade intensivvårdssjuksköterskor är utan tvekan en nödvändighet för att bedriva en god och säker vård av den kritisk sjuka patienter. Intensivvårdens ledning och organisation bör förbättra den sociala miljön på intensivvårdsavdelningar och introduktionsprogram för att underlätta för de nyutexaminerade när de ställs inför utmaningar i yrket, detta hade haft en positiv effekt på intensivvårdssjuksköterskors kliniska lärande.

Nyckelord: Sjuksköterska ny på intensivvårdsavdelning, Nybörjare till kompetent, erfarenhet, intensivvårdsavdelning

Abstract

Background: International reports highlight that there is a major shortage of nurses in healthcare from a global perspective. This is considered dangerous especially in intensive care units (ICUs) where seriously ill patients are cared for. Intensive care as a health care form requires on one side, higher competence and on the other side higher staffing to not jeopardize patient safety. There is a need for specialist trained and experienced nurses in intensive care to provide quality care. However, few countries offer specialty training in intensive care.
Purpose: The Purpose of the literature study is to shed light on new intensive care nurses` experiences of working their first three years in the ICU.
Method: A systematic literature study based on qualitative studies was used to answer the purpose of the study. Systematic literature searches were done in CINAHL, PubMed, PsykINFO, and Scopus databases. Nine qualitative studies were included in the literature study and analyzed using Bettany-Saltikov´s 9 steps of thematic data analysis.
Results: Literature study results resulted in 3 Themes- Reality Shock: transitioning in professional role, Challenges in Clinical learning and development, and Developing in the professional role, with associated subcategories.
Conclusion: Post-graduate specialist education in intensive care is a guarantee in providing quality patient care and patient safety of the critically ill patient. Intensive care organizations and managers should improve the intensive cares social environment, orientation programs, and mentorships. This is necessary to minimize the challenges that affect ICU nurses` clinical learning in the ICU.

Key words: Nurse new in ICU, Novice to competent, experience, intensive care unit

Acknowledgments

I would like to thank our advisor Sepideh Olausson for her time, support, and valuable knowledge through this process. I would like to thank the University of Gothenburg for the opportunity to learn and specialize in intensive care nursing. Thank you to the University of Gothenburg's librarians for their time, support, and knowledge. I would like to thank my fellow students for their help in this writing process. I thank my family for their support and sacrifices during this process as well.

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I would like to thank our advisor Sepideh for the help and support in accomplishing writing this literature study. I also thank Allah (God) for helping me to write this literature study.

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Introduction

Intensive care nurses (ICU nurses) work in intensive care units, where highly specialized advanced care is provided to critically ill patients with life-threatening organ deficiency. Critically ill patients in intensive care units need advanced diagnostics, continuous vital sign monitoring and life-sustaining treatments (Marshall et al., 2016). The Swedish government`s department of official investigations (SOU, 2018:77) stated in their report that after completing an intensive care nurse education, ICU nurses are expected to care for critically ill patients and independently assess patients' physical and psychological health, as well as administer medical procedures and manage medically advanced technology . In addition to that, ICU nurses must implement their theoretical competencies in clinical settings and follow the competence requirements of ICU nurses in intensive care units, in order to give quality care to critically ill patients (Svensk sjuksköterskeförening, 2020). However, to the best of our knowledge little is known about the experiences of new ICU nurses, hereafter referred to as newly graduated nurses (NGN), who have worked 0-3 years, in intensive care units. That led the Authors to seek knowledge about NGN experiences of working in the ICU.

Background

ICU nurse competence

Competence has been described in different ways and in the literature review of European research is described as having both knowledge and experience in a certain practical situation (Ääri et al., 2008). The Swedish National Board of Health and Welfare (NBHW) Socialstyrelsen (2018) has stated in a report that competence is the ability of using both knowledge and skills to execute a planned work outcome. In addition to that, a work requirement expectation put upon a person to achieve a proper work task is also known as competence. However, in the difficult and challenging situations in health sectors, both a lack of competence and lack of health care staff members can impact patients' safety and put them in danger (Socialstyrelsen, 2018). One literature review study declared; nurses have an important role in the foundation of hospital structure (Henriques Camelo, 2012). Critically ill patients require difficult care and ICU nurses are even challenged with caring for critically ill patients who are on the verge of life and death (Henriques Camelo, 2012). It is recommended that ICU nurses be mindful about their self-development by expanding their education and experiences (Henriques Camelo, 2012). According to an integrative review, achieving experience and development is inseparable and considered essential in the development of competence, therefore, ICU teachers and leaders must help nurses new to ICU in their transition to practice by creating a transition program that prepares them for different critical clinical situations in the ICU (DeGrande et al., 2018a),

The Sweden Nurse Association has described the six core competence requirements for new graduate ICU nurses and their senior nurses to provide safe care to patients in intensive care units and give a clear picture of their profession. Furthermore, the competence requirements help the academic institution design the curriculum of ICU nurse education programs to be implemented in the intensive care unit and even improve intensive care units' quality of care (Svensk sjuksköterskeförening, 2020). 80 % of nurses and their managers assert that advanced practice nurses increase patient safety and quality of care (Chau et al., 2022)

Core competence requirements

The six core competence requirements for ICU nurses in Sweden are; person-centered care, evidence-based care, team work, safe nursing care, improvement of intensive care knowledge for quality development in critical care nursing and use of information resources, including digital technology (Svensk sjuksköterskeförening, 2020). Providing person- centered care, ICU nurses have to see the patients as a person who is valuable and avoid focusing solely on their illness. (Ekman & Norberg, 2021). To manage future healthcare challenges, healthcare providers need to change work cultures by introducing person-centered care and inter-professional work practices into their work environment (SOU, 2020:19). ICU nurses should collaborate in teams with other health care professionals in order to give safe care to patients (Svensk sjuksköterskeförening, 2020). Safe nursing care starts with taking responsibility of

patient safety by following the competence requirements of reporting hazards, healthcare mistakes and examining and reviewing incidents, which is an important part of patient safety (Källberg & Göras, 2021). In a recent research study nurses have stated recommendations to help avoid error in intensive care units, proper regulations need to be specified, inseparable theoretical education and clinical training should be given, changing medicine package similarity, and using computer-based documentation will all help prevent error in intensive care units (Eltaybani et al., 2020). It is required that ICU nurses take a leading role in managing digital technology, staying update in care development with digital technology and provide person-centered care involving digital technology (Sävenstedt & Florin, 2021).

ICU nurses' competence in European intensive care units has also been researched in a literature review and Delphi research studies. Moreover, a competence requirement tool framework was also created by the members of the European Federation of critical care nursing associations (EfCCNa) committee (European Federation of Critical Care Nursing Associations, 2013; Lakanmaa et al., 2012; Ääri et al., 2008). The common research outcome has shown that ICU nurses competence requirements consist of professional and clinical competencies. Professional and clinical competence is defined as being knowledge based, skills based, experience based, with ethical principles, and ways of thinking. (Lakanmaa et al., 2012; Ääri et al., 2008). Similarly, EfCCNa competence requirement tool framework includes professional and clinical competence of ICU nurses, also including competence requirements such as management, education, and development that ICU nurses should accomplish through critical care nursing education and clinical work experience. The goal of the competence tool framework is to provide critical care nursing educators, and employers a tool to assess ICU nurses` competence during their education and asses their clinical skills on the job (European Federation of Critical Care Nursing Associations, 2013)

The clinical competence requirements

Clinical competence is defined as recognizing abnormal states in a patient's condition and providing appropriate care (Ääri et al., 2008). Clinical competence consists of three requirements ICU nurses must achieve, principles of ethics of nursing, clinical regulations and nursing interventions (Lakanmaa et al., 2012).

The principles of ethics in nursing competence are described as, being just, respecting patients' uniqueness, value, dignity, and providing continuous care without discriminating against patients (Ääri et al., 2008). Patients have the right to treatment and care without being judged by their age, ethnicity, religion or gender backgrounds (Socialstyrelsen, 2019). This is also a practice of person-centered care (Lakanmaa et al., 2012). However, following the regulation of patient self-determination and safety can be challenging when critically ill patients are agitated, lack self-awareness, and thus are not capable of making decisions about their care (Ääri et al., 2008). ICU nurses should be able to, despite these challenges, gather significant amounts of information about a patient's health condition, have the ability to correctly examine the psychological state of patients and give life sustaining support which can include end of life

care (European Federation of Critical Care Nursing Associations, 2013). Clinical regulation competence involves, following clinical guidelines, such as hygienic routines and evidence-based care guidelines (Lakanmaa et al., 2012). Knowledge of clinical guidelines helps ICU nurses implement evidence-based care, such as, clinical guideline recommendations of sedation to patients in need of mechanical ventilation (Ääri et al., 2008). Examples of competencies in nursing intervention includes providing oral care, pain management, endotracheal suctioning, reducing patient anxiety, providing education to patients, and monitoring and stabilizing vital signs (Lakanmaa et al., 2012; Ääri et al., 2008). An explorative research study stated that pain management assessment tools are challenging to score among ICU nurses and was seen as more appropriate to patients outside the care of intensive care units (Wøien & Bjørk, 2013). Additionally, ICU nurses should have skills and knowledge of anatomy and physiology functions, recognize alarming signs in patient conditions and should seek advice through collaboration with medical team members (Lakanmaa et al., 2012; Ääri et al., 2008).

Professional competence requirements

Professional competence requirements involve, having the skill of tranquility in challenging patient care settings, possessing the ability to think critically while executing calm informed decisions about patient care (Ääri et al., 2008). Professional competence requirements of ICU nurses consist of achieving ethical activity, decision making, workplace improvement and teamwork (Lakanmaa et al., 2012).

