The Lived Experience of Nursing Students Consolidating in the Intensive Care Unit

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A thesis submitted to the University of Ottawa in partial fulfillment of the requirements for the Master of Science in Nursing Degree

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Preface

Ethical Approval to Conduct Research

This Master's thesis is a qualitative, phenomenological study wherein data collection consisted of interviews. Ethical approval was sought through the University of Ottawa Research Ethics Board under the file #H-06-23-9321.

Statement of Contributions of Co-Authorship

Multiple authors contributed to this thesis and the associated manuscripts. The contributions of the primary authorship team are outlined below.

1. Paul Renick, Master of Science in Nursing student, School of Nursing, Faculty of Health Sciences. This research was completed for my Master's thesis. I conceptualized and designed this study. I wrote and revised all chapters within this thesis and I am the primary author of the manuscript in Chapter 3.
2. Brandi Vanderspank-Wright, Professor, School of Nursing, Faculty of Health Sciences. Dr. Vanderspank-Wright acted as my Thesis Supervisor. She provided ongoing support and feedback throughout the conceptualized and completion of this research study. She contributed to all aspects of the research process. She critically revised every chapter of this thesis and is the senior author of the manuscript in Chapter 3.
3. Michelle Lalonde, Professor, School of Nursing, Faculty of Health Sciences. Dr. Lalonde acted as a thesis committee member and offered guidance and support in all aspects of this study from conceptualization through to data analysis. She critically revised every chapter of this thesis. She is a co-author of the manuscript in Chapter 3.
4. Kimberly McMillan, Associate Professor, School of Nursing, Faculty of Health Sciences. Dr. McMillan acted as a thesis committee member and offered guidance and support in all

aspects of this study from conceptualization through to data analysis. She is a co-author of the manuscript in Chapter 3.

Abstract

Background: Global nurse shortages are requiring that organizations either consider beginning to, or alternatively increase, hiring novice nurses into intensive care units (ICUs), raising important questions about preparedness for specialized practice. Understanding the experience of nursing students' ICU final placement experiences can inform education and transition supports.

Objective: To explore the lived experiences of fourth-year nursing students completing their final clinical placement ("consolidation") in adult ICUs.

Methods: Qualitative, interpretive phenomenological study (van Manen, 2016). Semi-structured interviews were conducted with 4 nursing students who consolidated in adult ICUs. Transcripts were thematically analysed to identify the characteristic features of the phenomenon.

Results: Experiences aligned temporally following a before, during, and after timeline, summarized as "a supported learning journey." Prior exposure to critical care (coursework, clinical, personal) shaped placement preferences and readiness. Students proactively sought resources and mentorship to reduce uncertainty. Students faced steep learning curves, unpredictability, and emotional intensity. Growth was fostered by preceptors and interdisciplinary teams, hands-on participation, and developing therapeutic communication with patients and families. Consolidation was emotionally demanding yet professionally transformative, strengthening foundational skills, confidence, and interest in advanced roles.

Implications for Education and Practice: Programs and units should provide structured mentorship beyond graduation, simulation-based and reflective learning to reduce anxiety, and resilience-building resources to promote psychological safety. Clear pathways for professional development in critical care and advanced practice should also be considered.

Conclusions: ICU consolidation can be a transformative step from student to professional nurse, cultivating resilience, competence, and confidence when supported appropriately.

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This thesis is for the nursing student interested in critical care and the new graduate nurse in the ICU. Being a nurse is incredibly challenging, and the ICU is an especially difficult environment to put yourself in. Remember that you are not alone, and that these challenges will be easier to face as you continue to grow into your critical care knowledge. Be kind to yourselves, take things day by day, and remember to prioritize your well-being above all else because the world needs you. Thank you for all the good that you do.

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Chapter 1: Introduction

For nursing students, clinical placements offer a vital opportunity to engage with the realities of professional practice. These placements serve as an integral component of nursing education and are intended for students to develop their practical skills and nursing competencies in a workplace setting (Claeys et al., 2015). Clinical placements may take place in any number of healthcare environments where nurses provide care. Students are traditionally placed in general practice settings, such as hospital medical or surgical units, to learn basic and fundamental nursing skills (Reddish & Kaplan, 2007). As both population growth and patient acuity rise, the increasing complexity of care has necessitated advancements in nursing practices. Consequently, intensive care units (ICUs) face a growing demand for highly competent nurses equipped to manage critically ill and complex patient populations.

Nursing schools may provide the opportunity for an ICU clinical placement during baccalaureate education. However, nurses require specialized critical care training and must meet additional nursing competencies exclusive to critical care settings. Therefore, this raises an important question for nurse educators: can such high-acuity settings provide a safe and effective environment for developing nursing students' skills, competence, and confidence? Or should students remain in general practice settings to gain a firm grasp of fundamental nursing skills? Given that the goal of prelicensure nursing education has been to prepare nurse generalists and not nurse specialists (Swinny & Brady, 2010), these questions remain controversial.

Critical care nursing is a specialty which provides direct care to vulnerable patients who are at high risk for life-threatening illness, conducting thorough assessments and blending data from a variety of invasive and non-invasive monitoring technology (American Association of

Critical Care Nurses [AACN], 2019; Canadian Association of Critical Care Nursing [CACCN], 2024). The competencies of critical care nurses build upon the foundation of basic nursing education (AACN, 2019) and as such, may present a challenge to novice nurses, with some reporting feelings of stress, anxiety, depression, low self-esteem, and a lack of competence when entering the ICU setting (Serafin et al., 2022).

Upon graduation, new graduate nurses (NGNs) desirous to work in the ICU were traditionally required to first practice on a general practice or medical-surgical unit, thus allowing them to hone their basic nursing skills (Reddish & Kaplan, 2007). The relatively new practice of placing nursing students and NGNs in the ICU has been an ongoing topic of controversy (Ballard & Trowbridge, 2004; Liu et al., 2022). However, given the increasingly common practice to place nursing students and hire NGNs in these specialty settings, with a growing body of literature that supports the ICU as a valuable learning resource for NGNs and students alike (Swinny & Brady, 2010; Doucette et al., 2011), this seems a worthy phenomenon to explore. Therefore, this thesis will focus on the lived experiences of senior nursing students as they navigate and practice in the ICU for the first time.

1.1 Background

The World Health Organization [WHO] (2020) reported a shortage of approximately 5.9 million nurses worldwide. The International Council of Nurses [ICN] (2021) predicts that this shortage is being further exacerbated by an aging workforce and the lingering effects of COVID19. Their most recent policy brief estimates that up to 13 million will be needed to fill global nursing shortages (ICN, 2021). As a result, NGNs are being hired in a variety of nursing roles to fill employment gaps within the healthcare system (Vanderspank-Wright et al., 2020). Traditionally, nurse employment in the ICU has been reserved for experienced nurses with existing knowledge

regarding the intricacies of patient care. However, in response to staffing shortages, NGNs are increasingly being hired into critical care roles (DeGrande et al., 2018). Reports indicate that up to 23% of NGNs accept positions in ICU settings, with this trend continuing to rise (DeGrande et al., 2018; Blackmon et al., 2023).With medical technologies advancing and chronic diseases continuing to increase in prevalence, along with an aging global population as well as nursing retention challenges, the need for ICU nurses is increasing more than ever (Halcomb et al., 2011; CIHR, 2016; Bongar et al., 2019).

Conducting clinical placements in ICU settings may provide students with an opportunity to strengthen their existing nursing knowledge, owing to the complex processes involved in caring for critically ill patients and their families (Williams & Palmer, 2014). Novice nurses continue to report ongoing levels of uncertainty when caring for critically ill patients despite working in this setting for up to two years (DeGrande et al., 2018). The ICU may, however, present learners with educational opportunities they may not otherwise receive (Williams & Palmer, 2014).

Although not every ICU has historically permitted students to complete clinical placements in critical care or hired NGNs, these practices have now become ubiquitous. Upon graduation, students must make the transition from the academic setting to the workplace, entering a lengthy period of growth and progression from nursing novice to nursing expert (Benner, 1982). Upon passing the NCLEX-RN, an initial registration exam in Canada (along with other jurisdictions, except Quebec), nurses demonstrate entry-level nursing knowledge, deeming them capable of competently entering the profession as a novice nurse. However, there are additional standards for nursing practice exclusive to the ICU that nurses must meet to practice competently in this highly specialized setting (AACN, 2019; CACCN, 2024). As such, the training given to NGNs in the ICU

must be comprehensive and intensive enough to build sufficient competency and should begin during baccalaureate education (Bongar et al., 2019).

1.1.1 What is the ICU?

The roots of critical care nursing and ICUs themselves can be traced back to the 19th century Crimean War when Florence Nightingale thought to place soldiers who were severely injured, or required major surgical interventions, adjacent to the nursing station to provide them with more watchful nursing care (Weil & Tang, 2011). ICUs and critical care practice have since rapidly progressed into specialized healthcare settings that use an assortment of medical technologies to support failing organ systems (Marshall et al., 2017). For example, the use of invasive mechanical ventilation for a failing respiratory system, or the use of continuous vasoactive medications to regulate abnormal blood pressure. Critical care prioritizes stabilizing organ function, aiming to prevent further deterioration while the underlying illness or condition is addressed (Marshall et al., 2017).

In the ICU, "critical care nurses provide high-quality care across all transitions in the critical illness trajectory" (CACCN, 2024, p. 12). ICU nurses care for highly vulnerable, unstable, and complex patients requiring frequent assessment, constant monitoring and often invasive interventions to sustain life (AACN, 2019). The assessment, monitoring, and interventions required to provide medical care for the ICU patient is facilitated by advanced technology that may present a challenge to even the most experienced nurses (McGrath, 2008). Due to patient acuity, nurses are typically assigned patients on a 1:1 or 1:2 nurse-to-patient ratio, thus allowing for close and continuous monitoring. Critical care nurses collaborate with the medical team to ensure safe, effective treatment and high-quality care (CACCN, 2024). They also uphold patient safety through frequent equipment checks, seek clarification on unclear instructions from physicians or other

healthcare providers, and critically reflect on their practice to maintain their skills and thus provide competent nursing care (CACCN, 2024).

1.1.2 Defining Consolidation

Consolidation is a term used to describe a senior nursing student's final clinical placement. It represents the culmination of the clinical component of baccalaureate nursing education. Under the supervision of an experienced nurse (sometimes referred to as a preceptor), consolidation reinforces the knowledge learned in nursing school and helps students transition to safe practice in the workplace after graduation. Consolidation is integrated into undergraduate nursing curricula to provide students the opportunity to solidify clinical knowledge learned throughout nursing school, aiming to bridge the theory-practice gap (Bongar et al., 2019).

1.1.3 The ICU as a Consolidation Placement for Nursing Students

Given that the placement of nursing students in a critical care setting is a relatively new phenomenon, there are still aspects that we do not understand about the ICU as a consolidation experience. However, as nursing students and NGNs have been placed in ICU settings more frequently, there has been an increasing number of studies that explore this unique specialty setting and its ability to function as a positive learning environment for novice nurses and students.

The literature suggests that clinical placements, in general, serve to improve students' decision-making, knowledge, and confidence as it pertains to nursing practice (Williams & Palmer, 2013; Inayat et al., 2020). Sufficient clinical exposure significantly enhances nursing competency (Bongar et al., 2019) and hands-on participation in the clinical setting is vital for student satisfaction and learning; observation alone is insufficient (Vatansever & Akansel, 2021). Students may express dissatisfaction with being passive observers and prefer active engagement in their learning during clinical placements (Cooper et al., 2015).

Early exposure to critical care is a stronger predictor of readiness to work in the ICU than general nursing work (Halcomb et al., 2011). Clinical placements in the ICU may provide the opportunity for students to have early exposure to critical care settings to help them shape career preferences as they navigate challenges and professional development opportunities specific to the ICU environment (Halcomb et al., 2011). For students interested in ICU work, this suggests that early exposure to ICUs may prove more valuable in determining student interest in critical care rather than being placed in a non-ICU clinical setting.

1.1.4 The Role and Impact of Preceptors and Instructors in the ICU

The role of preceptors is often discussed in the literature when discussing clinical placements for nursing students. Preceptors are responsible for providing clinical supervision to new nurses and nursing students, providing clinical teaching, instruction, and formal evaluation (College of Nurses of Ontario [CNO], 2009). Preceptors help facilitate a preceptees' orientation to their assigned nursing unit, which when done adequately, has been shown to improve preceptees' cognitive and emotional readiness for independent nursing practice (Bongar et al., 2019). The quality of preceptor/preceptee relationships is central to effective support and retention (Brook et al., 2018; Williams & Palmer, 2013), and a supportive preceptor is a strong predictor of nurse competency (Bongar et al., 2019).

The clinical relationship between preceptors and preceptees is a pivotal relationship with a major influence on learning, which echoes other research findings that highlight the preceptor's role in student success (Cooper et al., 2015). Preceptors aim to foster a positive learning environment, characterized by strong leadership and interpersonal support, to benefit students (Williams & Palmer, 2013). However, it remains that nursing programs may provide insufficient orientation and training to clinical instructors, potentially having a negative impact on the

preceptor preceptee relationship and thus negatively impacting nursing students' learning (Salem, 2021).

While preceptors undoubtedly play a vital role in educating students during consolidation, it is important to note that the responsibility of precepting a nursing student should be a collaborative effort that does not solely fall upon the preceptor alone. Collaboration between nursing school faculty, preceptors, and clinical staff ultimately creates a more effective and emotionally supportive learning environment for students (Vatansever & Akansel, 2021; Hood & Copeland, 2021). Multi-component interventions (mentorship, preceptorship, teaching) are cited as more effective in educating students than single strategies (Brook et al., 2018). The interplay of course-based learning, along with practical learning experiences, may enhance student competence and reduce fear when entering the ICU (Inayat et al., 2020).