The competence of ethical activities consists of following ethical codes of nursing when giving care, not limited to, dealing with the ethical issues of patients in end-of-life care (Lakanmaa et al., 2012; Ääri et al., 2008). ICU nurses should possess the ability to understand ethical principles and regulations related to caring for critically ill patients, including knowledge of patient self-determination (European Federation of Critical Care Nursing Associations, 2013). The competence of decision making is described as thinking critically, prioritizing work tasks and solving problems in intensive care units (Lakanmaa et al., 2012). Critical thinking abilities are important and it is recommended that ICU nurses develop critical thinking skills in intensive care units in order to provide safe care to patients in this demanding environment (Al Zamel et al., 2020). The competence of work improvement requires that ICU nurses work according to evidence-based practice to improve intensive care settings. Due to the fact that intensive care units are continuously striving to be better through development from intensive care research studies and being up to date in advancements in intensive care technology, ICU nurses can continuously improve themselves by participating in research studies and working according to evidence-based practice (Ääri et al., 2008). Lastly, the teamwork competence requirements include ICU nurses working together with different health care professionals to solve day-to-day clinical issues in intensive care (Lakanmaa et al., 2012; Ääri et al., 2008). Requirements to gain ICU nurse competence starts with completing an academic institution's education leading to a graduate diploma or a master's degree, plus gaining clinical experience (Gullick et al., 2019).

ICU nurses' education in Europe and Internationally

In Europe, ICU nurse education is given to register nurses as a nurse specialty option (Rafferty et al., 2019; SOU, 2018:77). A research survey of ICU nurse education in Europe has shown that there are differences in ICU title protection , education program systems and length of ICU nurse education programs (Endacott et al., 2015). In Sweden ICUs professional title is protected and the right to use ICU as a specialty has to be approved by the National Board of Health and Welfare (Rafferty et al., 2019; SFS 2010:659). 45,5% of European countries do not have title protection, examples include Belgium, Denmark, Iceland, and Spain (Endacott et al., 2015). ICU nurse education programs are offered in countries such as, Sweden, Denmark, Switzerland, and Norway. (Endacott et al., 2015; 2019). 54% of European countries approve ICU as a specialty and include countries such as Sweden, Austria, Turkey, Switzerland, and Cyprus (Endacott et al., 2015). According to Bloomer et al. (2019) registered nurses who are responsible for patient care must have professional post-registration experience or certification in intensive care due to the complexity of care provided . However, the length of intensive care education programs differs in European countries and ranges from 240 h to 24 months (Endacott et al., 2015).

International perspective

Sweden´s registered nursing education is a three year higher education obtained at university level that allows for post-graduate education in intensive care nursing (Rafferty et al., 2019). The post-graduate intensive care nursing education is provided at university level and is a full-time education that lasts one year. Swedish intensive care education and curriculum is regulated by the Swedish government but how the education is provided can vary between different universities (Nursing, 2020; Rafferty et al., 2019; SFS 1992:1434; SFS 1993:100; Universitets Kanslers Ämbetet, 2023).

Australia's educational nursing framework consists of undergraduate studies that lead to a bachelor's degree aimed at entering a professional career in nursing that allows for post graduate education in critical care nursing. A post graduate education can include a graduate certificate in critical care which requires 6 months of further education or a graduate diploma in critical care which requires 1 year of further education (Griffith University, 2023; Studies, 2023).

In the United States Licensed registered nurses with a bachelor's degree or advanced practice registered nurse (APRN) are eligible to obtain a certification as a critical care nurse by taking the critical care nursing exam. In order to be eligible for this exam there are two options; the two year option which requires practicing as an RN or APRN for 1,750 hours in direct care of acute/critically ill adult patients during the previous two years, with 875 of those hours accrued in the most recent year preceding application and a five year option requiring practice as an RN or APRN during the previous five years with a minimum of 2,000 hours in direct care of acute/critically ill adult patients, with 144 of those hours accrued in the most recent

year. This certification must be renewed every three years and that involves specific requirements (American Association of Critical Care Nurses, 2022, 2023).

In England Registered Nurses are regulated by the National Health service of England. Registered Nurses have a three-year education, the first year consists of learning a basic foundation and skills and the next two years nurses' study one of three specialty options in adult care, mental health or children's nursing. Nurses are required to have a RN degree, be registered with the nursing and midwifery council, and have on the job experience before being eligible to begin a specialist nurse post graduate diploma. However, specialist nurses in England have no title protection and this has led to inconsistencies in scope of practice, education, and training (Rafferty et al., 2019). Below in Table 1 are examples of different educational curricula from an international perspective.

Tabel 1: Examples of university course plans in Intensive care nursing(Griffith University, 2023; nurses, 2022; University, 2023; University of Gothenburg, 2023)

Sweden	University of Gothenburg- 1-year full time studies ➢ Specialist Nursing profession, emphasis in intensive care ➢ Assessment, decision-making and nursing interventions in intensive care ➢ Advanced assessment, decision-making and nursing interventions in intensive care ➢ Scientific method ➢ Master's thesis in nursing with focus in Intensive care Clinical deepening in intensive care (In hospital and Simulation training)
Australia	Griffith University Australia: Critical care nursing diploma, 1 year education studied half- time ➢ Advanced Health Assessment ➢ Managing Complex Clients ➢ Transforming and leading healthcare ➢ Foundations of critical care nursing practice Griffith University Australia: Master of advanced Nursing Practice specialty in Critical care, 1,5-year education studied full time ➢ Advanced Health Assessment ➢ Managing complex clients ➢ Foundations of Research Inquiry ➢ Trauma, Shock, and multiple organ dysfunction syndrome ➢ Transforming and leading Health Care

	➢ Foundations of Critical care nursing practice ➢ Research Electives ➢ Managing clients with complex cardiac presentations
The United States of America	The USA does not have a specialist nursing education in Intensive Care, however, nurses who have worked in intensive care are eligible to take the Critical Care Registered Nursing exams. ➢ The CCRN exams are 3-hour tests consisting of 150 multiple-choice items. Eighty percent (80%) of each exam focuses on Clinical Judgment and the remaining 20% covers Professional Caring and Ethical Practice.
The United Kingdom	Conventry University offers a 1,5 year part-time education in Intensive Care nursing with a 150 hour clinical rotation requirenment. ➢ Advanced Health Assesment practice ➢ Fundamental principles of critical care nursing ➢ Applied practic of critical care nursing

Intensive care unit environmental factors of intensive care nurse turnover

Research emphasizes that intensive care nurse turnover is caused by social, physical, organizational, and environmental factors. The social environmental factors which led ICU nurses to leave their work included, not being able to discuss work responsibility, unhealthy work shifts, anxiety related to not having social support and lack of balance between work and personal life (Khan et al., 2019; National Academies of Sciences Engineering Medicine, 2019). Organizational aspects were related to a lack of socialization with coworkers, patients and relatives, teamwork, being unappreciated, not gaining respect and the stress caused by an unhealthy work environment plus an inability to provide diligent patient care due to workplace cost reduction. The physical aspects of intensive care turnover were associated with stress, related to being constantly in the patient room, hearing ongoing medical devices noise, and the impact on their health due to lack of sleep which led to inability to recover after work shifts. The shortage of nurses in intensive care units, unreasonable nurse to patient ratio, physical and mental pressure of intensive care environments are also reported causes of physical environmental impacts that lead to turnover in the ICU (Khan et al., 2019). In the Consensus Study report published by the National Academies of Sciences, Engineering, and Medicine burnout is described as a context-dependent phenomenon created by work-related stressors that affect professional attitudes and behaviors originating and driven in the work

environment (National Academies of Sciences Engineering Medicine, 2019). Kelly et al. (2021) conducted a prospective survey of critical care nurses which identified a significant relationship between burnout and nurse turnover and that the ICU work environment is a factor contributing to burnout. Three key elements were identified in the work environment, meaningful recognition, appropriate staffing, and effective decision making, all of which have a statistically significant impact on burnout, secondary traumatic stress, and compassion satisfaction. According to Van den Bulcke et al. (2020) newly graduated registered nurses with 18 months of experience had the most experience in their units which caused them fear of burnout.

Global nurses' shortage

Nurse shortage has been an issue from the 1970s and still is a global issue in clinical settings (2019; Socialstyrelsen, 2021; SOU, 2018:77). Finland´s Ministry of Employment and Economy has stated that a lack of nurses is hazardous in healthcare compared to other workplaces (2019). According to the Swedish government's public investigations report, Swedish hospital departments are closed, operation schedules are canceled, and waiting lists have increased due to nurse shortages. In addition to that, lack of specialist nurses has challenged the quality of the health care system`s way of maintaining a dignified death to patients, by minimizing suffering (SOU, 2018:77). According to Sweden`s National Board of Health and Welfare, ICU nurse shortages were reported in 21 Swedish hospitals in 2020 (Socialstyrelsen, 2021). The reason behind ICU nurse turnover has been studied and has shown that ICU nurse turnover is caused by social, physical, organizational, and environmental factors in ICUs (Khan et al., 2019). The Swedish National Board of Health and Welfare report states that healthcare employees and caregivers have concern over lack of nurses, patients' safety, and this poor quality of healthcare can cause life threatening health issues to patients.

Furthermore, studies have shown the rise of nurse-to-patient ratio to 1:2.5 in intensive care units has increased patient death by 3.5 times during an ICU nurse work shift compared to an 1:1 nurse to patient ratio (Socialstyrelsen, 2018). For nurse specialists to be retained in health care sectors, there has to be improvement in healthcare environments, increases in salary based on competence, and continuous special education opportunities should also be offered (SOU, 2018:77). In order to provide safe healthcare employers should provide staff with continuous and higher education opportunities to increase technical skills, team work abilities, decision making skills and communication skills (Socialstyrelsen, 2018).

Theoretical framework

From Novice to Expert

Benner uses the Dreyfus model Benner (1984) which proposes that to acquire and develop a skill, professionals pass through five different stages: novice, advanced new beginner, competent, skilled and expert, within nursing. These levels reflect changes in three general aspects of skilled performance. The first transition the learner moves from relying on abstract

principles to using past concrete experience as standard. The second transition the learner's perception changes from seeing a situation of equally relevant parts to seeing a complete whole where only certain parts are relevant. The third transition the learner stops being a detached observer and evolves to an involved performer engaged in the situation (Benner, 1984). The five stages are shown below in Table 2.

Table 2: Five stages of transition in Nursing (Benner, 1984)

Stage 1	**Novice** ➢ Novices are beginner nurses who are taught objective attributes such as, temperature, blood pressure and pulse. This is to give an entry to situations in which they have no experience but are expected to perform. Rule-governed behavior is typical of the novice and is limited and inflexible. A nursing student can be a novice just as well as an experienced ICU nurse in adult intensive care units can be a novice if transferred to neonatal intensive care units.
Stage 2	**Advanced Beginner** ➢ Advanced beginners' nurses demonstrate performance through using what the Dreyfus model terms "aspects of the situation." Aspects require prior experience in actual situations for recognition. Advanced beginners need support in the clinical setting, and this needs to be by nurses who have at least reached the competent level of skill and performance. Both novice and advanced beginners take in only small parts of a whole situation
Stage 3	**Competent** ➢ Competent nurses have been working two to three years and been involved in the same or similar situations. In this stage the nurse begins to see their actions as long-range goals or plans. These plans lead to consideration of what is most important and what can be ignored in future situations. There is a lack of speed and flexibility but a feeling of mastery with the ability to cope and manage clinical nursing.
Stage 4	**Proficient** ➢ The proficient nurse uses perception and is guided by maxims which are, a general truth or rule of conduct. Perception is based upon experience and recent events but not

	thought out. Maxims reflect nuances of a situation, unlike the novice or competent nurse who see maxims as unintelligible nuance of a situation, to the proficient nurse maxim provide direction into what must be taken into consideration. The proficient nurse learns what situation to typically expect and can modify their response leading to recognition of when the expected normal does not occur.
Stage 5	Expert • Expert nurses can use their understanding of a situation to form an appropriate action and no longer rely on a rule, guideline, or maxim as guide. These nurses have an enormous background of experience and use intuitive grasp to zero in on a problem leaving behind wasteful consideration of unfruitful diagnoses and solutions. The expert has highly skilled analytical ability which is used in situations where no earlier experience exists. Not all nurses become experts, but systematic documentation of expert performance is a first step in clinical knowledge development.

Transition Shock

Duchscher (2012) term transition shock describes the NGNs first months after orientation as the difference between what they learned in their education versus the expectation, anticipation, and levels of responsibility they faced in their new job. This shock exists due to the lack of insight into the expectations given during their education and the short amount of time before nurses are asked to be responsible for complex and risk-intensive situations (Duchscher, 2012). This includes the amount of support received to navigate the nurse's new role and responsibility, the nurse's level of developed maturity, life experiences and previous nursing experience. The expectation to have continued passion, energy and give hope to others is expected to be maintained while working in a health care system that call nurses in for overtime on a daily basis, do not honor approved time off, allow patients to be cared for in hallways, do not ask how nurses feel about changes before implementing them and do not support leaders who sacrifice and that feel powerless to demand and implement change. New graduate nurses begin transition when leaving a predictable and safe learning environment and many describe their first year as "an obstacle course" (Duchscher, 2012). Furthermore, Duchscher (2012) states the nursing profession expects a lot, and acute care nursing will ask a nurse to give everything they have and then ask them to give more.

Problem formulation

With a shortage of registered nurses and ICUs nurses in the world today which is only expected to increase, it is important to understand and support all new nursing graduates. Without properly trained, competent nurses in health care patient safety and care decreases.

Intensive care nurses are expected to care for critically ill patients with medically advanced technology and are also required to have critical thinking and decision-making skills to prevent patient harm as soon as they begin their new careers. Therefore, the newly graduated intensive care nurses' experiences of their first years in the intensive care unit are needed to explore intensive care nurse education, including clinical training, as well as explore introduction programs provided to newly graduated intensive care nurses, to help improve education and work environments and recruit and retain nurses and specialist nurses. Therefore, the Authors have done a qualitative literature study of new ICU nurses work experiences in the beginning of their careers.

Purpose

The purpose of this literature study is to explore new ICU nurses work experience in their first-three years in intensive care units.
The questions guiding this study consist of:

- Do new ICU nurses experience any challenges in their first three-years working in intensive care units?
- Do new ICU nurses feel they develop in any ways in their first three-years working in intensive care units?
- How do new ICU nurses feel in relation to their competence in their first three years working in intensive care units?

Method

A systematic literature study with a qualitative approach was used to seek knowledge and understand new ICU nurses work experience in their first-three years in intensive care units.

A systematic literature study means that relevant literature researches based on research questions is identified, chosen, quality evaluated and synthesized (Bettany-Saltikov & McSherry, 2016). A qualitative approach seeks knowledge about people's experiences and presents the findings in expressive text form instead of numeric form (Willman & Stoltz 2017). Which makes the method of choice appropriate to the authors' research purpose and hopes its readers` can gain knowledge about new ICU nurses work experience their first-three years in intensive care units.

A quantitative approach was excluded as a method to be used in this study since quantitative approaches are interested in summarizing research studies results using numerical methodology to present general research results findings (Bettany-Saltikov & McSherry, 2016).

Selection Criteria

To prevent bias in the selection of literature studies, inclusion and exclusion criteria must be clearly stated before proceeding to literature searching(Bettany-Saltikov & McSherry, 2016). A framework was used to create selection criteria that answers the research study purpose.
PEOT is used in qualitative literature studies to formulate and limit study questions and selection criteria. P stands for the studies population, E stands for Exposure, meaning what the population is exposed to, and O stands for Outcome, which is the results expected from exposure. Lastly, T stands for which type of research studies are going to be included (Bettany-Saltikov & McSherry, 2016). Inclusion and exclusion selection criteria of the Author's literature studies are presented in Table 3 below.

Table 3. Inclusion and exclusion criteria

	Inclusion criteria	**Exclusion criteria**
Population	Nurses who have worked in the ICU for 3 years or less	Nurses who have worked over 3 years in the ICU
Exposure	Intensive care units	Non intensive care units
Outcome	Work experiences the first 3 years in intensive care units	Any other outcomes that don't describe the study purpose

Type of Study design	Qualitative studies and Mixed articles where qualitative studies are identifiable. Articles from 2013 to 2023 will be included Peer review articles Written in English or Swedish language Ethically approved research	Quantitative studies Articles that do not have ethical approval Discussion papers Letters Commentaries Reviews Studies older than 10 years Other studies with languages other than English or Swedish

Data Collection

Literature Research Sources

A systematic literature search was conducted in CINAHL, PubMed, SCOPUS, and PsycINFO databases using inclusion and exclusion criteria lists as a search strategy, those criteria were presented earlier in Table 3 (see Appendix 2 for the above-named searches).

CINAHL and PubMed databases are search engines that store different nursing and medical research studies that are published in different research journals (Oermann et al., 2021; Polit, 2021). To find relevant articles in the databases, keywords from research questions have to be extracted first and used before searching for research literature (Karlsson, 2017). PsykInfo was used because it is a database for several disciplines including nursing, medicine and psychiatry (Gothenburg University Library, 2023). PsykINFO is also a database of behavioral and social science research and is current and comprehensive. It is intended for both students and researchers as a tool to locate article abstracts and full text documents for scientific study, education or patient care (Barber & Cable, 2015).

Search Term Strategy

The authors followed Bettany-Saltikov and McSherry (2016) steps of systematic literature research, search term strategy to identify keywords and phrases to be used in databases to find relevant research that can answer the Authors literature research questions. The quality of a study can often be determined by how thorough the Authors have been using a search term (Bettany-Saltikov & McSherry, 2016).

Step 1. The Authors research question was divided into parts using PEO framework to find keywords and synonyms (see appendix 1)

Step 2: Synonyms to keywords and phrases as well as Mesh terms and CINAHL Subject Headings and Thesaurus keywords were identified and added in the PEO framework.

Step 3: Truncations were added at the end of some keywords and double quotation marks were used around the keyword phrases. Shortcuts to keywords were identified and added to the PEO table. Truncations were used at the end of the search word to expand the search (Bettany-Saltikov & McSherry, 2016). Double quotation marks are used for databases to interpret as phrases and don't map the search phrases (Polit, 2021).

Step 4: Search strategy strings were made by combining every keyword list in the population column with Boolean operation "OR". The same process was done on the exposure and outcome keywords list. The keywords in the population column were combined with "OR" and were searched in a database search block first and then the same procedure was repeated with exposure and outcome keyword combinations also using "OR". Keywords that are not MeSH terms, CINAHL Subject Headings and PsykINFO thesaurus were combine with "[Tiab]" in PubMed ,"AB" & "TI" in CINAHL, "Abstract" in PsycINFO, "TITLE-ABS-KEY" in SCOPUS, to search free keywords and phrases in abstracts and titles to find articles that not yet assigned to mesh term or CINAHL heading as an index search according to library guidelines search strategi (Libgiudes).

Population, Exposure and Outcome keywords list with "OR" Boolean operation were then combined with Boolean operation "AND".

Boolean operators "AND", "OR" are those words used in searches to combine different keywords or phrases(Bettany-Saltikov & McSherry, 2016).

S**tep 5**. Finally, a comprehensive systematic search was performed in databases CINAHL, PubMed, PsykINFO and SCOPUS. (See Appendix 3)

Step 6. The search was documented and saved as well as the result of the searches of database format.

To find research articles to include in this literature study Bettany-Saltikov and McSherry (2016) three step approach was used by conducting searches in databases and then removing articles first based on their titles that did not match inclusion criteria, then abstracts of the remaining articles were read, if the Authors could not determine if the articles matched inclusion criteria from reading the abstract the articles were found and read in their entirety. In total 1,606 titles and or abstracts were read, a significant number of articles could be excluded after this process (1,590 articles) (see Prism Diagram in Appendix 3). After article exclusion from reading titles and abstracts, 16 articles in their entirety needed to be found, however one article was not available through the University Library and the Authors contacted the articles Author according to the webpage, but no article was sent or received, three articles had a misleading title and abstract and it was found that these were not articles but were instead Canadian ICU conference headings. In total 12 articles were found and read in their entirety, which led to 3 articles being excluded (see Appendix 5). 9 articles were in total included for data analysis.