1.1.5 Challenges for Consolidation Students in ICU

The ICU is a stressful environment due to its complexity and high acuity, which may heighten student anxiety, but may also offer valuable learning experiences (Vatansever & Akansel, 2021; Williams & Palmer, 2013). Clinical placements in the ICU provide students with many opportunities they may not otherwise receive under close supervision with an experienced critical care nurse serving as their preceptor (Williams & Palmer, 2014). Despite this close supervision, nursing students may still face emotional stress and psychological vulnerability, especially in ICU settings (Vatansever & Akansel, 2021; Hood & Copeland, 2021). Students may also perceive preceptors and other staff nurses as potentially intimidating when entering the clinical environment, thus contributing to emotional discomfort and uncertainty (Cooper et al., 2015).

Pertinent challenges cited by students and NGNs in the ICU within the literature included a perceived lack of confidence and competence, along with generalized fear and anxiety associated

with critical care environments (Inayat et al., 2020). Student fears and self-doubt, especially when caring for older, critically ill, or diverse populations, are persistent emotional barriers to effective learning (Grossman, 2013). Participants have also expressed a lack of confidence in completing specialized ICU nursing skills (Serafin et al., 2022). Operating the ICU's advanced technological equipment and balancing the time-management skills required to care for critically ill patients, all while learning and solidifying clinical knowledge as a nursing novice, is no doubt a challenge. Serafin et al. (2022) suggest this challenge is perpetuated by a potential lack of education hours during nursing school, as well as inadequate practical experience prior to working independently in an ICU setting.

At times, newer critical care nurses may feel the need to hide their entry-level ICU knowledge and inexperience from their patients to facilitate the development of a trusting nurse-patient relationship (Saghafi et al., 2012). Hiding entry-level ICU knowledge may in fact have effects that extend beyond the patient, with NGNs also wanting to hide their lack of knowledge from physicians, nurses, and other more experienced staff within the ICU (Kelly & Ahern, 2008). The latter may in turn, affect the development of trusting relationships with other healthcare providers in the workplace and prevent students and new nurses from asking questions or seeking clarification when necessary (Kelly & Ahern, 2008).

Gaining an understanding of the dynamics of the ICU and developing effective communication skills with patients, preceptors, and other ICU staff are critical for student learning and success (Vatansever & Akansel, 2021; Inayat et al., 2020). A sense of belonging is also described as crucial to students' positive clinical experience and emotional well-being (Cooper et al., 2015). The absence of a belonging culture among hospital staff may negatively impact the student experience (Cooper et al., 2015).

1.1.6 Supporting Student Learning and Well-Being in the ICU Environment

A passive approach to clinical placements may sometimes be adopted by students as a coping mechanism to reduce anxiety, even though it may limit learning (Cooper et al., 2015). This passive approach and lack of initiative by students to establish professional relationships with others during clinical placements may limit learning experiences (Cooper et al., 2015). Learning experiences may also be limited by an inadequately trained preceptor (Salem, 2021). Salem (2021), for example, suggested that nursing faculty should conduct intentional recruitment of experienced nurses for clinical placements, provide feedback, and give ongoing support to preceptors and students.

It is important that faculty and nurse preceptors recognize the risk for psychological distress associated with being placed in the ICU environment and provide support to students during and after difficult clinical experiences (Hood & Copeland, 2021). Trust and support systems, including debriefings, are essential to prevent long-term psychological harm (Hood & Copeland, 2021).

Salem (2021) noted that the timing of critical care courses during baccalaureate nursing education is an important factor in student preparedness to consolidate in the ICU, suggesting that the final year of nursing school may enhance student learning while consolidating in ICU settings when critical care knowledge is fresh in their minds. The literature also suggests that incorporating high-fidelity simulation and structured ICU orientation into these courses may prepare students for emotionally challenging scenarios and improve confidence (Inayat et al., 2020; Salem, 2021; Hood & Copeland, 2021). Simulation and reflective learning strategies are recommended to build competence and reduce anxiety (Inayat et al., 2020). When integrated with preparation and debriefing, simulation is an effective method to transfer theory into practice, potentially better preparing students for their clinical placements (Badir et al., 2015). Repeated simulation sessions

may help students manage stress, feel better prepared for real-world scenarios, and reduce performance anxiety (Badir et al., 2015).

These educational strategies allow opportunity for group reflection, cultural sensitivity training, and expert feedback from an experienced ICU nurse and nursing faculty, which are essential components to building student confidence (Grossman, 2013). Enhanced student education on professional relationships and clinical learning strategies prior to placement could also improve the overall quality of their clinical placement (Cooper et al., 2015). These strategies may be facilitated by a preceptor in collaboration with other nursing faculty to ensure student success.

1.1.7 Limitations in Current Research

Several studies on the topic of nursing students in the ICU rely on self-reported data and small or homogenous samples, which may limit generalizability (Bongar et al., 2019; Inayat et al., 2020; Vatansever & Akansel, 2021). Further research is needed to explore diverse experiences and evaluate long-term outcomes (Hood & Copeland, 2021; Inayat et al., 2020). There may also be a need for standardized outcome measures and robust methodologies in future studies to enhance generalizability and reliability of the data (Brook et al., 2018; Inayat et al., 2020).

Gaining additional insights into the consolidation period may provide an understanding of how to better prepare and support students interested in pursuing a career in critical care upon graduation. Yet, an understanding of how student nurses perceive their experiences consolidating in the ICU are lacking and, therefore, it remains unclear whether students themselves find this setting overwhelming or stimulating. This research study aimed to examine this consolidation period and explore the lived experiences of nursing students in an ICU setting, thus offering valuable insights into this pivotal phase of their education.

1.2 Problem Statement and Research Objective

There is paucity of research and literature in general on the lived experiences of consolidation students being placed in an ICU clinical setting. Understanding the consolidation period as it is lived through the first-hand experiences of consolidation students within an ICU context may provide valuable insight and a foundation for addressing knowledge gaps pertinent in the education of nursing students and NGNs transitioning into the ICU. This thesis seeks to explore the lived experiences of senior nursing students (4^{th} year/final year) during their consolidation period in the ICU using a hermeneutic phenomenological approach proposed by Max van Manen (2016).

1.3 Thesis Outline

Chapter 1 has outlined an introduction to the topic of the lived experience of nursing students consolidating in the ICU. Chapter 2 will include the underlying theoretical foundations and considerations as well as methodological approach that guided this phenomenological research study. In chapter 3, an empirical findings manuscript of this study is presented. In chapter 4, an integrated discussion surrounding empirical findings and how it is situated within current research as it pertains to nursing research and education is presented.

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Chapter 2: Theoretical Considerations, Research Methodology, and Methods

Chapter 2 will first present the underlying theoretical foundations and considerations that guided this phenomenological research study. The theoretical foundations of any academic research typically begin with a discussion surrounding the philosophical beliefs that guided the principal investigator's study. As such, a discussion surrounding paradigms, ontology, epistemology, and reflexivity will be presented, after which this chapter will then discuss the study's overall design. This will include a description of the study's methods, population of interest, inclusion/exclusion criteria, sampling, recruitment, data collection, data analysis, and considerations of rigour.

2.1 A Discussion of Paradigms, Ontology, and Epistemology

To fully appreciate and understand any research study, a discussion surrounding its philosophical underpinnings is crucial. I begin with an examination of paradigms, ontology, and epistemology. A definition of these terms and their relationship to the creation of this thesis will be presented, beginning with an overview of paradigms and then progressing to discussions surrounding ontology and epistemology. Of note, there are several paradigms or worldviews that guide research studies; however, this chapter will use a comparison between positivism and realism on one end of a spectrum, and constructivism and relativism on the other end of the spectrum for the purposes of explanation and clarity.

A paradigm "represents a worldview that defines, for its holder, the nature of the 'world,' the individual's place in it, and the range of possible relationships to that world and its parts" (Guba & Lincoln, 1994, p. 107). Positivism is the paradigm that tended to dominate the discourse in the physical and social sciences for several years (Guba & Lincoln, 1994). Schlick (1932/1999) explains that positivists claim that only "the given" is real, with "the given" being that which is

unquestionably true as verified by sensory experience. Thus, metaphysical ideologies, such as the existence of an unknowable and transcendent external world separate from the observable world, are seen as meaningless (Schlick, 1932/1999). By contrast, constructivism tends to view things through a far less rigid lens. Constructivists believe that reality is mentally constructed by individuals and groups who build or "construct" a subjective reality (Polit & Beck, 2021). They embrace the exploration of multiple truths and points of view, welcoming and placing significance on subjectivity and personal values (Denzin & Lincoln, 1994; Guba & Lincoln, 1994; Polit & Beck, 2021). This thesis is situated within this constructivist paradigm.

Given constructivism as the dominant paradigm for this research, it is also important to consider ontological positioning. Ontology is defined as "the researcher's view of the nature of reality of being" (Pessu, 2019, p.40). At one end of the ontological spectrum, we have realism, in which the researcher would believe that there is one objective reality governed by strict mechanical laws that are unwavering and unbreakable – congruent with positivism (Guba & Lincoln, 1994). However, given that this thesis is situated within a constructivist paradigm, we must look at the world through a different lens. In contrast, a relativist ontology situates researchers within a subjective reality that varies for the group or individual in question. Relativists believe that multiple, socially and experientially based realities exist as mental constructions that are dependent on the individual or group that constructed them (Guba & Lincoln, 1994). While there may be several views within the range of this ontological spectrum between positivism and relativism, phenomenology tends to be consistent with relativism and has thus served as the philosophical foundation of this thesis.

Epistemology further builds upon the foundations set by paradigms and ontology, asking the inquirer to consider the nature of knowledge and how we might know things to be true (Guba

& Lincoln, 1994). If we compare the positivist/realist and constructivist/relativist paradigms, realists assert that knowledge is objective and that research findings are meant to be objectively true because they reflect the actual state of the world (Polit & Beck, 2021). As such, realists attempt to eliminate threats to validity and study an object of inquiry completely objectively and without influencing it. On the other hand, the relativist believes that the investigated object and the investigator are linked, with research findings being created during the interview process (Guba & Lincoln, 1994). Data is usually obtained in the form of narrative, unstructured information from a small group of study participants who experienced the phenomenon of interest (Polit & Beck, 2021). Constructivists prefer a flexible, emergent research design over a rigid experimental design, as would be done in a study situated within a positivist paradigm (Polit & Beck, 2021).

2.2 Phenomenology

As discussed in the previous section, this study was guided by relativist ontology and epistemology, situated in a constructivist paradigm. Guba and Lincoln (1994) claim that the relativist perceives reality as subjective, suggesting that truth itself is not measurable and that multiple realities (or truths) exist. Epistemologically, relativist researchers acknowledge that their own values and prior knowledge are a fundamental part of the research process (Guba & Lincoln, 1994). These philosophical underpinnings are congruent with Phenomenology, which served as a guide for the methodology and methods of this thesis.

Phenomenology proposes an alternative to the traditional methods used in positivist and post-positivist research methods. Proposed by Edmund Husserl (1971) and built upon by Martin Heidegger et al. (1962/2008), phenomenology involves a thorough examination of the human experience, seeking to study a given phenomenon within its respective context rather than adhere to the rigid structure of the traditional scientific method. The phenomenologist seeks to

"investigate subjective phenomena in the belief that critical truths about reality are grounded in people's lived experiences" (Polit & Beck, 2021, p. 477). They believe that there is an invariable structure, or essence, in the phenomenon of study that can be understood, comparable to how an ethnographer assumes that cultures exist (Polit & Beck, 2021). Phenomenology aims to study lived experience with the goal of uncovering the "meanings in everyday practice in such a way that they are not destroyed, distorted, decontextualized, trivialized, or sentimentalized" (Benner, 1985, p. 6).

Phenomenology has evolved since the early articulations of Husserl and Heidegger, but it still attempts to study the lived experience of a person or group that has lived through a particular phenomenon of interest without isolating variables, as would be done in positivist and postpositivist research (Benner, 1985). There are two main schools of thought when conducting phenomenological inquiry: descriptive phenomenology and interpretive phenomenology (Polit & Beck, 2021). Descriptive phenomenology aims for a pure description of the phenomenon of study, while interpretive phenomenology aims to interpret the meaning of a phenomenon (Polit & Beck, 2021). This thesis is most congruent with interpretive phenomenology. Interpretive phenomenologists approach their research data with openness, with a desire to hear what the text is saying through their analysis (Polit & Beck, 2021). As Heidegger (1971) once said, "we never come to thoughts. They come to us" (p. 6).

Max van Manen (2016) is a Canadian phenomenologist who built upon the works of Heidegger, incorporating aspects of hermeneutics, or interpretation, in describing and interpreting lived experience. Hermeneutics is defined as the study of interpretation, marked by the use of a hermeneutic circle during the analysis process — an interpretive exercise described as a circular relationship where one understands the whole of a text (such as a transcribed interview) in terms

of its parts and its parts in terms of its whole (Polit & Beck, 2021). According to van Manen (2016), “hermeneutic phenomenological human science being interested in the human world as we find it in all its variegated aspects” (p. 18). Subjectivity and individual experiences are valued because constructivism and relativism guide phenomenological belief that truth about our reality is in fact subjective and grounded in our lived experiences (Polit & Beck, 2021).