Data analysis

Article quality appraisal

The quality of the included research articles is inherently important because the literature studies finished quality, evidence, and conclusion is dependent upon this (Bettany-Saltikov, 2016). The authors chose, a Critical Appraisal Skills Programme (CASP), to appraise the methodological quality of the included studies. Critical appraisal allows the authors to systematically assess published papers quality (CASP, 2023). Five of the 9 articles were assessed as having high quality (Amankwaa et al., 2014; DeGrande et al., 2018b; Della Ratta, 2016; Gohery & Meaney, 2013; Serafin et al., 2022). Three articles were appraised as medium quality (McKenzie et al., 2021; O'Kane, 2012; Stewart, 2021). One article was assessed as low quality (Saghafi et al., 2012).

Data extraction process

Bettany-Saltikov (2016) lists a 9-step process for extracting data that the authors followed in their data extraction process that is shown in table 4 below.

Table 4: The 9-step data extraction process

Step 1	The articles result section of primary articles should be read several times to become fully immersed in the data, to begin seeing the participants view and perception.
Step 2	The primary articles` different themes should be highlighted in different color codes, either with pens or electronically on a computer.

Step 3	Themes with the same color codes should then be grouped together either manually or electronically. Make sure to note the page number and line number from the primary paper.
Step 4	In each color code general themes should be exposed.
Step 5	In each color category after general themes are found, they should then be grouped into new categories, reducing the number of themes.
Step 6	All similar heading should be removed.
Step 7	Authors should compare their results.
Step 8	The results of the primary articles need to be read again to ensure all relevant data is included.
Step 9	This process is continued in all primary articles`.

All articles` results were read several times. Then, each article was analyzed for themes and subthemes, by writing down and grouping information from the results, this was repeated with all 9 articles. This step helped with immersion and understanding in seeing patterns in the text. After this, one Author color coded each article manually using different colored pens and one Author color coded each article electronically on a computer. After this, each article was worked through focusing on the important meanings in relation to the aim of the study and related research questions. The identified information was written by one Author, on a paper and the paper was given a heading that correlated with the meaning, and this was done electronically by the other Author. This continued until all important meanings had an individual heading. This was repeated with all nine articles. This resulted in 23 headings that were then grouped into 6 higher order headings. Similar headings were removed. Both Authors did this individually and then compared and discussed and changed. All articles' results were then reread to ensure all relevant information was included in the results.

Ethical considerations

Following the Declaration of Helsinki- ethical principles WorldMedicalAssociation (2023) and the Swedish law on ethical review of research involving humans Utbildningsdepartementet (2003) the authors of this literature study understand the duty of research is to protect life, health, dignity, integrity, and that research subjects always have a right to self-determination, privacy, and confidentiality. The Authors took into consideration the risks to ICU nurses who

were interviewed in the articles chosen, which have been considered as minimal. The main risk the authors have as a concern is the effect of speaking about a period that may be considered stressful for the ICU nurses. The studies chosen for data analysis had ethical approval from an ethics committee before the study began.

Result

This literature study consisted of analyzing 9 articles that were relevant to the aim of this study, the articles were published between 2011-2021, all used a qualitative method, in total 93 nurses working in the Intensive care with 0 to 3 years of experience in the ICU were interviewed, none of the nurses hired to work in the ICU had a specialist ICU education and were all Registered Nurses (Amankwaa et al., 2014; DeGrande et al., 2018b; Della Ratta, 2016; Gohery & Meaney, 2013; McKenzie et al., 2021; O'Kane, 2012; Saghafi et al., 2012; Serafin et al., 2022; Stewart, 2021). Three studies included senior nurse perspectives from interviews with a total of 21 senior nurses interviewed (Amankwaa et al., 2014; O'Kane, 2012; Stewart, 2021). One study had the perspective of registered nurses with 2-20 years of ward experience, who had transferred to the ICU (Gohery & Meaney, 2013) and DeGrande et al. (2018b) study had nurses who had been working in the ICU 2-3 years since graduation. The studies are from Europe (Serafin et al., 2022), The United States of America (Amankwaa et al., 2014; DeGrande et al., 2018b; Della Ratta, 2016), The United Kingdom (O'Kane, 2012; Stewart, 2021), The Republic of Ireland (Gohery & Meaney, 2013), and Australia (McKenzie et al., 2021; Saghafi et al., 2012). The result will be presented in three themes with correlating subthemes (see Table 5 below).

Table 5: Themes and Subthemes

Themes	Subthemes
Reality Shock: Transitioning to professional role	➢ Discovering and concealing lack of knowledge ➢ Overwhelmed and realizing responsibility awareness ➢ Transition through orientation in ICU
Challenges in clinical learning and development	➢ Communication and teamwork ➢ Being criticized and fear of asking for support ➢ Mentorship impact and seeking encouragement
Developing in the Professional Role	➢ Competence needed in clinical learning ➢ Technology Competence ➢ Gaining confidence through supportive colleagues and mentors

	➢ Gaining competence

Reality Shock: Transitioning to professional role

Discovering and concealing lack of knowledge

Several studies describe how NGN feel about being new and not having the appropriate knowledge or skills, and these were expressed as, nervous, lack of confidence, an acute awareness of inadequate knowledge, self-doubt, anxiety, physical and psychological stress, overwhelming and uncomfortable (DeGrande et al., 2018b; Gohery & Meaney, 2013; McKenzie et al., 2021; O'Kane, 2012; Serafin et al., 2022). Reality shock was described as well as stronger feelings, such as anxiety and emotional turmoil (Gohery & Meaney, 2013; O'Kane, 2012). In Saghafi et al. (2012) NGN awareness of being new and lacking knowledge led to them to trying to hide this from their patients and their families due to the belief that this would influence the level of trust between them, and they went as far as using clothing to hide what level of experience they had. In this study it was reported that NGNs who had just graduated from the university wore light colored shirts and the more experienced nurses wore dark colored shirts and this lead to NGNs changing into dark colored shirt to avoid being seen as inexperienced and NGNs describe how they avoid the questions from families on how long they had been working or use other words then new, such as, awhile.

Overwhelmed and realizing responsibility awareness

Most NGN before entering the ICU environment had feelings of confidence, competence, excitement, and enthusiasm according to studies by DeGrande et al. (2018b); McKenzie et al. (2021); O'Kane (2012); Serafin et al. (2022). However, in the beginning of the transition phase an awareness over responsibility and autonomy, plus a perception of not having adequate knowledge quickly changed these feelings (DeGrande et al., 2018b; McKenzie et al., 2021; O'Kane, 2012; Serafin et al., 2022). Feelings of uncertainty, increased stress, anxiety, emotional turmoil and even insomnia have been reported (DeGrande et al., 2018a; Gohery & Meaney, 2013; O'Kane, 2012). It was reported that NGNs left the ICU due to feelings of being overwhelmed (Amankwaa et al., 2014; Gohery & Meaney, 2013). NGNs describe a lack of appropriate preparedness for documentation and legal aspects of nursing, plus felt unprepared for the responsibilities and accountability after orientation (Gohery & Meaney, 2013; Serafin et al., 2022). In Serafin et al. (2022) study NGNs acknowledge a lack of preparedness in how to describe their observations in writing. In the study by O'Kane (2012) NGNs during orientation had a legally binding booklet that was meant to document their competence achievements, however some NGNs did not acknowledge or understand the importance of this document and described it as, tick boxes. Senior nurses reported being worried about NGNs who did not realize the implications, importance and consequences of the legal aspects and importance of record keeping (O'Kane, 2012).

Transition through orientation in ICU

All analyzed articles reported an orientation process that ranged in duration from 4 weeks to one year and there were different opinions on their quality and structure (Amankwaa et al., 2014; DeGrande et al., 2018a; Della Ratta, 2016; Gohery & Meaney, 2013; McKenzie et al., 2021; O'Kane, 2012; Saghafi et al., 2012; Serafin et al., 2022; Stewart, 2021). The more structured orientation package offered in the ICU contributed to increased self-confidence, career progression, and made the transition process into the ICU environment easier (Gohery & Meaney, 2013; O'Kane, 2012; Stewart, 2021). However, they did not only have positive effects and were related to high pressure, transition shock and increasing the cognitive load (Stewart, 2021).

In Serafin et al. (2022) study, NGNs had a planned three-month orientation, however nurse shortages required NGNs to begin independently caring for patients after only a few shifts. Mentorship led by several experienced nurses was a goal, but few NGNs reported having a dedicated mentor, and many NGNs felt unprepared to care for patients independently after orientation (Serafin et al., 2022).

Challenges in clinical learning development

Communication and Teamwork

Multi-professional teamwork and effective communication emerged as a necessary component of effectively working in the ICU and a large part of learning and feeling comfortable is interactions with staff, according to (Serafin et al., 2022; Stewart, 2021) studies. Effective communication skills with patients and families are also mandatory in the ICU (DeGrande et al., 2018a; Gohery & Meaney, 2013; Serafin et al., 2022; Stewart, 2021). It was reported that not being calm in a critical situation and still needing to communicate with the patients families was a preparation NGNs felt they lacked most (Serafin et al., 2022) and moreover, NGNs described performing new skills while caring and communicating with the family as difficult (Della Ratta, 2016). In several studies it was reported that relationship barriers have a great impact on NGNs clinical learning (DeGrande et al., 2018a; Della Ratta, 2016; Gohery & Meaney, 2013; Saghafi et al., 2012). (Serafin et al., 2022). The Stewart (2021) study, explained how relationship breakdown was one reason NGNs were leaving the ICU and even reported seeing NGNs having breakdowns in the ICU. It is described that certain senior nurses treat NGNs differently than other nurses, which is reported as a feeling of being tested and senior nurses are reported as criticizing, intimidating, unavailable, disinterested and in general rude and this was described as leading to feelings of anxiety, stress, not feeling good about the job being done and these feelings were reported as having a negative effect in future situations (Della Ratta, 2016; Gohery & Meaney, 2013; McKenzie et al., 2021; Saghafi et al., 2012; Serafin et al., 2022). Good relationships with other NGNs, Physicians and members of the multi- professional team was reported as being good for learning, emotional support, and a successful transition (DeGrande et al., 2018a; Della Ratta, 2016; O'Kane, 2012; Saghafi et al., 2012). Feelings of continously needing to prove themselves to be part of the team and accepted by colleagues was report but with time communication skills in multi-disciplinary teams did

improve (Gohery & Meaney, 2013; Saghafi et al., 2012; Serafin et al., 2022) NGNs recommended that classes for nurses and medical student be offered to prepare them for future multi-professional teamwork (Serafin et al., 2022).