Van Manen’s (2016) hermeneutic phenomenology is congruent with interpretive phenomenology, given that the raw data and findings are analyzed, compared, and contrasted in a hermeneutic circle throughout the research process. It is also interpretive in its claim that uninterpreted phenomena do not exist. The mere act of capturing lived experience in language is inevitably an interpretive exercise (van Manen, 2016). However, van Manen (2016) emphasizes that his methodology is also a descriptive process, in that it seeks to be attentive to how ‘things’ appear, wanting to allow ‘things’ to speak for themselves.

Van Manen claims that phenomenological inquiry should always begin with questioning the way one experiences the world in which we live and must inspire a sense of wonder in the researcher (Van Manen, 2007; Van Manen, 2017). It seeks to explore pre-reflective or spontaneous lived experience, typically done through in-depth interviews with study participants, followed by a detailed thematic analysis with the purpose of uncovering the characteristic features of a phenomenon (Heinonen, 2015; van Manen, 2016; Polit & Beck, 2021). Van Manen’s (2016) phenomenology guided this research study, and his three-step approach was used in analyzing the raw data. This method will be discussed further in section 2.4.

Two staples of phenomenological methods include both 'reduction’ and epoché (also known as bracketing). Reduction in this context refers to returning to the original source of an individual’s lived experience (Heinonen, 2015). This can be achieved by returning to the raw data,

or interview transcript, and ensuring findings are truly grounded within this data (Heinonen, 2015). In this study, it will be seen that direct quotes are used often to ensure that the research findings are reflective of the participant's lived experience.

Epoché, or bracketing, involves having the researcher free themselves of their assumptions before beginning their investigation (Polit & Beck, 2021). However, in the interpretive tradition, true bracketing does not always occur (Polit & Beck, 2021). In fact, Heidegger thought that true bracketing of one's own presuppositions and being-in-the-world was impossible (Polit & Beck, 2021). Instead, researchers are recommended to take time to pause and reflect on one's own preunderstanding and biases (van Manen, 2016; Polit & Beck, 2021). This allows for a critical self-awareness to be had, thus allowing for an openness to engage in a conversational relation with the phenomenon of interest free of, or at least aware of, our presuppositions (Heinonen, 2015; van Manen 2016). As such, a reflexivity statement is listed in the section below as a means of practicing critical self-awareness through the acknowledgment of the researcher's own biases.

2.3 Reflexivity Statement

Despite an interest in critical care during nursing school, I was never presented with the opportunity to conduct a clinical placement in the ICU. My clinical experiences largely took place on general practice units, with my final practicum taking place on an acute medical floor. This presented a huge challenge when, upon graduation, I obtained my first nursing job in a cardiothoracic ICU and soon learned the realities of being a novice nurse in a critical care setting. To say it was overwhelming would be an understatement.

Transitioning to an ICU setting proved to be a huge challenge for me, and I distinctly remember my manager discussing the possibility of re-assigning me to a medical-surgical unit while I was on orientation, as they did not feel that I was ready for critical care. Thankfully, that

looming threat of being re-assigned to another unit encouraged me to focus all my time and attention, inside and outside of the workplace, on learning the complexities of critical care. With much hard work and persistence, I completed my rigorous orientation period and began practicing as an independent critical care nurse. Despite successfully making that initial transition to independent practice, the difficulties of working in the ICU as an NGN remained a huge challenge well over a year into my nursing career.

My interest in exploring the phenomenon of students' experiences in the ICU stems from my own lived experiences as a nursing student. I felt that there had to be a better way to transition NGNs into the ICU and always wished that I was exposed to the critical care setting earlier in my career. I felt disadvantaged being introduced to the ICU so late and almost gave up on my goal to be an ICU nurse. Thankfully, I pushed through this challenging period and have successfully worked as an ICU nurse since 2018. I successfully obtained professional certification in critical care (CCRN) in 2021 and have now served as a nurse preceptor to several new nurses transitioning into the ICU.

I am grateful that I did not give up my position in critical care when faced with resistance, but I imagine that there are several other new nurses that are in the same position that I was in. As such, I have developed an interest in ICU education and would like to believe that if someone has the desire to become an ICU nurse, they can do so with the right support and resources. This thesis is driven by my passion for critical care and a desire for nursing students and NGNs interested in critical care to have early exposure to the ICU, thus facilitating an easier transition to this complex setting.

It is important to acknowledge my presuppositions prior to engaging in phenomenological research, as my experiences in critical care could introduce bias in data collection and analysis. To

mitigate these potential biases, I engaged in reflexivity, grounded findings during data analysis in participant quotes, followed a structured analytical method from the works of van Manen (2016), and sought guidance from more experienced qualitative researchers on my committee.

2.4 Methods

The methods section outlines this study's proposed research design, including population of interest, sampling, data collection, data management, analysis, and considerations for rigour, ethics, and feasibility within the constraints of an MScN thesis.

2.4.1 Research Design

This study is qualitative in nature and, more specifically, is a study guided by interpretive phenomenology. Being phenomenological in nature, this study seeks to describe and interpret meaning from a particular lived experience. In this case, the lived experience is that of nursing students consolidating in an ICU setting. Van Manen's (2016) phenomenology provided the methodological foundation for this interpretive phenomenological study. In alignment with the tradition of phenomenology, data was collected through interviews with study participants. A three-step approach was used when analyzing the raw data. This method included a holistic approach, a selective approach, and a detailed approach in reviewing the interview transcripts (Van Manen, 2016). This allowed for a thorough examination of the ICU setting from the perspective of an under-researched population, namely nursing students during their consolidation.

2.4.2 Population of Interest

The lived experience of 4th year students undergoing a consolidation period in the ICU is the phenomenon of interest and central study goal of this thesis. As such, the population of interest for this study was 4th year Bachelor of Science in Nursing (BScN) students who recently underwent an ICU consolidation experience for their final practicum. This population of interest

was accessed using convenience sampling. The primary investigator determined interest in study participation by contacting 4th year BScN students who attend the University of Ottawa and consolidated in an Ontario-based ICU (see section 2.4.5 Sampling and Recruitment).

2.4.3 Inclusion Criteria

Considering this study is exploring a particular lived experience by means of conducting interviews, it was decided that data collection should be completed as close in time to their consolidation as possible to enhance reliability. Thus, the inclusion criteria to be considered for participation in this study was that interested participants were current or recently graduated BScN students that consolidated in a Canadian, Ontario-based adult ICU within <1 year from their scheduled interviews. Participants were also required to be English or French speaking.

2.4.4 Exclusion Criteria

The exclusion criteria for this study were participants that consolidated in an adult ICU >1 year from their scheduled interview, participants that were not English or French speaking, and participants that did not consolidate in an adult ICU. Students that consolidated in pediatric ICUs, emergency department, medical-surgical units, or any other unit that was not an adult ICU, were not included in this study.

2.4.5 Sampling and Recruitment

A purposive convenience sampling strategy was used to recruit individual nursing students who met the inclusion criteria listed above. According to Polit and Beck (2021), purposive sampling involves handpicking elements to be included in a study sample based on the researcher's knowledge about the population. Additionally, convenience sampling involves using the most conveniently available individuals as participants (Polit & Beck, 2021). Van Manen's (2016) interpretive phenomenology does not prescribe a specific sample size, as its focus is on rich

description of lived experience as opposed to data saturation. Therefore, a small sample size is acceptable in phenomenological studies.

Upon being vetted by the University of Ottawa's Research Ethics Board (REB), the primary investigator gauged initial interest in the research project by emailing a SurveyMonkey survey to 4th year BScN students at the University of Ottawa that consolidated in the ICU. By filling out the survey, students agreed to be contacted for potential study recruitment. Once the REB approved the study upon submission of the research proposal, participants who expressed interest via the "permission to contact" form were sent more information on the study, including a consent form (Appendix C), recruitment poster (Appendix F), and recruitment poster (Appendix B). Upon explanation of the study design and goals, the researcher obtained informed consent from each participant before collecting data in the initial and subsequent interviews.

2.4.6 Data Collection

Ultimately, a total of four University of Ottawa (n = 4) BScN students that consolidated in various Ontario-based ICUs in Canada were selected to participate in this study. Participants completed a brief demographic survey and consent before their interview (see Appendix D). This survey also included questions that the PI used to develop unique participant identification codes. Once this survey was completed, interviews were scheduled at a date and time convenient to the participants.

Data for this study was collected using 1-2 semi-structured interviews (see Appendix A) that were audio-recorded using an encrypted recording device. Interviews were conducted using the Microsoft Teams platform, being chosen as the ideal method for obtaining data because it allowed participants to conduct the interviews in a space comfortable for them in a private location.

In addition, transcription software within Microsoft platforms is ideal for the purposes of recording and transcribing interviews with participants. Consent was verified prior to each interview (see Appendix E).

After each interview, the audio-recorded data was uploaded to the University of Ottawa's secure SharePoint and transcribed into Microsoft Word. Transcriptions were verified by the research team before finalizing and analyzing each transcript. The interviews were semi-structured, with questions that were open-ended in nature and geared towards understanding the lived experience of consolidation students in the ICU setting. Follow-up interviews were also conducted to uncover additional thematic aspects of study participants' lived experience and clarify any unclear details of the initial interview with participants. Three participants took part in 2 interviews, and one participant took part in 1 interview. In total, 7 interviews were conducted, lasting 25-55 minutes in duration.

2.4.7 Data Analysis

Data were analyzed using Max van Manen's (2016) three-step approach to uncovering thematic aspects of a text, involving a holistic approach, a selective approach, and a detailed approach. The holistic approach involved the research reading and attending to the whole text and seeking out its fundamental meaning. The selective approach involved reading passages of text several times and considering which phrases seem particularly essential or revealing about the phenomenon or experience being described. These statements were then colour-coded by circling, underlining, or highlighting and used for reference as recurring themes emerge from the raw data. Finally, the detailed reading approach, also known as the line-by-line approach, involved the researcher considering every sentence and considering what each sentence or sentence cluster revealed about the phenomenon or experience being described (van Manen, 2016).

As the thematic analysis unfolded, recurring themes became apparent across interviews, revealing the essence of what it meant to be a consolidation student in the ICU for the first time. These recurring themes were organized into categories and subcategories grounded in the raw data using direct quotes from the interview transcripts.

2.5 Methods to Ensure Rigour

In terms of rigour for this qualitative study, Tracy's (2010) Eight Criteria of Quality in Qualitative Research were considered in developing this thesis. According to Tracy (2010), "high quality qualitative research is marked by: (a) worthy topic, (b) rich rigour, (c) sincerity, (d) credibility, (e) resonance, (f) significant contribution, (g) ethics, and (h) meaningful coherence" (p. 839). These eight criteria guided the research team and ensured that the study findings are indeed reliable. The eight steps are summarized below with a brief discussion on how each step was achieved in this thesis's creation.

2.5.1 Worthy Topic

Tracy (2010) states that "worthy topic" refers to choosing a topic that is relevant, significant, interesting, timely, or evocative. Given that there is paucity of research and literature on the lived experiences of consolidation students being placed in an ICU clinical setting, this was certainly a topic worth exploring. An understanding of the consolidation period as it is lived in an ICU context may provide insight into the student experience and provide a foundation for addressing knowledge gaps pertinent in the education of competent ICU nurses.

2.5.2. Rich Rigour

"Rich rigour" refers to the study's sufficient, abundant, appropriate, and complex consideration of theoretical constructs, data and time in the field, sample, context, and data collection and analysis processes (Tracy, 2010). This thesis was supervised by a team of qualitative

researchers with research experience in phenomenological inquiry and nursing experience in critical care. Under this expertise, it was ensured that phenomenological methodology and methods were adhered to throughout the research process. Rich data was obtained by means of one to two in depth semi-structured with each study participant, which was then analyzed in depth according to van Manen's (2016) methods for thematic analysis.

2.5.3. Sincerity

"Sincerity" involves self-reflexivity and transparency from the researchers to acknowledge their own values, biases, and inclinations (Tracy, 2010). Therefore, a reflexivity statement was included (see section 2.3) to ensure that values, biases, and inclinations were acknowledged by the research team.

2.5.4. Credibility

"Credibility" refers to the research findings being marked by thick description and concrete detail that frequently refers to the raw data (Tracy,2010). This helps to evidence and emphasize where themes emerged from, rather than simply telling the reader. Throughout the study manuscript in chapter 3, data is marked with thick description and rich, concrete details with several direct quotes taken from study participants. These direct quotes serve as the raw data as mentioned by Tracy (2010) and are referenced many times throughout the manuscript.

2.5.5. Resonance

"Resonance" considers if the research will influence, affect, or move its readers through evocative representation and relatable, transferable findings (Tracy, 2010). The findings may be transferrable to any nursing students who also experienced the phenomenon of interest - a consolidation experience in the ICU. Furthermore, this study will resonate with nursing scholars

and educators seeking to further understand the lived experiences of nursing students in this complex ICU setting as they begin the transition from student to nurse.

2.5.6. Significant Contribution

"Significant contribution" means that the research itself provides a significant contribution to its field of study either practically, morally, theoretically, methodologically, or heuristically (Tracy, 2010). This study does indeed provide a significant contribution to nursing students in the ICU, ICU nurse preceptors, and nurse educators in every sense listed above as they consider the lived experiences of these study participants. The lived experiences of these consolidation students may help to new students what to expect as they enter the ICU for the first time. It may also help educators to understand and anticipate the potential learning needs of future students, thus allowing them to better prepare educational materials for the consolidation period.

2.5.7 Ethical

The "ethical" criteria considers if the research went through the proper ethical channels to conduct the research (Tracy, 2010). This study was approved by the University of Ottawa's internal REB prior to data collection (REB #H-06-23-9321). Confidentiality and anonymity were maintained by removing identifying data from the interviews and giving participants a unique identifying code. These codes were developed from the answers given during the demographic survey via SurveyMonkey. This helped to reassure participants that their information remained confidential and securely stored, thus encouraging more honest and forthcoming responses to interview questions.