Being criticized and fear of asking for support

According to several studies having someone to ask for help and feeling supported was important to NGNs and lack of having a preceptor or one they trusted was describes as damaging (DeGrande et al., 2018b; Della Ratta, 2016; Gohery & Meaney, 2013; O'Kane, 2012; Saghafi et al., 2012; Serafin et al., 2022). When support was not available NGNs described feeling alone and feeling abandoned (Della Ratta, 2016). Approachability is most important when asking for support and NGNs report that they quickly learned who the experienced team members they perceive as kind were and avoided the experienced team members who were abrupt and uncivil when asking for support (DeGrande et al., 2018b; Della Ratta, 2016; Gohery & Meaney, 2013; O'Kane, 2012; Saghafi et al., 2012; Serafin et al., 2022). According to Saghafi et al. (2012) study, NGNs found nurses closest to them in the hierarchy to ask for support when they were feeling the ICU was difficult because they felt they would get more empathy, and would seek advice on technical nursing matters with nurses more experienced and this study also highlighted that NGNs discover who are and are not willing to help them. In O'Kane (2012) study, NGNs report that a good or bad day was determined by which nurse was in charge and Gohery and Meaney (2013) stated NGNs only approach staff they know will assist them and provide support. According to the McKenzie et al. (2021) study NGNs state that feelings of victimization were strengthened by the NGNs deficit of knowledge, which affected patient outcomes.

Mentorship impact and seeking encouragement

Studies showed an absence or perceived absence of formal educators to NGNs on the ICU and described an environment in which experienced senior nurses were not working, using agency nurses without proper experience, and an irregular presence of clinical development nurses (McKenzie et al., 2021). Gohery and Meaney (2013) study reported experiences of not having continuity in preceptors, and a differing degree of education received by them. It was recommended that NGNs should be led by more experienced nurses (Serafin et al., 2022). In Gohery and Meaney (2013) it was reported that there was a feeling of always being wrong because of all the different teaching methods. In McKenzie et al. (2021) study NGN in the neonatal ICU worked with agency nurses who also had no Neonatal experience. Seeking and receiving feedback plus formal appraisal is an important component for increasing self confidence in NGNs and an opportunity to evaluate their progress and achievement. Feedback is so important to NGNs that negative feedback is considered better than no response at all (Gohery & Meaney, 2013; McKenzie et al., 2021; Saghafi et al., 2012).

Developing in the Professional Role

Competence needed in clinical learning

By analyzing what NGNs report as competencies they feel they lack in their new ICU environment it can be concluded what competencies are needed, including but not limited to; time management skills, coping with stress, coping with shift pattern changes, reacting to patient death, controlling their emotions, communicating with patients families, providing CPR, disconnecting patients from life support equipment and not having the ability to put theoretical knowledge into practice (DeGrande et al., 2018b; Della Ratta, 2016; Serafin et al., 2022; Stewart, 2021). NGN felt they had sufficient theoretical information but needed more education in technical skills (Amankwaa et al., 2014; Della Ratta, 2016).

The work environment gave a perception of being high risk because after serious incidents new material was added to the orientation documents and new nurses also perceived this as blame (Stewart, 2021). Evening and night shifts plus changing shifts often had a negative impact on nurses and they felt vulnerable, lost, unsupported and this led to confusion and inconsistency in meeting developmental needs and impeded learning (McKenzie et al., 2021; Stewart, 2021). NGN recommended simulation based training to help them feel less stress in the ICU environment by exposing them to possible situations they may encounter and being able to practice without fear of harming patients (Serafin et al., 2022). NGN state that an ability to resist stress is important and suggest decompressing after work and physical activity are ways to obtain this (DeGrande et al., 2018b; Serafin et al., 2022). NGN felt that time management was crucial in the ICU and described how their lack of time management affected being a valued member of the team (Amankwaa et al., 2014; DeGrande et al., 2018b; O'Kane, 2012; Serafin et al., 2022). Confident, assertive, dominate, having a willingness to improve and not being shy are reported as personality attributes deemed as helpful for working in the ICU (DeGrande et al., 2018a; Serafin et al., 2022; Stewart, 2021). NGN in Della Ratta (2016) felt they needed to be viewed or feel a certain way, all describing strong and hard attributes.

Technology Competence

Nurses new to ICU felt that their lack of knowledge or feelings of incompetency left them fearful of using equipment incorrectly and struggled with the equipment within the ICU and these nurses also struggled with the computer information system, stating that it caused extra stress, anxiety, confusion (Gohery & Meaney, 2013). The fact the NGN lacked knowledge on how to use the computer system resulted in a communication breakdown within the multi-professional team that led NGN to feel embarrassed, insecure, incompetent and not a part of the team (Gohery & Meaney, 2013). NGN in Stewart (2021) study mention that all the new equipment was overwhelming. In Serafin et al. (2022) study NGNs responded they felt unprepared after clinical training, because they were assigned a small number of tasks, especially with specialized equipment.

Gaining confidence through supportive colleagues and mentors

In several studies NGNs report social acceptance, senior nurse relationships and communication as having a great impact on their clinical learning (DeGrande et al., 2018a;

Della Ratta, 2016; Gohery & Meaney, 2013; Saghafi et al., 2012). Developing social relationships helps in gaining confidence in the ICU (Serafin et al., 2022; Stewart, 2021). Having a good team resulted in a successful transition and fellow colleagues helped with emotional support (DeGrande et al., 2018b; Della Ratta, 2016). Those senior nurses who were described as brilliant, supportive, encouraging, gave NGNs feelings of self-confidence, were persons to share experiences with, helped in the transition process and also helped NGNs in their progress and achievements (DeGrande et al., 2018a; Della Ratta, 2016; Gohery & Meaney, 2013; O'Kane, 2012; Saghafi et al., 2012).

Gaining competence

Time, repeated exposure to situations, colleagues, mentors, and educators increased self-confidence, and familiarity with the ICU environment (DeGrande et al., 2018b; Della Ratta, 2016; Gohery & Meaney, 2013; Serafin et al., 2022)

As transition progressed study participants actively built up their own knowledge and skills leading them to be more alert in care and monitoring of patients and could reach within themselves for solutions and management of deteriorating patients (Della Ratta, 2016).

Company representatives who came to the ICU to teach about the use of their companies specific equipment, were beneficial and increased confidence (Gohery & Meaney, 2013). With time NGNs gained confidence, competence and felt empowered and excited (Gohery & Meaney, 2013). The more NGNs were exposed to situations the more they learned and felt comfortable, this was described as being able to know what to look for (DeGrande et al., 2018b).

Discussion

Result Discussion

In this systematic literature study, we aimed to gain knowledge of how newly graduated nurses experience working in the ICU, how they felt about their competence, what challenges they faced, and their development in the ICU. The findings show that NGNs have feelings and experiences that are overwhelming and stressful in the beginning of their career in the ICU, senior nurses and team members can affect NGNs either positively or negatively, and communication, competence and responsibility are important and mandatory in the ICU. Lastly with time and exposure to critical situations these feelings and experiences become easier, and NGN begin to take control of their new role as ICU nurses. Each theme will now be discussed.

Theme 1: Reality Shock: Transitioning to professional role

It is not a secret that nurses go through transitions in their level of skills and abilities during their careers. Benner (1984) has researched and explained this through her model Novice to Expert and Duchscher (2012) model of Transition shock also can be used to identify and explain these transitions. A novice nurse has no experience and is still expected to perform in the ICU, which NGNs in our study described. In the transition to advanced beginner, support in the clinical setting should be given by nurses who have reached at least a competent level, which

is achieved after working for 2-3 years, and having a feeling of proficiency with abilities to cope and manage clinical nursing. In the three studies involving more than NGNs perspectives different titles were used for these perspectives including nurse managers, preceptors, educators, clinical educators and senior nurse (La Toya Lewis-Pierre et al., 2014; Stewart, 2021) . The O'Kane (2012) study from Wales, was the only study that defined their title used, as senior nurses having a band 7 or higher, this is defined as requiring a master's degree, and requiring many years of experience according to ID Medical (2020). Duchscher and Windey (2018) highlight that transition shock is the contrast between the expectations in the academic environment and those required in the professional setting regarding relationships, roles, responsibilities, knowledge, and performance. What is surprising and distressing is how strong of reactions nurses feel when they discover how unprepared they are to care for critically ill patients in the ICU. That newly graduated nurses with a Bachelor of Science degree only realize the level of responsibility they have as nurses, including the legalities once they are already employed and caring for patients and this was perceived as an area for concern and betterment in education curriculum. Australia offers NGNs a competency based curriculum that was developed by their board of health, with a one year orientation for NGNs (Australian Government Department of Health and aged Care, 2021). The National Coalition for the State Boards of Nursing National Council of State Boards of Nursing (2023) in The United States is also studying the effects of transition to practice programs. However, where NGNs are placed during this orientation can be on advanced care wards such as the Neonatal ICU, which they have no previous education in (McKenzie et al., 2021). This is a concern for both the patients, and the nurses. Other countries have no regulation on the orientation period, and these can be as little as 4 weeks in length. Many nurses report still feeling unprepared after orientation (DeGrande et al., 2018b; Gohery & Meaney, 2013; Serafin et al., 2022). No studies could be found regarding how nurses who have completed a specialty education in intensive care feel about lack of knowledge, orientation, and responsibility awareness. With the knowledge that NGNs are not prepared to care for ICU patients it is a suggestion that mandatory post graduate studies be implemented to work in the ICU.

Theme 2: Challenges in clinical learning Development

Being new and inexperienced means asking for help. A theme that became evident in its importance was how asking for help became a challenge due to the fact NGNs experienced a lack of willingness from colleagues to help them. NGNs learned who they could go to for help and who was unkind and demeaning if they asked for help. When an NGN starts their career, they are not just a new nurse but a colleague that the entire team will need to rely on in ICU situations. In our study bullying and harassment were not words used or a theme that was discovered, however, what was described could have been called bullying or harassment and is not a new phenomenon (Simons & Mawn, 2010). Rush et al. (2014) study reported that 39% of NGNs report bullying and harassment and this percentage was the same regardless of participating in a formal transition program or not and a statistically significant factor between NGNs ability to access support and their total transition scores was bullying and harassment. Lockhart (2020) study reports improving orientation and role transitions increase nursing

retention. It is unfathomable to treat NGNs rudely and have them afraid to ask for help because this is how they learn and become competent and not supporting NGNs could lead to a future ballasting to experienced nurses, patients, and team members. A literature study by Hayes et al. (2006) reports a link between job satisfaction and nursing turnover and Park et al. (2016) study shows one reason nurses had an intention to leave was negative work environments.

Theme 3: Developing in the professional role

NGNs describe what they felt they needed to be prepared to work in the ICU, including technical skills and putting theory into practice. Several articles came to the same conclusion (Amankwaa et al., 2014; Chiliza & Masango, 2015; Della Ratta, 2016; Serafin et al., 2022). However, nursing education has become more academic, with a higher standard than a technical trade (Rafferty et al., 2019). It is time to increase the number of years needed to study nursing to give nurses the ability to practice while still learning instead of learning while having full responsibility. It is important to take into consideration that all 9 included articles in this literature study are from the perspective of registered nurses who have not completed a post-graduate specialist education in intensive care, an empirical study done in Sweden where registered nurses have a magister exam in intensive care to work on the ICU could give evidence to the fact that registered nurses lack knowledge to work directly from university on the ICU and that a post graduate education should be required in order to guarantee patient safety and quality of care. The one theme that stood out and gave a feeling of positivity and hope was time. All NGNs experienced a turbulent and stressful transition into the ICU, if this could have been easier if they had completed a postgraduate education in intensive care could not be answered, but after time all NGNs expressed positive feelings and a sense of enthusiasm and competence in their role as nurses in the ICU.

Method discussion

The aim of this study is to explore newly graduated nurses' experiences of working in the intensive care unit. To answer the study purpose, a systematic literature study with a qualitative approach was chosen for the method, which means that only qualitative studies are synthesized and reported (Bettany-Saltikov & McSherry, 2016). A Systematic literature study with a qualitative approach method was considered the appropriate method to study new nurses' experiences working in the ICU. Moreover, qualitative studies are beneficial for this literature study because they provide a person-centered approach related to understanding experiences and a general idea of perspectives about people and their values in an environment (Bettany-Saltikov & McSherry, 2016). Therefore, this choice is a strength for the aim of our literature study.

A systematic literature study must be based on a clear inclusion and quality criteria to increase validity and reduce the risk of unplanned influence on the literature search strategies, and this can be seen in the inclusion and exclusion criteria (see Table 1) (Butler et al., 2016; Pati & Lorusso, 2018; Rosén, 2017; Wright et al., 2007). The aim of the study was changed due to not finding articles that matched the aim wished to explore.

In systematic literature studies a clear research protocol should be performed before proceeding to a literature search to prevent bias and increase transparency (Bettany-Saltikov & McSherry, 2016; Butler et al., 2016; Pati & Lorusso, 2018; Wright et al., 2007). This was performed before our literature search began.

A systematic literature search was carried out in CINAHL and Pubmed databases first because both CINAHL and Pubmed databases provide the opportunity to find relevant scientific articles in nursing (Oermann et al., 2021; Polit, 2021). PsykInfo and Scopus were searched later in our process due to the authors unfamiliarity with search strategies in these databases. A librarian at Gothenburg University was consulted in the search process. First free text searching was done and then Mesh terms, CINAHL headings, and PsykInfo thesaurus terms were identified and used which allows a more specific search of the available scientific articles (Pati & Lorusso, 2018).

A weakness we found was being unfamiliar with a systematic data base search and found it surprisingly time-consuming to find the right keywords that needed to be used to find relevant articles.

The criteria of the literature studies were also to include qualitative articles written in either English and Swedish, only searching for articles written in English can produce bias due to exclusion of research in other languages (Bettany-Saltikov & McSherry, 2016; Butler et al., 2016; Wright et al., 2007). However, no articles were found in Swedish. The Authors had an aim to include recent articles published in the last 5 years, which was expanded to 10 years, and due to the fact so few articles were found was finally expanded to articles between year 2011 and 2023. It can be argued that no limitation should have been used regarding article age.

The same articles recurring in several databases show the credibility(trustworthiness) and reliability of the literature search the Authors performed. According to Polit (2021) credibility is confidence in which one is certain about the value of the findings and reliability in a study can be shown by the exactness and consistency of information. Due to the small number of articles, a manual literature search was executed in Google scholar and one article was found. In total, 9 relevant articles were found that responded to the study purpose.

All 9 articles used in the results were peer reviewed. Including articles that are peer reviewed strengthens the study's reliability. Peer reviewed studies mean that studies are appraised for their scientific quality (Polit, 2021).

The articles discussed were appraised by both authors separately and then the article quality appraisal was compared with each other which strengthens the validity of quality of the selected articles. It was determined that five articles had high quality, three articles had medium quality. One article was determined as having low quality, only because the Authors could not determine if the article was an original study. However, it is important to take into consideration the Authors are new to quality appraisal and, a Critical Appraisal Skills Programme (CASP) is a learning tool. The article appraisal tool CASP which was used, has no scoring system and leaves the quality of the chosen articles up to each Authors own interpretation. Therefore, a limitation is, that the quality appraisal is an interpretation.

The validity of the result or trustworthiness can be obtained if two researchers compare their work to see if they can come up with the same result (Bettany-Saltikov & McSherry, 2016; Butler et al., 2016; Pati & Lorusso, 2018; Wright et al., 2007).
A limitation in the result is 4 articles out of the nine articles that were chosen had other focus group participants' perspective (Amankwaa et al., 2014) (Stewart, 2021) (Della Ratta, 2016) (O'Kane, 2012). McKenzie et al. (2021) uses the perspective of newly graduated nurses working in the Neonatal ICU, adding this article is a limitation to the quality of the result, because these registered nurses had no prior education to work with the highly specialized patient group of neonates, which could have affected their perspective negatively and has an impact on the generatability of this literature study.
The authors independently analyzed the primary articles results and changes were made after agreement to increase the validity of data categorization methods and the final result, this increased validity step is recommended by Bettany-Saltikov and McSherry (2016).
All included articles in the literature study result had obtained ethical approval by an ethics committee which strengthens the authors' literature study.

Conclusion

Post-graduate specialist education in intensive care is a guarantee in providing quality patient care and patient safety of the critically ill patient. Intensive care organizations and managers should improve the intensive cares social environment, orientation programs, and mentorships. This is necessary to minimize the challenges that affect ICU nurses` clinical learning in the ICU.

Implications

This literature studies result findings have found several areas of implication regarding NGNs working in Intensive Care Units

- It should be mandatory to have a post graduate education in Intensive care as this study shows NGN are not prepared to work in the ICU environment or care for critically ill patients. Until this is implemented in health care organizations and in national requirements for nurses the following implications should be exercised.
- Institutions responsible for Nursing Education should provide exposure to ICU environments and situations for NGN to enhance their confidence in clinical settings and develop technical skill requirements
- Institutions responsible for nursing education should add curriculum including coping with stress, time management, technical skills in the ICU, communication, and teamwork
- ICU employers should provide team building techniques to help develop social relationships and teamwork and prevent bullying
- A government regulated orientation package should be implemented to ensure NGN competence requirements are fulfilled before being fully responsible for patient care and should include guidelines to senior nurses on evaluation and feedback

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Appendix 1: Synonyms/SearchTerms

Identified synonyms search terms		
Population	**Exposure**	**Outcome**

Novice Nurse Nurses New graduates New ICU nurses New Graduate Nurse Newly qualified nurses Novice critical care nurse	Intensive care unit Intensive care units Inservice training ICU nursing ICU settings Adult ICUs Adult ICU Critical care environment Critical care practice Critical care units Recovery Room Coronary Care Units Respiratory Care Units Neurocritical care unit Surgical intensive care unit Adult intensive care units Surgical intensive care unit Neuro-intensive Care unit Cardiothoracic Intensive Care Unit	Intensive care experiences learning experiences Nurses' experiences Learning in ICU Role transition Transition