2.5.8. Meaningful Coherence

Finally, "meaningful coherence" considers if the study achieved what it set out to achieve using the methods that fit the overall research goal. Literature, research questions, research

findings, and interpretations should be meaningfully interwoven to produce a rigorous study (Tracy, 2010). Chapter 4 presents an integrated discussion that helps situate this study within the existing literature, thus providing meaningful coherence.

2.6 Final Considerations and Conclusion

Following Tracy's (2010) eight steps, methodological rigour will be ensured and allow this study to provide meaningful and significant contributions to the field of nursing. This project was undertaken over 12 – 18 months with a limited budget, as an MSc thesis project. The research team performed interviews, coding, and the analysis process, and the scope of the project was feasible. Ethical approval was obtained by the University of Ottawa's REB, with interviews and thematic analysis being conducted throughout 2023-2024.

The lived experience of consolidation students in the ICU is highly under-researched and could contribute immensely to the nursing discipline. This study gives nurses, scholars, and students insights into the physical, emotional, spiritual, and educational needs of consolidation students in the ICU as they begin the difficult transition from student to RN. Competence in the ICU is a multidimensional concept requiring advanced skills in assessment and the provision of high-intensity interventions to sustain life (American Association of Critical Care Nurses [AACN], 2019). As such, preparation for ICU employment must begin during undergraduate education to facilitate the progression from nursing generalist to ICU specialist.

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Chapter 3:

The Lived Experience of Nursing Students Consolidating in the Intensive Care Unit: A Phenomenological Inquiry

This Chapter has been formatted as a manuscript for submission to Nursing in Critical Care. All formatting therein conforms to the style requirements and authorship guidelines of the journal.

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Introduction

The World Health Organization [WHO] (2020) recently reported a shortage of approximately 5.9 million nurses worldwide. The International Council of Nurses [ICN] (2021) predicts that this shortage is being further exacerbated by an aging workforce and the lingering effects of COVID-19. Their most recent policy brief estimates that up to 13 million will be needed to fill global nursing shortages in the future (ICN, 2021).

New graduate nurses [NGNs] are being hired in a variety of settings to fill employment gaps within the healthcare system (Vanderspank-Wright et al., 2020), with some evidence suggesting that 18% to 23% of NGNs are accepting jobs in an intensive care unit [ICU] (DeGrande et al., 2018). However, NGNs working in the ICU have expressed a lack of confidence in completing specialized ICU skills, making the decision to hire NGNs in this setting controversial (Serafin et al., 2022). This presents a critical issue for nursing. As medical technologies advance and chronic diseases continue to increase in prevalence, along with an aging global population, the need for ICU nurses more dire than ever (Halcomb et al., 2011; CIHR, 2016; Bongar et al., 2019).

NGNs often solely rely on the theoretical and practical experiences allotted to them during nursing school when practicing independently as a registered nurse [RN] for the first time. Clinical placements are integrated into undergraduate nursing curricula to help future RNs prepare to enter the workplace, providing them the opportunity to solidify clinical knowledge and bridge the theory-practice gap (Bongar et al., 2019). A nursing student's final clinical placement, sometimes referred to as 'consolidation', serves as the final opportunity for students to bridge this theory-practice gap before transitioning to the workplace as a RN. Conducting a consolidation placement in ICU settings may provide senior nursing students with an opportunity to strengthen their existing nursing knowledge, owing to the complex processes involved in caring for critically ill patients

and their families (Williams & Palmer, 2014). However, given that the goal of prelicensure nursing education is to prepare nurse generalists and not nurse specialists (Swinny & Brady, 2010), the question of whether to allow nursing students and NGNs in the ICU setting remains a topic of controversy.

Traditionally, nurse employment in the ICU has been reserved for experienced nurses with existing knowledge regarding the intricacies of patient care. The assessment, monitoring, and interventions required to provide medical care for an ICU patient is facilitated by advanced technology that may present a challenge to even the most experienced nurses (McGrath, 2008). Because of its complexity, nurses continue to report ongoing levels of uncertainty when caring for critically ill patients despite working in an ICU setting for up to two years (DeGrande et al., 2018). This challenge is further perpetuated by a potential lack of education hours during nursing school and inadequate practical experience prior to working independently in an ICU setting (Serafin et al., 2022). Balancing the time-management and technical skills required to care for critically ill patients, all while learning and solidifying clinical knowledge as a nursing novice, is no doubt a challenge. Still, given the ongoing nursing shortage, the practice of hiring NGNs in the ICU is nearly ubiquitous.

NGNs make a transition from the academic setting to the workplace upon graduation, entering a lengthy period of growth and progression from nursing novice to nursing expert (Benner, 1982). Upon passing an initial registration exam, NGNs demonstrate entry-level nursing knowledge, deeming them capable of competently entering the nursing profession as a novice nurse. However, there are additional standards for nursing practice exclusive to the ICU that nurses must meet to practice competently in this highly specialized setting (AACN, 2019; CACCN,

2017). As such, it can be suggested that preparation for ICU employment should begin during undergraduate education to facilitate the progression from nursing generalist to ICU specialist.

There is paucity of research and literature on the lived experiences of consolidation students being placed in an ICU clinical setting. An understanding of the consolidation period as it is lived in an ICU context may provide insight into the student experience and provide a foundation for addressing knowledge gaps pertinent in the education of competent ICU nurses. With a growing body of research highlighting the ICU as a valuable learning opportunity for both NGNs and students (Swinny & Brady, 2010; Doucette et al., 2011), this trend presents a phenomenon worth exploring further.

Research Objective

The objective of this research study was to explore the lived experiences of consolidation students as they navigate and practice in the ICU for the first time.

Theoretical Positioning

This study was guided by relativist ontology and epistemology, situated in a constructivist paradigm. Guba and Lincoln (1994) claim that the relativist perceives reality as subjective, suggesting that truth itself is not measurable and that multiple realities (or truths) exist. Epistemologically, relativist researchers acknowledge that their own values and prior knowledge are a fundamental part of the research process (Guba & Lincoln, 1994). The research team took time to reflect on their own pre-understanding and biases (van Manen, 2016; Polit & Beck, 2021), allowing for a critical self-awareness and an openness to engage with the phenomenon of interest free of, or at least aware of, their presuppositions (Heinonen, 2015; van Manen 2016). These philosophical underpinnings are congruent with interpretive phenomenology, which served as a guide for the methodology, methods, and design of this study.

Methodology

This study incorporated an interpretive phenomenological approach (van Manen, 2016), with the goal of exploring the pre-reflective and spontaneous lived experience of nursing students conducting their final clinical placement in the ICU. This study sought to describe and interpret meaning from students' lived experience through in-depth semi-structured interviews with study participants. Interviews were followed by a detailed thematic analysis with the purpose of uncovering the characteristic features of this phenomenon (Heinonen, 2015; van Manen, 2016; Polit & Beck, 2021). Van Manen's (2016) phenomenology guided this research study, and his three-step approach to uncovering thematic aspects of text was used in analyzing the raw data. This method included a holistic approach, a selective approach, and a detailed approach in reviewing the interview transcripts (Van Manen, 2016).

Participants

The population of interest for this study was 4th year Bachelor of Science in Nursing (BScN) students who recently underwent an ICU consolidation experience for their final clinical placement. Ultimately, a total of four University of Ottawa (4) BScN students that consolidated in various Ontario ICUs in Canada were selected to participate in this study.

Inclusion criteria were as follows: current or recently graduated BScN students that consolidated in an adult ICU within <1 year from their scheduled interviews. Participants were also required to be English or French speaking. The exclusion criteria for this study were participants that consolidated in an adult ICU >1 year from their scheduled interview, participants that were not English or French speaking, and participants that did not consolidate in an adult ICU. Students that consolidated in pediatric ICUs, emergency department, medical-surgical units, or any other unit that was not an adult ICU, were not included in this study.

Setting

All participants conducted their consolidation period in an adult Canadian ICU with a nurse preceptor or preceptors that helped facilitate their learning. Two participants consolidated in surgical/trauma ICU, one (n = 1) participant was in a medical ICU, and one (n = 1) participant was in a burn ICU.

Recruitment

A purposive convenience sample was used to recruit individual nursing students who met the inclusion criteria listed above. Purposive sampling involves handpicking elements to be included in a study sample based on the researcher's knowledge about the population (Polit & Beck, 2021). Additionally, convenience sampling involves using the most conveniently available individuals as participants (Polit & Beck, 2021). The sample was recruited from a single cohort of 4th year BScN students from an Ontario, Canada University. To facilitate recruitment, initial interest in the research project was gauged using a "permission to contact" form was designed and administered through SurveyMonkey. The permission to contact survey was sent out by the primary investigator to ICU consolidation students. This enabled students who provided permission to be contacted to be sent study information following the completion of their consolidation and post-graduation. Following REB approval, participants who provided permission to contact, were sent additional information regarding the study, including the recruitment poster and consent form. The researcher obtained informed consent from each participant before collecting data in the initial and subsequent interviews.

Data Collection

Participants were sent a demographic survey to complete prior to their interview. Completing this survey also constituted as informed consent to participate in interviews with the PI. Once this survey was completed, interviews were scheduled at a date and time convenient to the participants. Data for this study was collected using semi-structured interviews that were audio-recorded using an encrypted recording device. Interviews were conducted using the Microsoft Teams platform, being chosen as the ideal method for obtaining data because it allowed participants to conduct the interviews in a space comfortable for them in a private location. In addition, transcription software within Microsoft platforms is ideal for the purposes of recording and transcribing interviews with participants.

After each interview, the audio-recorded data was uploaded to the University of Ottawa's secure SharePoint and transcribed into Microsoft Word. Transcriptions were verified for accuracy prior to analysis. The interviews were semi-structured, with questions that were open-ended in nature and geared towards understanding the lived experience of consolidation students in the ICU setting. Follow-up interviews were also conducted to uncover additional thematic aspects of study participants' lived experience and clarify any unclear details of the initial interview with participants.

Data Analysis

Data were analyzed using van Manen's (2016) three-step approach to uncovering thematic aspects of a text, involving a holistic approach, a selective approach, and a detailed approach. The holistic reading approach involved attending to the whole text and seeking out its fundamental meaning. The selective approach involved reading a passage of text several times and considering which phrases seem particularly essential or revealing about the phenomenon or experience being

described. These statements were then colour-coded by circling, underlining, or highlighting and used for reference as recurring themes emerge from the raw data. Finally, the detailed reading approach, also known as the line-by-line approach, looked at every single sentence and considers what each sentence or sentence cluster reveals about the phenomenon or experience being described (van Manen, 2016).

As the thematic analysis unfolded, recurring themes became apparent across interviews, revealing the essence of what it meant to be a consolidation student in the ICU for the first time. These recurring themes were organized into categories and subcategories grounded in the raw data, using direct quotes from the interview transcripts.

Methodological Rigour

Tracy's (2010) Eight Criteria of Quality in Qualitative Research were considered in developing this study. According to Tracy (2010), "high quality qualitative research is marked by: (a) worthy topic, (b) rich rigour, (c) sincerity, (d) credibility, (e) resonance, (f) significant contribution, (g) ethics, and (h) meaningful coherence" (p. 839). These eight criteria guided the research team and ensured that the study findings are indeed reliable.

Ethical Considerations

Research ethics approval was sought and received from the institutional research ethics board (REB #H-06-23-9321). Consent was received before initiating interviews, and all data was anonymized and redacted where necessary to maintain confidentiality and anonymity.

Confidentiality and anonymity were maintained by removing identifying data from the interviews and giving participants a unique identifying code. These codes were developed from the answers given during the demographic survey via SurveyMonkey. This helped to reassure

participants that their information remained confidential and securely stored, thus encouraging more honest and forthcoming responses to interview questions.

Findings

A total of four participants were recruited for this study. Three participants completed two semi-structured interviews, while one participant completed one semi-structured interview. Prior to the interviews, all participants completed a brief demographic survey that captured their gender identity, sex at birth, race/ethnicity, type of ICU consolidated in, number of preceptors, use of additional preparation prior to consolidation, current employment in the ICU after consolidation, and whether they were employed in the same ICU in which they consolidated. All four participants identified their gender and sex at birth as female; one identified their race/ethnicity as asian and three as white. Two participants completed consolidation in a surgical/trauma ICU, one in a medical ICU, and one in a burn ICU. Three participants reported having one preceptor during their consolidation, while one reported having two preceptors. All four participants indicated using additional resources to prepare for consolidation (e.g. online resources, books). Following consolidation, three participants were employed in an ICU and one was not. Two participants are employed in the same ICU in which they consolidated, one is employed in a different ICU, and one participant preferred not to answer this question.

Based on the analysis, the participant's lived experiences consolidating in the ICU were organized into nine theme clusters situated within three overarching categories (Table 1). Each category represents a period within the consolidation experience situated along a linear timeline, beginning with "before consolidation", then progressing to "during consolidation", and ending with a reflective period "after consolidation." The overall essence of the study phenomenon was

summarized as “a supported learning journey” (see Table 1 for breakdown of categories and themes).

Table 1

Category	Theme Cluster	Theme
Before Consolidation: The Influence of Past Lived Experiences	I. Choosing to do Consolidation in the ICU	Personal preferences Nursing school experiences Previous life experiences
	II. ICU Consolidation Preparation	Searching for learning resources
During Consolidation: Adapting to the ICU	I. Impressions of the ICU Environment Throughout Consolidation	First impressions of the ICU Impressions of the ICU’s Physical Environment
	II. Experiencing the ICU’s Clinical Workflow	Creating a daily routine Building the clinical skills of an ICU nurse Accessing and creating learning resources
	III. Socialization	Forming a relationship with a preceptor Interactions with other ICU staff Communicating with patients and families Integrating into the ICU team
	IV. Challenges and Coping	Perceived challenges caring for patients and families Perceived challenges with staff Balancing Consolidation with other school requirements Developing coping mechanisms
After Consolidation: Reflecting on a New Lived Experience	I. Reflecting on the Consolidation experience	Feeling emotions Reflecting on lessons learned Advice to future ICU Consolidation students
	II. Transition to becoming an ICU nurse	Becoming comfortable with the basics Ongoing learning
	III. Future nursing goals	ICU employment and gaining competence Growing interest in advanced practice

Theme 1: Before Consolidation – The Influence of Past Lived Experiences

Choosing to do Consolidation in the ICU

Participants began describing their consolidation experience with a story of how they were initially placed in the ICU. The choice to consolidate in the ICU was influenced by a combination of factors, including personal preferences, nursing school experiences, and previous life experiences. Participants also reflected on efforts they made to prepare for the demands of consolidation placement.

i. Personal Preferences on Consolidation Unit

There was variation in participants' personal preferences on the type of unit they wanted to consolidate in, and the ICU was not necessarily each student's first choice. Neither Phoebe nor Freya had the ICU at the top of their list for consolidation. Phoebe stated that "I didn't really intend to consolidate in the ICU…I just randomly got that placement and then I ended up loving it…I was kind of just open minded for the experience" (Phoebe, Interview #1). This sentiment was further echoed by Freya, who stated that "it was actually my second choice…I had emerge… first" (Freya, Interview #1). Contrarily, Bella was desirous to consolidate in the ICU, stating that "fortunately, I had good grades that got me to [REDACTED] ICU, it was my top choice" (Bella, Interview #1). This marks an evident difference of opinion between participants' personal preferences on the type of unit they wanted to consolidate in.

ii. Nursing School Experiences

In part, the students' preferences on the unit they wished to consolidate in was also affected by their prior experiences in nursing school. Positive experiences in both the clinical environment and the classroom affected perceptions on their desired consolidation unit. Gia explained:

> "I was perfectly happy to go into other things, like oncology. I had a really great experience during my complex care rotation on oncology… I had also been thinking about postpartum because again, I had a really great clinical experience" (Gia, Interview #1).

Phoebe also mentioned that positive experiences in the classroom contributed to her perception of an ICU placement, stating that "after doing the critical care course in fourth year… maybe I would like ICU" (Phoebe, Interview #1).

By contrast, negative clinical experiences also shaped the perception of the type of consolidation unit students wanted to be placed in. There was a commonly held negative perception of medical-surgical floors from past clinical experiences, with all four students mentioning some aspect of their past clinical placements on these units being unfavourable. There were frequent mentions of instructors, nurses and students being "stretched thin" (Freya, Interview #1) and that "the issue you'd run into was everybody was really, really busy… they clearly had the mindset of they weren't there to teach you. They were there to be a nurse" (Gia, Interview #1). Bella further echoed this sentiment, stating that:

> "What I hated on the floors are the patient load… sometimes you just don't have time… my medicine placement was like, there's no…way I'm doing this ever. And for my other placements, sometimes I was unsure… But I was never unsure about going in ICU" (Bella – Interview #1).

Thus, both positive and negative lived experiences reinforced students' perception of a desirable consolidation placement.

iii. Personal Life Experiences

Personal life experiences outside of nursing school further impacted students' perception of their desired consolidation placement. Phoebe recounted a childhood story of her time in the ICU as patient:

> "I was there for, I think 2 weeks, with like pneumonia and mono… I kind of got to see that when I was in the ICU there and then the critical care course kind of made me understand what critical care was kind of about" (Phoebe – Interview #1).

Gia also recounted a personal story about her father's admission to the ICU:

> "I actually chose a specific ICU because several years ago my father was... he was in an explosion, so he got sent to ICU. And I remember the experience really well. Just, you know, being a visitor and he was there for quite a while so I kind of always just wanted to go there (Gia, Interview #1).

Previous employment experiences, both inside and outside of an ICU setting, also helped shape students' perceptions of the ICU and their desire to be placed in this setting. As Freya recounts: "I worked in the emerge before as at ECG tech throughout nursing school and I really liked the emerge, but I found that there's a bit too much chaos… I wanted a bit more controlled chaos." On the other hand, Bella worked in an ICU previously as a patient care aide. She explained: "it was my first job in the hospital, and I really loved it. Like the patient population that I was working with like older adults or adults in general."

Based on participant responses, several factors affected their decision to pursue a consolidation experience in the ICU. Upon obtaining said clinical placement, students were then tasked to prepare for their time in the ICU.

Preparing for Placement

There were several ways in which participants prepared for their time consolidating in the ICU, noting that they took time to reach out to their assigned preceptors prior to placement to ask questions, contacted professors they had during nursing school, or looked to online resources and educational materials. Phoebe described feelings of uncertainty and a perceived lack of control when entering the ICU, explaining that "you can't really control everything going in… whatever I could do to prepare myself was a way of kind of navigating that feeling of being unsure of what to expect" (Phoebe, Interview #1). Referring to PowerPoint presentations from nursing school, making cue cards, and watching educational videos were often cited by participants as ways to help prepare themselves for their clinical placements.

Theme 2: During Consolidation - Adapting to the ICU

Impressions of the ICU Environment Throughout Consolidation

As students transitioned from preparing for their clinical placements to entering the ICU as consolidation students for the first time, they confronted an unfamiliar environment in which their clinical and interpersonal skills were tested and refined.

i. First Impressions of the ICU

Students' first impressions of the ICU environment highlighted the variegated aspects that made it unique from other clinical units they had been on previously. Bella emphasized the size of the ICU she was placed in, noting that "it's so bright. It's so big…the rooms are bigger" (Bella, Interview #1). She also expressed an underlying feeling of being "a little bit overwhelmed as well," in part due to the unit's size: "it was out of my comfort zone because I don't know the people and it's so big and there are so many beds" (Bella, Interview #1).

Freya's first impression was marked by her observation of the nurses' proximity to their patients: "I found it weird seeing everyone in front of the patient. I wasn't used to seeing that at all … everyone is usually congregating at the nursing station, there wasn't as much of that" (Freya, Interview #1). Given the nurses' proximity to their patients and the patient acuity, she assumed that the nurse-to-patient ratio was always 1:1. She "was surprised when people were getting doubled. Especially when there were ventilators" (Freya, Interview #1).

Gia and Phoebe's first impressions reflected the ICU's level of busyness. Gia expressed "it was really busy… it was really, really intense and it was quite the first day" (Gia, Interview #1). By contrast, Phoebe expressed that "my first impression was that it's not as busy all the time as I would have expected… I would say that it wasn't as hectic and crazy all the time as I thought it would be" (Phoebe – Interview #1).

ii. **Impressions of the ICU's Physical Environment**

Participants also reflected on the physical environment of the ICU and the challenges it presented, primarily stemming from the constant noise, sensory overload, and unexpected elements. Participants found the frequent alarms overwhelming. As Phoebe noted, "there is quite a lot of alarms, a lot of ventilator alarms going off. For me, just expanding the alarm limits a little bit, while still keeping it safe, helped." The persistent alarms were described as bothersome, highlighting the need to adapt to auditory stimulation, while also keeping the patients safe with appropriate alarm limits.

Additionally, the ICU's sensory experiences, such as smells, had a memorable impact. For instance, Gia recounted an emotional reaction to the smell during an escharotomy, saying, "I didn't expect to have such a reaction, but the smell when somebody is cauterizing through skin is very particular and overwhelming. I didn't feel prepared for that."

The unpredictability of patient behaviors also contributed to the environment's intensity. Participants noted the frequent agitation and delirium of patients coming off sedation, which contrasted with their experiences in other units. Freya observed, "just random noises like yelling from patients… it was something I wasn't used to. In other units, that kind of behavior would almost trigger a code white, but in the ICU, it was part of the routine." This required participants to develop a sense of composure and adaptability to manage these high-stimulus situations effectively.

Together, the combination of noise, smells, and unpredictable patient behaviors made the ICU a uniquely challenging environment, pushing students to build resilience and become accustomed to the ICU's clinical workflow.

Experiencing the ICU's Clinical Workflow

The clinical workflow in the ICU was described as structured yet dynamic, requiring participants to adapt to an unfamiliar and complex routine. Participants' experiences participating in the ICU's clinical workflow was marked by the creation of a daily routine, building ICU clinical skills, and accessing and creating learning resources.

i. Creating a Daily Routine

When asked to describe a typical daily routine in the ICU, participants highlighted a sequence of preparation, collaboration, and patient care. Phoebe explained:

> "Coming on to shift…you get your report from the night nurse or the day nurse leaving… After that, looking into the chart, learning about your patient…planning your day… medications, scans…Then going into the patient's room, doing your safety check and morning head-to-toe assessment…Reconfirming meds…daily cares like mouth care…

> Your next assessment is typically every four hours…depending on your patient's needs and what they have going on."

Shifts often began with preceptor collaboration and setting learning goals. Gia described: "I'd have to get there about 7:00 AM and the shift started for 7:30…I would have a meeting with my preceptor…talk about…patient assignment…my learning goals… Then we'd go and get report from the outgoing nurse…ask…questions [and] format a learning plan for the day."

Participants emphasized how lengthy assessments and the documentation associated with these assessments formed a significant part of their daily routine during their consolidation. Gia explained:

> "We would go in for our assessment and usually my preceptor would come with me…at first…she would…show me the assessment cause obviously it was quite different from how it was on medsurg. And then after that, she just let me do it myself, and then we'd go in debrief about afterwards because the assessments took an hour every single time. They're so long, and especially with all the dressings and the wounds, they were incredibly long and a lot of the times the patients were on like 12 different IV lines. So just doing that and getting them all mapped out took ages sometimes."

Bella similarly described her routine, focusing on preparation and early medication administration:

> "I['d] get to the hospital…go in the unit to check my assignment. This is when [my preceptor] and I would meet…and then we would go to the monitor and print the [ECG] strips for our patients…meet with the nurse that had the patient for the night or the day and receive report. And after we receive report, I would check if there are…medications that I need to give…at the beginning of my shift and then have that ready and bring them in the room and then go and see the patient for the first time."

The variability in patient conditions also contributed to the dynamic nature of the workflow. Freya stated, “I’d see car accidents and I would see…strokes and neuro patients and then we would have some patients that could walk and talk. So, some with ALS or myasthenia gravis. So, it was very I would say I never really had the same for a while.” Freya also noted how they evolved in their ability to adapt: “At the beginning it was definitely a lot of just reading off the paper and trying to not miss a single little thing and then as it progressed, it kind of got better in terms of being able to talk about it more naturally. And then also like feeling more comfortable in asking for things.”

The clinical workflow in the ICU demanded attention to detail, adaptability, and a commitment to continuous learning, providing students with a dynamic and challenging environment to grow their skills.

ii. Building the Clinical Skills of an ICU Nurse

Developing the clinical skills of an ICU nurse required students to navigate a steep learning curve, especially when transitioning from less acute care settings in previous clinical placements to the consolidation period in the ICU. Gia reflected,

> “When I first started my consolidation, I don’t think I had a really good sense for what was immediate versus what could stand to wait a little bit…it kind of felt like everything was a little bit of an emergency. I realized quickly that…you can relax a little.”

Adjusting to the critical nature of ICU care helped students refine their ability to prioritize tasks effectively.

Technical skills were another key area of growth. Participants highlighted gaining experience with complex procedures and equipment, such as central lines and arterial lines. Freya shared,

> "Changing art line tubing…was just one of those things that I probably only did like a handful of times in consolidation…The first few times of having to do art line changes by myself, I asked someone just to watch me do it…because it's kind of more risky, and you don't want them bleeding a lot."

This highlights the importance of practice, mentorship, and confidence-building in mastering ICU-specific procedures.

In addition to technical skills, participants noted the integration of family-centered care in the ICU as a unique and valuable experience. Freya stated,

> "I found one thing that we didn't have on the floors or any of my other placements is part of the handoff includes the family…I'd never heard really family mentioned before in handoff reports on any floor…so that was really nice…having an idea of what they were like or…information about the family and…the patient story."

This aspect of ICU nursing emphasized the holistic nature of patient care, which participants expressed was less prominent in other settings.

The process of building ICU nursing skills involved not only mastering technical competencies but also adjusting to a new pace of care, learning to prioritize effectively, and embracing a more holistic approach to patient and family care. These experiences laid the foundation for students to grow into confident and capable ICU nurses.

iii. Accessing and Creating Learning Resources

Participants emphasized a desire to learn along with the importance of accessing and creating learning resources to enhance their clinical knowledge and confidence in the ICU. Many relied on institutional resources to explore key topics during downtime. Phoebe noted,

> "I remember my preceptor had access to like a SharePoint ICU site…I would just look into what was available there such as like arterial line setups…wound care, how to do a lot more…I would kind of refer to those documents and look at those to learn more, like on my downtime."

In addition to institutional resources, participants also created personalized tools to support their learning. Freya described developing cheat sheets to manage less frequently encountered procedures:

> "I made like a cheat sheet for blood transfusions…for..EVDs…deceased patients or… transfers. It always felt like: 'am I missing something?' So, it's nice to have that…and then I feel a lot better knowing that I hit all those points."