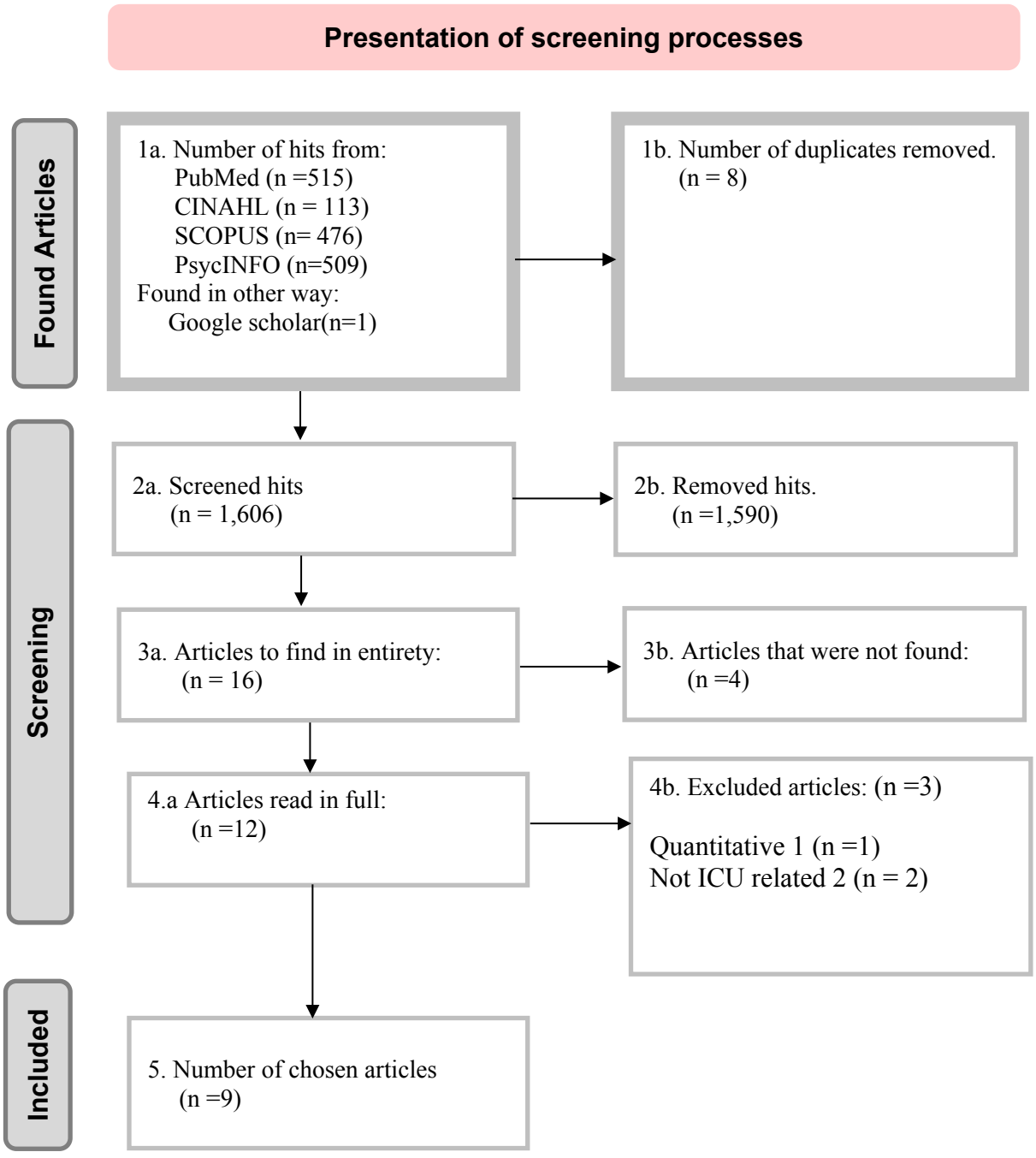
Appendix 2: CINAHL, PUBMED, PsykINFO, and SCOPUS Search

Date	Database	Search	Limited	Number Of hits
230222	CINAHL	(MH "New Graduate Nurses") OR (MH "New Graduates") OR (MH "New Graduate Role") OR (MH "Students, Nursing, Graduate") OR (MH "Education, Nursing, Graduate") ORAB Novice* OR TI Novice* OR AB Nurse* OR TI Nurse* OR (MH"Nurses") OR AB "new graduates" OR TI "new graduates" ORAB "new ICU nurses" OR TI "new ICU nurses" OR AB "New Graduate Nurse*" OR TI "New Graduate Nurse*"OR AB "New graduate nurse*" OR TI "New graduate nurse*" OR AB "Newly qualified nurse*" OR TI "Newly qualified nurse*" OR AB "Novice critical care nurs*" OR TI "Novice critical care nurs*" OR AB "Novice intensive care nurse*"OR TI "Novice intensive care nurse*" ORAB "New critical care nurs*" OR TI "New critical care nurse*" ORAB "Graduated Critical care nurs*" OR TI graduated critical care nurs*" OR AB "Graduated intensive care nurs*" OR TI "Graduated intensive care nurs*" OR(MH"critical care nursing") AND (MH"Intensive care units") OR AB "intensive care unit*" OR TI "intensive care unit*" OR AB "ICU nursing" OR TI "ICU nursing" OR AB "critical care environment*t" OR TI "critical care environment*" OR AB "surgical intensive care unit*" OR TI "surgical intensive care unit*" OR AB "Critical care unit*" OR TI "Critical care unit*" OR AB" critical care practice* " OR TI "critical care practice " OR AB" adult intensive care unit*" OR TI "adult intensive care unit*" OR AB ICU OR TI ICU OR AB "Adult ICU" OR TI "adult ICU" OR AB " ICU settings" OR TI " ICU settings" OR AB "Surgical intensive care unit" OR TI "Surgical intensive care unit" ORAB "Coronary Care Units" OR TI "Coronary Care Units" OR AB"Recovery Room" TI "Recovery Room" OR AB "Respiratory Care Units" OR TI "Respiratory Care Units" OR AB SICU OR TI SICU OR AB "Neuro-intensive Care unit" OR TI "Neuro-intensive Care unit" OR AB NICU OR TI NICU OR AB "Neurocritical care unit" OR TI "Neurocritical care unit" OR AB NICN OR TI NICN OR AB "Cardiothoracic Intensive Care Unit" OR TI "Cardiothoracic Intensive Care Unit" OR AB CTICU OR TI CTICU AND	Peer Review 2011-2023	113

		AB Transition* OR TI Transition* OR AB "Learning in ICU" OR TI" Learning in ICU" OR AB "Role transition*" OR TI "Role transition*" OR AB "learning experience*" OR TI "learning experience*" OR AB "Intensive care experiences*" OR TI "Intensive care experiences*" OR AB "Nurses experience* " OR TI" Nurses experience* "		
230222	PubMed	(Novice OR Nurse*[Tiab] OR Nurses[MeSH] OR"new graduates"[Tiab] OR "new ICU nurses"[Tiab] OR "New* Graduate* Nurse*"[Tiab] OR "New graduate nurse*"[Tiab] OR "Newly qualified nurses"[Tiab] OR "Novice critical care nurs*"[Tiab] OR "Critical care nursing" [Mesh] OR "Education, Nursing, Graduate"[Mesh]) AND ("Intensive care units"[MeSH] OR "intensive care unit"[Tiab] OR"Inservice training"[MeSH] OR "ICU nursing" [Tiab]OR "critical care environment"[Tiab] OR "surgical intensive care unit"[Tiab] OR "Critical care units"[Tiab] OR "critical care practice "[Tiab] OR "adult intensive care units"[Tiab] OR ICUs[Tiab] OR "adult ICU"[Tiab] OR " ICU settings"[Tiab] OR "adult ICUs"[Tiab] OR "Surgical intensive care unit"[Tiab] OR "Coronary Care Units" OR "Recovery Room" OR "Respiratory Care Units" OR SICU[Tiab] OR "Neuro-intensive Care unit"[Tiab] OR NICU[Tiab] OR "Neurocritical care unit"[Tiab] OR NICN[Tiab] OR "Cardiothoracic Intensive Care Unit"[Tiab] OR CTICU[Tiab]) AND (transition [Tiab] OR "Learning in ICU"[Tiab] OR "role transition"[Tiab] OR "learning experiences"[Tiab] OR "intensive care experiences" [Tiab] OR "nurses experiences "[Tiab])	Abstract, 2011-2023, English & Swedish	515
230223	PsycINFO	abstract (MAINSUBJECT.EXACT("Nurses") OR MAINSUBJECT.EXACT("Nursing Education") OR Novice OR Nurse* OR Nurses OR" New* graduate*" OR "New ICU nurse*" OR" New Graduate Nurse*" OR "Newly qualified nurse*" OR "Novice critical care nurse*" OR "Critical care nursing" OR "Education, Nursing, Graduate") AND abstract (MJMAINSUBJECT.EXACT("Public Health Service Nurses") OR MJMAINSUBJECT.EXACT("Nurses") OR "Intensive care units" OR "intensive care unit" OR "Inservice	2011 – 2023, AND Qualitative Study OR Empirical Study AND Interview AND English NOT	509

		training" OR "ICU nursing" OR "critical care environment" OR "surgical intensive care unit" OR "Critical care units" OR "critical care practice " OR "adult intensive care units" OR ICUs OR "adult ICU" OR " ICU settings" OR "adult ICUs" OR "Surgical intensive care unit" OR "Coronary Care Units" OR "Recovery Room" OR "Respiratory Care Units" OR SICU OR "Neuro-intensive Care unit" OR NICU OR "Neurocritical care unit" OR NICN OR "Cardiothoracic Intensive Care Unit" OR CTICU) AND abstract (transition OR "Learning in ICU" OR "role transition" OR "learning experiences" OR "intensive care OR experiences" OR "nurses experiences ")	(Quantitative Study, Systematic Review, Metasynthesis, Clinical Trial Mathematical Model, Meta Analysis, Clinical Case Study, Twin Study, Scientific Simulation, AND Treatment Outcome)	
	SCOPUS	(TITLE-ABS-KEY (novice OR nurse* OR nurses OR "new graduates" OR "new ICU nurses" OR "New* Graduate* Nurse*" OR "New graduate nurse*" OR "Newly qualified nurses" OR "Novice critical care nurs*" OR "Critical care nursing" OR "Education, Nursing, Graduate")) AND (TITLE-ABS-KEY ("Intensive care units" OR "intensive care unit" OR "Inservice training" OR "ICU nursing" OR "critical care environment" OR "surgical intensive care unit" OR "Critical care units" OR "critical care practice " OR "adult intensive care units" OR icus OR "adult ICU" OR " ICU settings" OR "adult ICUs" OR "Surgical intensive care unit" OR "Coronary Care Units" OR "Recovery Room" OR "Respiratory Care Units" OR sicu OR "Neuro-intensive Care unit" OR nicu OR "Neurocritical care unit" OR nicn OR "Cardiothoracic Intensive Care Unit" OR cticu)) AND (TITLE-ABS-KEY (transition OR "Learning in ICU" OR "role transition" OR "learning experiences" OR "intensive care experiences" OR "nurses experiences "))	2011-2023 English Subject area Nursing Documents type: Artikel	476