These tools provided structure and reassurance when navigating complex workflows. Bella highlighted creating a comprehensive, custom report sheet to organize patient data:

> "I have this report sheet that I…custom made to include all the information of reports…I have the room number, patient's name, age, category, allergies, isolation…Then I have different systems…neuro…CVS…labs, LDA, consults and rounds…And finally, I have a small text underneath that reminds me that I have to do Braden scale, fall risk."

This systematic approach helped streamline patient assessments and ensured critical details were not overlooked.

Overall, accessing pre-existing resources and creating individualized tools allowed participants to manage the complexity of ICU nursing effectively. These strategies not only supported skill acquisition but also fostered confidence and organization during clinical practice.

Socialization

i. Forming Relationships with a Preceptor

Participants described the significance of supportive and communicative relationships with their preceptors during their ICU placements. Phoebe emphasized the emotional support provided by their preceptor: “My nurse was super supportive…She was…good to ask questions and make sure that I was doing OK after seeing like codes being done or a patient passing away…it was super supportive.” This type of relationship helped foster confidence and provided a safe space to process challenging experiences.

Preceptors also actively sought learning opportunities and offered guidance beyond the clinical setting. Phoebe shared, “She'd always give me feedback and seek out opportunities for me…And then even after my last consolidation placement day, she was even reaching out to me through text…giving me pointers past that too.” These efforts demonstrated the preceptor’s investment in their student’s success, both during and after the placement.

Gia described how preceptors helped establish learning goals and structured discussions: “We would just talk about…the patient assignment…my learning goals.” These meetings provided a foundation for tailored learning and skill-building opportunities.

While initially hesitant to let students take on hands-on tasks, preceptors adapted as students demonstrated initiative, as noted by Gia: “At first it felt more like she was…showing me everything and I wasn't really getting a lot of hands-on experience…but…once I started asking and putting myself out there, she would let me do some things.” This progression highlighted the evolving dynamic between preceptor and student as trust developed.

In preparing for interdisciplinary rounds, preceptors also offered feedback and refinement of communication skills, as noted by Freya: “Before rounds I would check with my consolidation preceptor and…mention what I would say…if there’s anything I could add or…not really necessary to say.”

Overall, preceptors played a key role in fostering professional growth, providing emotional and educational support, and empowering students to take initiative in their learning.

ii. Interactions with Other ICU Staff

Participants highlighted the supportive and collaborative environment fostered by ICU staff. Phoebe shared how welcoming the team was, even beyond their primary preceptor: "Everyone in the ICU [was] super supportive and welcoming…a nurse came to me [and said], 'I have an EVD being inserted in this room. Do you want to come check it out?'" Such inclusivity encouraged learning opportunities and facilitated exposure to various clinical experiences.

Many staff members, including surgeons, respiratory therapists (RTs), and social workers, actively contributed to the participants' learning. Gia recounted a surgeon's effort to teach: "He made a really big effort to…teach me how to identify the different stages of burns…showing me why they were making certain paths with [the] escharotomy tool…I really appreciated that…a lot of the people in the room [were] really big about just including me." This enthusiasm for teaching extended beyond direct clinical tasks, enhancing the participant's understanding of complex medical situations.

The interprofessional nature of the ICU also stood out as a key strength. Gia noted that, "in an ICU, the doctors are constantly there, the RTs are constantly there, the PTs [and] OTs are constantly there. You have constant access to so many amazing resources…the ability to communicate…was amazing." This constant interaction facilitated real-time communication and fostered a cohesive learning environment.

Respiratory therapists were frequently highlighted for their willingness to share knowledge. Freya described how they explained ventilator settings, saying, "The RTs were really great…and…passionate…they were really helpful, especially when I hadn't really learned much

about…what PEEP was or what pressure support was, or what CPAP was." This guidance provided valuable insights into specialized aspects of ICU care.

Additionally, the social work team supported participants by managing difficult conversations with patients' families, alleviating some of the emotional burden on nurses. "Social work helped out a lot…not having to have all of those really, really difficult conversations when you're already…caring for the patient," Freya shared.

The supportive culture extended to management, as Bella noted in reference to interviewing for a potential job following the consolidation period: "the manager said, 'oh, you're welcome to send me an e-mail when you feel ready.'" This open-door policy reinforced the collaborative and approachable atmosphere within the ICU team.

Overall, the interactions with ICU staff emphasized a culture of mentorship, interprofessional collaboration, and shared learning, all of which contributed to the participants' professional growth and confidence.

iii. Communicating with Patients and Families

Communication in the ICU posed unique challenges due to the condition of many patients, who were often intubated, sedated, or unable to respond verbally. Participants emphasized the importance of continuing to engage with these patients despite limited interaction. Phoebe shared, "just like ensuring that you're still talking through everything that you're doing with them right up until they're like, passing away, I thought was very important." Gia noted, "While I was doing my assessments, it was more like just trying to get them to, say, squeeze my hand. It was very rare I'd get a verbal response while they were intubated." These efforts to maintain a connection underscored the commitment to compassionate care, even when direct communication was not possible.

Family interactions were another significant focus. Participants recognized the high emotional states many families experienced and the importance of empathetic communication. “It’s important to be super open with them about what’s going on…in order to kind of calm them down while they’re visiting,” Phoebe explained, adding that this openness fostered trust in the care team. Family presence was noted to have a profound impact on patient well-being. Gia observed, “watching the people who had no family…versus the people who had family coming in every day …the people who had no family…were often very depressed. People who had family…tended to do a lot better and felt very hopeful.”

End-of-life discussions were particularly delicate but were often handled thoughtfully by the healthcare team. Freya shared their experience of observing family meetings with the healthcare team, saying, “doctors were really good about…putting it in [a compassionate] way… rather than being…harsh with the explanation.” These conversations often helped families make decisions aligned with the patient’s wishes.

Participants also recounted specific interactions that left a lasting impression. Bella shared a story of a patient with a severe brain injury whose daughter remained at the bedside throughout her care. “Even though it was a very sad situation…she was really respectful and really thankful…That means a lot to me as well.” These experiences highlighted the emotional depth of ICU care and the significance of building respectful and supportive relationships with families during challenging times.

Overall, communication in the ICU required balancing technical care with emotional sensitivity, ensuring both patients and their families felt supported during critical and often life-altering moments.

iv. Integrating into the ICU Team

Integrating into the ICU team was challenging and rewarding for participants as they navigated their roles as students in a complex and collaborative environment. Initially, many felt overwhelmed by the demands of the ICU. Phoebe reflected, “It was just reassuring to see... everyone working together as a team and knowing that in the future, if I'm in one of those situations I'm going to have other people there to help me…by the end of it, [I was surprised] how comfortable I became.”

Participants described feeling unsure of their contributions early on. “I definitely didn't feel very useful during consolidation because there was like a lot that I didn’t know really what to do just yet,” Freya shared, though observing and learning from preceptors and the team provided valuable insight over time. Another strategy for integration involved being proactive about their role. Bella noted, “I presented myself to others and said, ‘oh, I’m [a] nursing student…so they all knew that I was a student…If they know you’re a nursing student, they will help you.”

Building relationships within the ICU extended beyond the nursing team. Participants appreciated the collaborative atmosphere, working closely with physicians, residents, respiratory therapists, and physiotherapists during rounds and daily tasks. Bella explained, “we already are sort of integrated in the nurse circle and during rounds we are talking with the physicians, residents… and also …RTs and physiotherapists...The consolidation definitely helps with the integration into the ICU team in general, not only in the nursing circle.”

Overall, while the initial stages of integration could feel daunting, participants gained confidence as they became familiar with the team, their role, and the collaborative dynamics of the ICU environment. Through proactive communication and observation, they found their place within the multidisciplinary team, building connections that enhanced their learning and prepared them for future practice.

Facing and Coping with Challenges

i. Perceived Challenges with Patients and Families

Participants described various challenges they encountered in the ICU, often related to the intensity of the environment, emotional strain, and their own inexperience. One common theme was feeling overwhelmed by the high-stakes nature of ICU care. As Phoebe shared, "at the beginning, it was overwhelming just because it was a lot different from what I've seen before… especially seeing those emergency cases where there's an emergency intubation or someone's crashing or a code bleed." Witnessing traumatic events, such as a "pretty extensive amount of blood coming from the mouth," as described by Freya during a code bleed, further heightened the emotional impact.

Another significant challenge was adjusting to the emotional realities of patient care, particularly dealing with distraught families and the normalization of intense situations. Freya reflected on one such situation: "getting used to…families going through really tough times…it was weird that everyone was really normal when there was a family that was really upset in the other room…but like giving them their space, so that…took some getting used to."

Communicating effectively with families also posed difficulties. Participants expressed concerns about balancing the need to provide information without overwhelming or frightening family members. "This is…one of the biggest challenges for me: to communicate with families… and give them all the information they need without… scaring them off, and to make myself seem like a nurse that actually knows something, not just…a newbie nursing student," Bella admitted.

Despite these challenges, participants learned to adapt through observation, reflection, and support from the ICU team. Over time, they developed coping strategies to navigate the emotional

and professional demands of the ICU environment, growing more confident in their ability to manage difficult situations.

ii. Perceived Challenges with Staff

Participants identified challenges in building relationships with staff, particularly at the beginning of their ICU integration. One recurring difficulty was encountering skepticism from some nurses about new graduates entering the ICU. As Freya noted, "you would meet a couple nurses and then they'd be like, 'Oh, where did you work before?' And you say you're a new grad, and they would immediately say, 'I don't think new grads should be in the ICU…I've had like maybe 4 nurses say that." Such interactions made the transition into the ICU more challenging and potentially affected confidence early on.

For others, the difficulty lay in overcoming personal barriers to socializing and forming connections with colleagues. Bella explained, "At first, it was really hard…you have to present yourself to others…I'm introverted, so I don't really enjoy that part of meeting people." However, they observed that over time, relationships improved as familiarity grew through shared tasks like giving and receiving reports or taking breaks together. Bella emphasized that the social aspect of the role posed a greater challenge than the technical or clinical responsibilities. "The most challenging thing for me is to get to know different colleagues…the socializing part is actually what scares me." Despite these initial struggles, participants acknowledged that with time and repeated interactions, relationships with staff became easier and more comfortable, contributing to a sense of belonging within the ICU team.

iii. Balancing Consolidation with Other School Requirements

Balancing consolidation with other academic and personal responsibilities proved challenging for participants, particularly during their final semester of nursing school. Freya

described the physical and mental toll of juggling night shifts, academic obligations, and part-time work: “I would have really, really busy months…I would do night shifts and then work…the next day because I wanted to get in all my shifts… It was hard…balancing my schedule around that.” Despite these difficulties, they noted that the challenges eased after consolidation was completed.

Effective time management and self-care strategies were essential for navigating these demands. Bella explained their approach: “I usually start with other assignments or activities in advance so I can finish them outside of the clinical days.” They also emphasized the importance of self-care, describing activities such as snowshoeing trips and spa visits that provided relaxation and motivation. Having small rewards to look forward to, helped maintain balance and manage the intensity of their schedule. These reflections highlight the importance of planning, prioritization, and finding moments of respite to cope with the demanding nature of balancing consolidation with other school requirements.

iv. Developing Coping Mechanisms

Participants emphasized the importance of developing effective coping mechanisms to manage the challenges of working in the ICU. Positive feedback from families and patients played a significant role in motivation, as Phoebe noted, “Getting that positive feedback from families and the patients is really encouraging to keep going…when there's a lot of burnout happening these days.” Taking regular breaks during shifts was another strategy. Phoebe further explained that their preceptor stressed the importance of pausing during the day: “It's important we go break down and not let the day kind of fly by without realizing that you haven't got your breaks.”

Outside of work, having someone to talk to was critical for processing difficult experiences. Nursing students particularly valued the support of peers who could relate to their challenges. Freya shared how helpful it was to talk with other students: “If we had an encounter with a nurse

that seemed really intense or a difficult situation with a patient or family, we could kind of open up…and they would talk about their experiences." These discussions provided reassurance that others also faced struggles and made small mistakes, reinforcing that imperfection is part of the learning process.

However, after transitioning out of school, the lack of easily accessible peers who fully understood their experiences became a challenge. As Phoebe explained, "Now being out of school…you're mainly reaching out to other friends and families to talk to, [but] they might not understand the things that you're talking about and know what exactly you've gone through throughout the day." These insights highlight the significance of peer support, self-awareness, and structured breaks in fostering resilience and managing the demands of ICU nursing.

Theme 3: After Consolidation - Reflecting on a New Lived Experience

Reflecting on the Consolidation Experience

Participants described their consolidation experience as both challenging and rewarding, characterized by a steep learning curve and moments of uncertainty. Gia noted the unpredictability of ICU work: "Every day was totally different, and I never knew what to expect until I got there… you might start to think you know what to expect, and then suddenly, somebody takes a turn and the whole day is just like out the window." Freya reflected on the discomfort of the learning process, saying, "It's a big learning curve for sure…you feel comfortable, and then you feel not as comfortable anymore…it was really tough getting used to that and being uncomfortable."

Despite the challenges, participants largely viewed the experience as positive. Freya remarked, "I was really happy by the end of it," while also expressing satisfaction with achieving their goals: "I got exactly what I wanted out of it…I wanted to do a ton of learning and learn a bunch of new things, and that was exactly what I got."

A key aspect of the experience that stood out was the opportunity to provide focused, patient-centered care. Freya appreciated the ability to dedicate time to a single patient, explaining, "It was nice…being able to do all that care and not feeling like I was too rushed for time…I really liked talking with the families and the patient[s]." This contrasted with other nursing settings where time constraints often limited such interactions. Overall, the consolidation experience was a time of growth, where participants navigated challenges, gained new skills, and developed confidence, emerging with a deeper understanding of ICU nursing.

i. Feeling Emotion

Participants reflected on the emotional impact of their experiences, highlighting the delayed processing of feelings and the emotional weight of difficult situations. Phoebe noted, "in the moment, I was kind of just doing the tasks and not really thinking about how I was feeling, and that kind of came later after my shift." This suggests that the immediate focus on tasks and responsibilities often delayed emotional responses until after the work was done. Freya shared the emotional sensitivity they experienced, saying, "Sometimes when I'll hear something, I'll almost get like teary myself when I'm hearing, like really difficult…situations." These reflections underscore the emotional intensity of working in an ICU setting and the challenge of managing personal feelings while remaining professional.

ii. Reflecting on Lessons Learned

Participants emphasized significant growth in their clinical skills, confidence, and communication abilities throughout their consolidation experience. Several reflected on mastering daily routines and becoming more independent in their practice. Phoebe noted, "By the end of my consolidation…I'm super proud of myself," highlighting the reduced need for guidance from preceptors and an increased ability to anticipate patient needs, such as monitoring lab values and

advocating for interventions during rounds, sharing that they found comfort in developing a sense of routine amidst the unpredictability of the ICU.

Interprofessional communication was also identified as a key area of learning. Freya shared how consolidation offered valuable experience in collaborating with diverse healthcare professionals, including doctors, surgeons, respiratory therapists, and physiotherapists. This skill was complemented by the development of therapeutic communication with families, which was initially challenging. She reflected on this experience in saying that "it was kind of hard at the beginning knowing…what's the right thing to say…but that was definitely improved upon a lot." This growth was reinforced by positive interactions with families, which provided a sense of encouragement and validation.

Both Bella and Freya emphasized the importance of silence and listening, particularly in emotionally charged situations such as end-of-life care. Freya described how they allowed families to share memories and take the lead in conversations during moments of grief, noting that this approach fostered meaningful connections: "I found too what was nice is…getting them to share…memories…at the end of their life." Overall, the experience underscored the value of family communication in the ICU, as Bella explained, "a big thing I would say in ICU is to communicate with patients' families, because if they're on the floor…we don't have time to do that with everyone, but in ICU this is a big element because the patients are super sick and their family would want to know what's happening." These reflections demonstrate the profound personal and professional lessons gained through the consolidation experience.

iii. Advice to Future Consolidation Students

Participants emphasized the importance of communication, active engagement, and self-compassion during consolidation. Communication skills were identified as crucial in the ICU, with

Phoebe noting, “as much as…skills such as hanging meds are important…communication is super important.” Many highlighted the value of asking questions and taking initiative. Phoebe explained further that, “the sooner you…jump in to try to do something…the sooner you’re going to become more competent and confident,” adding that actively participating in rounds or performing skills early on helped build comfort and proficiency.

Several participants reassured future students that they are never truly alone in the ICU. Freya noted the high level of support, sharing that, “there’s always people around…ICU [doctors and residents] are very attentive and available compared to other units.” This collaborative environment helps mitigate feelings of isolation and provides a safety net for learning and growth.

Managing expectations was also a recurring theme. Students reflected on the complexity of ICU care, stressing that it’s unrealistic to expect full competence by the end of consolidation. Freya observed, “some of my other friends on medicine floors…already had a full patient load…but the ICU has a lot more complex details.” Bella shared advice to “take it easy” and accept that mistakes are part of the learning process, explaining, “for certain mistakes, you do it for the first time, and you won’t replicate the same mistake.” Finally, self-reflection and self-care were identified as essential. Participants encouraged future students to view consolidation as a time to learn and grow, rather than to achieve perfection. With repeated practice, reflection, and support, students can build the skills and confidence needed to succeed in the ICU.

Transition to Becoming an ICU Nurse

i. Becoming Comfortable with the Basics

Participants highlighted the importance of mastering foundational skills during consolidation, which served as a critical stepping stone for more advanced tasks. Phoebe noted, “I think I was focused on just getting the skills down, getting the routine down, and then…I felt that

I was able to help out others more." Consolidation provided an opportunity to solidify these basics, building a sense of preparedness and confidence. Freya reflected, "It was nice to have the basics… and then do a lot more critical thinking when I first started."

For those who consolidated in the ICU, the experience was particularly valuable in becoming familiar with unit-specific skills and equipment. Participants appreciated exposure to tasks like managing arterial lines and administering vasopressors, which are unique to the ICU environment. Phoebe remarked, "I feel like seeing all of those things in consolidation really did prepare me for working there," adding that this preparation made the transition to independent practice smoother. Overall, mastering the basics during consolidation laid a strong foundation for navigating the complexities of ICU care.

ii. Ongoing Learning

Participants emphasized the continuous nature of learning in their nursing journey, highlighting how consolidation experiences prepared them for real-world challenges while underscoring the ongoing opportunities for growth. Freya noted that exposure to a variety of conditions during consolidation was invaluable when preparing for the NCLEX, stating, "I just had so much knowledge about all these other different disorders that I might not have been exposed to on another floor…it was nice kind of being able to learn about all of it." This broad knowledge base also facilitated discussions with peers specializing in different areas, enhancing their understanding of complex concepts.

The transition to independent practice required further adaptation, with participants engaging in ongoing learning through hands-on experiences even after the consolidation experience. Freya shared that "I still definitely feel like I'm learning quite a bit every day…my patient passed away, and I was like, oh, I can't remember exactly every single part of the

postmortem care, but all the nurses around were really kind and they came in and showed me exactly what to do." Support from colleagues played a critical role in navigating these moments and filling knowledge gaps.

Basic skills learned during consolidation provided a strong foundation for handling more advanced tasks in the ICU. For instance, familiarity with procedures like managing arterial lines allowed participants to focus on more complex aspects, such as critical thinking and safety protocols. Freya further remarked, "learning something basic like that beforehand…it was kind of like a refresher when I came back as a new hire."

Additionally, Freya reflected on the steep learning curve associated with specific clinical situations, such as managing agitated patients. They shared that "the first time I really dealt with a really agitated patient was by myself…it definitely took some getting used to." However, support from experienced colleagues eased the transition and reinforced the importance of teamwork in navigating challenging situations. Participants recognized that consolidation served as an essential starting point for building confidence and competency, while continued learning remained a vital and ongoing process.

Future Nursing Goals

i. ICU Employment and Gaining Confidence

Participants reflected on how their ICU consolidation experiences shaped their career trajectories, built their confidence, and influenced their goals. Many described the ICU as a setting that provides foundational skills applicable across all areas of nursing. Phoebe explained, "if you're starting in the ICU, then you're gaining all the skills that you'll ever need in nursing…as much as I do like working in the ICU, I want to continue working there for a while to get those skills down…but take advantage of the skills I've learned in the ICU and then kind of go elsewhere with

them." This sentiment underscores the belief that ICU experience equips nurses with versatile skills that set them up for success in diverse roles.

Career decisions were often guided by educational opportunities and personal aspirations. For example, Gia shared their choice to accept a position in a different ICU, stating, "I got a job offer from them and also from a different ICU, and I ended up taking that one only because it had more educational opportunities." Others maintained clear goals of working in complex care environments, with Bella noting, "my consolidation experiences almost convinced me 100% to work in ICU…it was generally a positive experience for me to go further in complex care."

However, participants also acknowledged the emotional challenges of ICU nursing. Bella reflected on declining a job offer due to mental health concerns and questioned their future in the ICU, sharing, "sometimes really just tragedy happens and there's little we can do about it." This highlights the intense emotional demands of ICU work and the need for self-reflection and resilience. Overall, these ICU consolidation experiences left participants feeling confident in their skills, with many viewing the ICU as an ideal starting point for their careers while recognizing the importance of balancing professional growth with emotional well-being.

ii. Growing Interest in Advanced Practice

Participants expressed a growing interest in pursuing advanced practice roles, inspired by their ICU consolidation experiences. Exposure to various educational and leadership roles within the ICU motivated some to consider furthering their education. Phoebe shared, "seeing the nurse educators and other roles in ICU that I really haven't seen elsewhere…did motivate me to maybe want to go back to school for education or whatnot." The abundance of support and educational opportunities within the ICU environment sparked new aspirations and pathways for career advancement.

Critical thinking also played a significant role in shaping participants' ambitions. Observing how rounds were conducted and actively engaging in clinical problem-solving prompted Freya participant to reflect on pursuing a nurse practitioner role. As Freya explained, “it made me a lot more interested in critically thinking…like is the patient on any DVT prophylaxis or GI prophylaxis?… It made me wan[t to] consider doing…a nurse practitioner in the future…to have more control and authority over patient care.” This demonstrates how ICU consolidation experiences not only refine clinical skills but also inspire individuals to seek roles with greater responsibility and autonomy in patient care. These reflections highlight how consolidation experiences can serve as a catalyst for professional growth, fostering a deeper interest in advanced practice and leadership opportunities within nursing.

4.0 Discussion

The lived experiences of the participants before, during and after their ICU consolidation reflect a profound journey of personal and professional growth, characterized by personal and interpersonal challenges, emotional development, skill mastery, and evolving career aspirations. The following discussion synthesizes these reflections, situating them within existing literature and highlighting implications for ICU nursing education and practice.

The findings emphasize that exposure to critical care, whether through personal experiences, coursework, or clinical placements, was pivotal in preparing students for ICU consolidation. Positive classroom learning, such as a critical care course, and negative clinical experiences, such as negatively perceived medical-surgical placements, both shaped preferences. This aligns with research highlighting the importance of early exposure to critical care environments and critical care knowledge in shaping readiness and preferences (Halcomb et al., 2011; Salem, 2021). Students also sought preparation through professors, preceptors, and online

resources, reflecting the need for supportive educational environments and a variety and learning resources to adequately prepare (Vatansever & Akansel, 2021; Hood & Copeland, 2021).

Students described their ICU experiences as marked by steep learning curves, unpredictability, and emotional intensity. Some perceived the ICU as less hectic than expected, while others found it overwhelming, reinforcing its variability and unpredictability (DeGrande et al., 2018). Support from preceptors, ICU nurses, and interdisciplinary staff was critical in fostering learning and a sense of belonging (Cooper et al., 2015). Students reported oscillating between comfort and discomfort, reflecting the iterative nature of ICU learning. These experiences align with Benner's (1984) novice-to-expert framework and prior research that emphasizes hands-on participation as essential to building competence (Bongar et al., 2019). Growth in therapeutic communication, particularly with families in emotionally charged contexts, was identified as a major area of learning.

Participants reflected on consolidation as both emotionally demanding and professionally transformative. They highlighted the value of self-compassion, seeking support, and reframing mistakes as learning opportunities. ICU consolidation laid a foundation for advanced practice aspirations and broader career trajectories, suggesting that the ICU can serve as a springboard for diverse nursing roles. Mentorship and teamwork were identified as pivotal in easing the transition to independent practice, echoing the need for structured support beyond graduation (Hood & Copeland, 2021).

5.0. Implications for Education and Practice

Findings highlight the need for structured mentorship, simulation-based learning, and resilience training to support students in critical care environments. Simulation and reflective strategies have been shown to reduce anxiety and better prepare students for practice (Inayat et al.,

2020; Badir et al., 2015). Nursing programs should integrate resilience-building interventions and prioritize psychological safety to safeguard students' well-being. Clear professional development pathways should also be established for students who wish to pursue ICU or advanced practice roles.

6.0. Limitations

This study was limited by its small, homogenous sample of four young female participants from a single Canadian province. While this sample size is congruent with phenomenological inquiry, broader and more diverse participation would enhance transferability of the findings. The study was also conducted by a novice researcher, which may have shaped interpretation despite supervisory support.

7.0. Conclusion

ICU consolidation is both challenging and rewarding. It demands resilience, adaptability, and emotional strength, but fosters competence, confidence, and long-term professional growth. With intentional supports, ICU consolidation can be a transformative step in the transition from student to professional nurse.

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Chapter 4: Integrated Discussion

The purpose of this study was to better understand the lived experience of 4th year nursing students completing their consolidation practicum in adult ICU. This was a qualitative study rooted in phenomenology and is thus situated within a constructivist paradigm. Specifically, it was conducted using Max van Manen's (2016) methods for interpretive phenomenology, with the intent to describe and interpret meaning from the study participants' lived experiences. Participants had completed their consolidation period in an Ontario-based adult ICU less than one year from the time that data was collected by the primary investigator. Qualitative data was gathered using one to two in-depth semi-structured interviews with four study participants that were audio-recorded and transcribed. This was followed by a detailed thematic analysis with the purpose of uncovering the characteristic features of the study phenomenon (Heinonen, 2015; van Manen, 2016; Polit & Beck, 2021). This analysis led to three overarching themes becoming apparent in the form of a linear timeline (before, during, and after consolidation) in which participants' final clinical placement took place. These themes were further broken down into several subthemes that describe the phenomenon that is the lived experience of nursing students doing their consolidation in an ICU.

The lived experiences of the participants before, during and after their ICU consolidation reflect a profound journey of personal and professional growth, characterized by personal and interpersonal challenges, emotional development, skill mastery, and evolving career aspirations. The following discussion synthesizes these reflections, situating them within existing literature and highlighting implications for ICU nursing education and practice. This discussion will follow a similar format to the thesis itself, highlighting key points first within the "before consolidation" period, then moving onto "during consolidation," and ending with "after consolidation." The

chapter will conclude with a discussion surrounding implications for nursing practice, education, and research, as well as the strengths and limitations of this study.