Appendix 3: PRISMA Diagram



Appendix 4: Result Articles

Author Year Country	**Title**	**Aim**	**Method**	**Selection**	**Result**	**Quality Using CASP**
P. Gohery T.Meaney 2013 Republic of Ireland	Nurses´ role transition from the clinical ward environment to the critical care environment	To explore the experiences of nurses moving from the ward environment to the critical care environment	Phenomenology Heideggerian research Approach (researchers own experience becomes part of the research) Qualitative One semi-structured interview conducted individually with each participant Field notes Reflective diary	Nine registered nurses with previous ward experience that ranged between 2-20 years who have transferred to ICU within the last three years	Found that participants felt ill prepared and inexperienced to work within the stressful and technical environment of critical care due to insufficient education and support.	High

C.E. O`Kane 2013 England	Newly qualified nurses` experiences in the intensive care unit	To investigate newly qualified nurses' experiences of starting their career in the intensive care unit and investigate the opinions of senior nurses from the ICU in relation to NGN in ICU.	Comparative Qualitative Semi-structured interviews Focus group Pilot study	7 NGRN employed in the ICU have been working 0-12 months 7 Senior nurses	Found that NGN experience anxiety about time management, accountability, and socialization. Senior nurses felt NGN coped well with the demanding aspects of ICU but were aware that preceptors are under a lot of pressure.	Medium
H. Degrande et al. 2018 USA	The experiences of new graduate nurses` hired and retained in adult intensive care units	To explore the experiences of nurses who were hired in the adult ICU as new graduates and survived the transition from Novice to Competent and starting their third year in the ICU.	Hermeneutic phenomenology Qualitative One on One open-ended interviews	11 Registered nurses who were hired to the ICU directly from nursing school and had been working 24 to 30 months at the time of interviews.	Found NGN can successfully navigate the initial uncertainties and reality shock, gain confidence and knowledge over time, and develop intuitive knowing. The experiences is difficult and stressful; however resilience and self-care eased the struggles into the third year of practice.	High

R.McKenzie et al 2021 Australia	Transition experiences of newly qualified registered graduate nurses employed in a Neonatal Intensive Care Unit	To explore the experiences of newly qualified registered nurses´ clinical and professional learning experiences during their first six months working in the Neonatal ICU	Narrative inquiry Qualitative Semi-structured individual interviews	8 Newly graduated Registered nurses first employment after graduation that are participating in Graduate Nurse transition program (GNTP), the first six months of GNTP in the Neonatal ICU.	Found that NGN felt unprepared to work in the Neonatal ICU, due to a brief NICU orientation, a minimal or no undergraduate NICU education as compared to nursing the adult patient. NGN reported overwhelming feelings of stress, emotional exhaustion, concerns for patient safety and for some, fear of early career burn-out.	medium
C. Stewart 2021 England	Understanding new nurses´ learning experiences in Intensive Care	To illuminate and explore new nurses´ learning experiences in the ICU	Case Study Methodology Qualitative -Individual Semi-structured interview with NGN	6 Newly Graduated Nurses (NGN) working 1 year or less in ICU	Found NGN felt ill prepared and inexperienced to work within the stressful and technical environment.	medium

			-Focus group with senior nurses -Reflective diary -pilot interview	6 Senior Nurses		
L. Amankwaa L.Hollis J.Kovacich L.Lewis 2014 USA	Workplace readiness of New ICU Nurses: A grounded Theory Study	To generate a theory to explain workplace readiness and the needs of NGNs entering the ICU from the perspective of managers, clinical educators, preceptors and new graduates in ICU.	Grounded Theory Qualitative In-depth interviews	-16 nurses participated in the study -8 nurses participated in the pilot study; these nurses represented Four categories -managers -educators -preceptors -NGN in ICU	The Novice Nurse Embracing the ICU theory (NNEIT) emerged from four themes. Embracing the new ICU role Overwhelming experience of performance ambiguity or anxiety Adapting to the ICU Embodying the new ICU RN role The theory will provide guidance in resolving the discourse of the competencies and skills for new nurses entering the ICU	High

L. Serafin et al. 2021 Poland	Novice nurses` readiness to practice in an ICU: A qualitative study	To explore polish novice nurses´ readiness to practice in an ICU Investigating pre-registration preparation for work in the ICU, Identifying the most needed competencies to work in the ICU and analyzing organizational aspects of the professional orientation period	Phenomenology design Qualitative Semi-structured interviews	17 Novice nurses were interviewed from the pediatric ICU, Neonatal ICU and adult ICU who had: -Experience in ICU (3-26 months) -15 the ICU was their first job out of school -2 with ward experience prior (12-15 months) -16 studying master's program -1 studying ICU specialty	Responders were not prepared to work in an ICU after graduation and five most needed competencies were discovered: -communication -teamwork -professional self-confidence -knowledge and its practical use	High

C. Della Ratta 2016 USA	Challenging graduate nurses` transition: Care of the deteriorating patient	To explore graduate nurses´ experiences of caring for deteriorating patients during the first year of practice	Interpretive method Influenced by works of Heidegger and Gadamer Qualitative Semi-structured interviews	8 Registered nurses completing or having completed the new graduate nurse transition program in the last year and had at least one deteriorating patient their first year in practice. Wards participants worked on: -2 worked in the Emergency room -2 worked in acute care -2 worked in the ICU	Identified needs of graduate nurses` during high-stake patient encounters, shedding light upon one aspect of transition.	High

				-1 worked in medical ICU - 1 worked in Coronary care unit		
F. Saghafi J. Hardy S. Hillege 2012 Australia	New graduate nurses´ experiences of interactions in the critical care unit	The aim is to discover what the experience is like for NGNs when they begin in the ICU as well as to explore the changes that occur in their attitudes and experience after 2-3 years of clinical practice in the ICU.	Phenomenological approach Qualitative Individual in depth, semi structured interviews	10 NGN Who were registered nurses that had graduated in the last 12 months	Found valuable descriptions of both positive and negative experiences with nursing and medical colleagues, as well as patients during their transition to practice, this brings insight into NGNs perceptions of interactions with patients and other health professionals in ICU.	low

Appendix 5: Articles not included

Author **Year** **Country**	**Title**	**Reason for exclusion**
J. Smith V. Vandall-Walker 2017 Canada	A Double Whammy! New Baccalaureate registered Nurses` transitions into rural acute care	After reading it was found that the description of acute care was not comparable to ICU care.
J. Mills et al. 2016 Australia	Retaining early career registered nurses: a case study	After reading it was found that the description of acute care was not the same as ICU care.
P. Messmer et al. 2004 USA	Enhancing Knowledge and Self-Confidence of Novice nurses: The “SHADOW- A-NURSE” ICU program	Presented as a mix-method study but only quantitative data was given.

Appendix 6: Quotes Table

Discovering and concealing lack of knowledge	***Overwhelmed and realizing responsibility awareness***	***Transition through orientation in ICU***
"I was completely overwhelmed at first, I wasn't sure if I could cope, it was physically and mentally exhausting, the new machines, all the things I couldn't do and didn't know" (Stewart, 2021).	*''I had moments where I cried where….It was totally overwhelming, I couldn't do it (006)* (Gohery & Meaney, 2013)	*"They (new nurses) are constantly fed information, so they often forget things easily."(Stewart, 2021).*
''not really knowing what I'm doing every day. . .I began to dread going to work and fantasized about calling in sick" (Graduate 2) (McKenzie et al., 2021).	*"but a lot of them are just tick boxes aren´t they..I think well do you really need a tickbox for that? Just to say you´re competent (P2) "they don´t seem to realize importance of record keeping (FGP 1) (O'Kane, 2012)."*	*"Compared to some of my friends on the wards, our booklet is great and it tells you what you need to know."* <u>Okane</u>
''It also helped me realize how much I didn't know. There's a lot. . that I, quickly learned that I wasn't that competent in the beginning" [P7] (DeGrande et al., 2018b).		
''It was a very scary experience and very frightening. . .. . ..the first day was scary and even the next few weeks'' (001) (Gohery &		

Meaney, 2013)		

Communication and Teamwork	***Criticized and fear of asking for support***	***Mentorship impact and seeking encouragement***
"it was okay, but now it´s even better because I feel part of a team, I´m not an outsider (Serafin et al., 2022)."your communication skills improve…doctors and teams listen to you,listen to your opinion(Gohery & Meaney, 2013)	*"I cope with it so much that…I don´t have to humble myself…because for me it was humiliating (crying).. and they humiliated me at every step as much as they could."* *"…there are some people who I´m sometimes afraid to ask about something because first it´s reproach and the claim that I don´t know something or that it is obvious, and only later is there any help possible."(Serafin et al., 2022)*	*"I think, they [senior nurses] need to say 'yes you have had a bad day, but you did well we will see you tomorrow' just a bit of positive feedback would do wonders … Like I think, I had a chat with one of the other New Grads and that was probably one of the most important things that we said we were never told that we were doing well. You can't judge how well you are doing unless you get feedback; unless you are getting negative criticism all the time, which you seem like you are when you are a New Grad, there is no obvious sign that you are doing bad. (Rose) (Saghafi et al., 2012)"*
		''They could be a little more complimentary of good work that is done on the unit. . ..constructive criticism'' (005)(Gohery & Meaney, 2013)"

Competence needed in clinical learning	***Technology***	***Gaining confidence through supportive colleagues and mentors***	***Gaining competence***
	" The whole ICU..are very technical..even though you have very sick patients… you are trying to get used to the technology (Gohery & Meaney, 2013)."		*"I think it takes time to learn and assimilate things. You´ve got to have that time. I also think exposure to situations… not just formally learning but being exposed to it too. (DeGrande et al., 2018b)*
			"So there were the circumstances when you slowly started to see these problems arise you have the right answers and the right advice and you kind of learn the trends. Your confidence would sort of be there.."(Della Ratta, 2016)