4.1 Key Point from Before Consolidation: Preparation Through Exposure

This section will discuss the "before consolidation" period, highlighting how personal preferences regarding consolidation placement and student preparation tie into the first key point of discussion: preparation through exposure. This study's findings emphasize that prior exposure to critical care, whether through personal life experiences, clinical placements, or other related work, played a pivotal role in preparing students for their ICU consolidation.

Participants' experiences leading up to their ICU consolidation revealed a complex interplay of personal preferences, nursing school experiences, and personal life events that influenced their placement choices. While some participants, like Bella, had a longstanding desire to work in the ICU and actively pursued this path, others, such as Phoebe and Freya, had not initially prioritized critical care, but came to appreciate its value through firsthand lived experience. This highlights the importance of open-mindedness and adaptability when entering clinical settings, as several participants came to learn from and enjoy their consolidation despite not initially pursuing an ICU placement.

Nursing school experiences played a significant role in shaping consolidation placement preferences as well. Positive classroom and clinical exposures influenced perceptions of desirable clinical placement areas. For example, Phoebe emphasized how taking critical care class during nursing school piqued her interest in an ICU placement. This reinforces what was noted by Salem (2021): that the timing of critical care courses during baccalaureate nursing education may be an important factor in student preparedness to do ICU clinical placements. The timing of Phoebe's critical care class appeared to have some sway in her motivation to do an ICU consolidation.

By contrast, negative clinical experiences during nursing school on medical-surgical floors contributed to some participants' lack of interest in these non-ICU settings. This lack of interest may have stemmed from these units being perceived as too busy as mentioned by Gia, from the preceptors and staff nurses' prioritization of their work over teaching nursing students. These experiences align with research suggesting that hands-on participation is crucial for student satisfaction and learning, while the passive observation that may have been taking place during students' previous clinical placements can lead to frustration and disengagement (Vatansever & Akansel, 2021; Cooper et al., 2015).

Literature supports the notion that exposure to critical care settings is a stronger predictor of readiness for ICU work than general nursing experience (Halcomb et al., 2011). Halcomb et al. (2011) emphasize that early exposure to the ICU can help students and NGNs by revealing challenges specific to critical care and highlighting professional growth opportunities unique to this setting. Interestingly, all participants in this study were exposed to critical care in some facet prior to their consolidation placements. Phoebe had her own ICU admission during childhood, Gia was deeply affected by her father's time in the ICU, Freya had prior work experience as an ECG technician in the emergency department, and Bella's experience as a patient care aide in an ICU confirmed their interest in a critical care specialty. For students with an interest in ICU nursing, this may suggest that strategic placement or exposure to critical care may be more beneficial than experience in non-critical care settings.

Participants' preparation for ICU consolidation also involved proactive efforts to build knowledge and confidence. Participants sought guidance from preceptors, professors, and online critical care resources, emphasizing the importance of preparation in alleviating uncertainty. These preparatory efforts act as a form of exposure to critical care knowledge, as students turned to

former professors who may have critical care experience or turned to learning resources that focused on critical care. Collaboration between nursing school faculty, preceptors, and clinical staff creates a more effective and emotionally supportive learning environment for students (Vatansever & Akansel, 2021; Hood & Copeland, 2021). Multi-component interventions are cited as more effective in educating students than single strategies (Brook et al., 2018). The interplay of course-based learning, along with practical learning experiences, may enhance student competence and reduce fear when entering the ICU (Inayat et al., 2020).

Participants highlighted their desire to prepare for placement by reaching out to former professors, reviewing course materials, creating cue cards, and watching educational videos, demonstrating the value of accessible and practical resources for consolidation students. This allowed participants to navigate feelings of uncertainty upon entering an ICU consolidation for the first time. Collectively, these narratives underscore how a combination of personal history, educational experiences, and early professional exposure converge to inform and evolve students' preferences leading up to their ICU consolidation.

Upon considering why students may choose an ICU placement and how they can adequately prepare, it is next important to consider how we support said students by reflecting on the following sections “during consolidation” and “after consolidation.”

4.2. During Consolidation: Growing into Critical Care Through Interdisciplinary Support

This section will highlight the key point of discussion from study participants’ ICU consolidation throughout the “during consolidation” phase as it relates to the current literature. Consolidation students began to grow into their new roles as critical care providers during their consolidation period with the help of interdisciplinary support from preceptors, professors, physicians, respiratory therapists, and other staff members.

Participants' consolidation experiences in the ICU were marked by a steep learning curve, unpredictability, and emotional intensity. The ICU is a complex environment, and students' first impressions of this environment were marked by awe and apprehension alike, with participants describing an initial discomfort and uncertainty when adapting to the ICU. This is congruent with the generalized fear and anxiety students may experience that is associated with critical care environments, as cited in the literature (Inayat et al., 2020). This also echoes findings that the ICU is an environment in which inexperienced nurses may report levels of uncertainty when providing critical care services (DeGrande et al., 2018).

Of note, there was a discrepancy in student expectations versus the reality of the ICU, and there was marked variability in student perceptions of the ICU. For example, Phoebe's observation that the ICU was less hectic than anticipated contrasts with Gia's experience of constant intensity, highlighting that each student's perception of critical care is unique. This may also highlight the variability in the level of business that ICU nursing entails, with some ICUs likely being busier than others, or that the day-to-day routine of what "nursing" entails in an ICU is highly variable. Therefore, each student must individually recalibrate their understanding of what ICU nursing entails as it pertains to the environment that they are in. This supports research that paints the ICU as an unpredictable environment (DeGrande et al., 2018).

Gia described the ICU environment as "really intense," while Bella emphasized that the size of the ICU as being bigger than what she was used to, both of which contribute to feelings of uncertainty in an environment that is out of their comfort zone. Freya echoed that the ICU was an environment that was unique to other units she had done clinical placements in. She emphasized the nurses' constant proximity to their critically ill patients as differing from other units in which

nurses may gather at the nurses' station more frequently. These findings demonstrate that ICU consolidation students must adapt to a new way of nursing that is unique to this environment.

As we know, there are additional standards for nursing practice exclusive to the ICU that nurses must meet to practice competently in this highly specialized setting (AACN, 2019; CACCN, 2024). These standards are compounded to other entry-to-practice requirements that all nurses must meet to be granted their licensure. Not only are students learning to adapt to a new environment, but they are learning a completely new facet of nursing care that is unique to anything they have experienced prior to their consolidation.

Freya described the cyclical nature of ICU learning in which students may feel comfortable providing care for patients at one point in time, then quickly shift to feelings of discomfort when faced with new or difficult situations. This highlights the oscillation that occurs in students' learning while in the ICU as they navigate their clinical placement and grasp for control in a new, challenging environment. Participants also emphasized that the ICU was initially out of their comfort zone, with the unpredictability of ICU work often necessitating immediate task focus and emotional processing occurring later. This delayed emotional response aligns with literature suggesting that emotional compartmentalization is often observed in nurses as a means of remaining “professional” in the workplace (Gerow et al., 2010).

Despite these challenges, participants identified the consolidation experience as rewarding and transformative. They emphasized the importance of embracing discomfort as part of the learning process, given the unpredictability of the ICU environment. Their experiences in the ICU were largely supported by preceptors, nurses, and other staff on the unit who helped support and educate students both formally and informally. Developing effective communication skills with patients, preceptors, and other ICU staff are critical for student learning and success (Vatansever

& Akansel, 2021; Inayat et al., 2020). A sense of belonging is also described as crucial to students' positive clinical experience and emotional well-being (Cooper et al., 2015). The absence of a belonging culture among hospital staff may negatively impact the student experience (Cooper et al., 2015).]

Overall, participants highlighted significant growth in clinical skills, confidence, and communication abilities during consolidation. This aligns with Benner's (1984) novice-to-expert framework, which emphasizes the importance of experiential learning in skill acquisition. Mastering foundational skills, such as managing arterial lines and administering vasopressors, allowed participants to progress to and become more comfortable with advanced tasks, including critical thinking and interprofessional collaboration with the ICU team. This supports prior research findings indicating that sufficient clinical exposure significantly enhances nursing competency (Bongar et al., 2019) and hands-on participation in the clinical setting is vital for student satisfaction and learning, with observation alone being insufficient for students (Vatansever & Akansel, 2021).

Therapeutic communication also emerged as a key area of growth. Participants initially found family-centered care challenging, particularly during emotionally charged situations such as end-of-life care. Freya's approach of encouraging families to share memories illustrates the relational aspects of ICU nursing, while Bella underscored the importance of family communication given that patients are often intubated and sedated, thus rendering these patients unable to communicate for themselves. Gaining an understanding of the dynamics of the ICU and developing effective communication skills with patients, preceptors, and other ICU staff are critical for student learning and success (Vatansever & Akansel, 2021; Inayat et al., 2020).

Structured debriefing sessions with preceptors or clinical instructors, and reflective practice could further support emotional resilience, helping students navigate the intensity of ICU work.

4.3. After Consolidation: Professional Development through ICU Consolidation

This section will discuss how students reflected on their experiences during consolidation in the ICU after their consolidation. Ultimately, their reflections exhibit that their consolidation was a period of intense emotion, yet immense professional growth. In reflecting on their consolidation experiences, participants were able to provide valuable advice to future consolidation students, emphasizing communication, active engagement, and self-compassion. They emphasized the importance of seeking support and embracing mistakes as learning opportunities, which helped to normalize the challenges of ICU consolidation. Participants encouraged future students to focus on gradual growth rather than achieving full competence by the end of consolidation.

The transition from consolidation to independent ICU practice underscored the importance of mastering foundational skills and engaging in continuous learning. Participants noted that consolidation provided a solid foundation for navigating the complexities of ICU care, allowing them to focus on critical thinking and advanced tasks. We recall that Phoebe reflected upon becoming increasingly comfortable with the ICU skills and routine, she was then able to help out other staff members more.

Support from ICU staff played a pivotal role in easing the transition to independent practice. Participants described moments of uncertainty—such as managing agitated patients or performing post-mortem care—where mentorship and teamwork were invaluable. This reinforces the need for post-consolidation mentorship programs to bridge the gap between student and independent practice, fostering confidence and ensuring a smooth transition.

The ICU consolidation experience significantly influenced participants' career trajectories, instilling confidence, and shaping long-term goals. Many viewed the ICU as a foundational setting that equips nurses with versatile skills applicable across diverse roles. Phoebe perceived that if you're working ICU, then you're gaining a strong foundation in nursing to potentially pursue other more advanced roles. This perspective highlights the ICU's potential to serve as a springboard for broader nursing opportunities.

Participants also reflected on the emotional demands of ICU work, acknowledging the need for self-reflection and mental health considerations. Bella's decision to decline an ICU position due to emotional strain underscores the importance of balancing professional aspirations with personal well-being. Institutions could address this by offering resources such as counseling and resilience training to support nurses in high-stress environments, as well as post-consolidation mentorship programs to help ease the transition from nursing school to ICU employment. This is congruent with research suggesting that it is crucial that faculty and nurse preceptors recognize the risk for psychological distress associated with being placed in the ICU environment and provide support to students during and after difficult clinical experiences (Hood & Copeland, 2021). Trust and support systems, including debriefings, are essential to prevent long-term psychological harm (Hood & Copeland, 2021).

Exposure to the ICU's dynamic environment inspired participants to consider advanced practice roles, such as nurse practitioner or nurse educator positions. Observing interprofessional collaboration and engaging in critical thinking during rounds motivated participants like Freya to have the desire to pursue roles with greater responsibility and autonomy. The literature reinforces the thought that clinical placements in the ICU may help students shape career preferences specific

to the ICU environment (Halcomb et al., 2011). This suggests that consolidation experiences in the ICU may spark interest in other specialized nursing roles.

To support these aspirations to pursue advanced practice roles, both educational institutions and healthcare institutions should provide clear pathways for professional development, including opportunities for further education and mentorship. The abundance of educational roles and leadership opportunities within the ICU environment positions it as an ideal setting for fostering long-term career growth.

4.4. Consideration for Future Nursing Practice, Research and Education

The findings from this discussion highlight many key implications for ICU nursing education and practice. Structured support systems, including debriefing sessions, mentorship, and psychological safety, are vital for helping consolidation students navigate the challenges of ICU work. Enhanced communication training, possibly through simulation-based exercises focused on therapeutic communication with patients and families, may also better prepare students for these challenging conversations, which are integral to ICU care. Mentorship programs that extend beyond consolidation can bridge the gap to independent practice, fostering confidence and competence among early-career nurses.

The literature states that nursing students may face significant emotional stress and psychological vulnerability during their clinical placements, especially in ICU settings (Vatansever & Akansel, 2021; Hood & Copeland, 2021). In her post-consolidation reflection, Bella gave advice to “take it easy” and accept mistakes as part of the process, highlighting the importance of being patient with oneself while learning and growing as a new ICU nurse. Freya’s reassurance that “there’s always people around” highlights the collaborative and supportive nature of the ICU environment, which may help mitigate student anxiety and feelings of isolation. Nurse educators

can further support this by fostering a psychologically safe environment where students feel comfortable asking questions.

Participants did not identify that simulated learning experiences were used to help them navigate ICU-related challenges they may face. The literature suggests that simulation and reflective learning strategies are recommended to build competence and reduce anxiety (Inayat et al., 2020). When integrated with preparation and debriefing, simulation is an effective method to transfer theory into practice, potentially better preparing students for their clinical placements (Badir et al., 2015). Repeated simulation sessions may help students manage stress, feel better prepared for real-world scenarios, and reduce performance anxiety (Badir et al., 2015).

Additional emotional resilience resources, such as counseling and resilience training, should be integrated into nursing programs to safeguard mental health and well-being. Participants emphasized immediate task-focus with emotional processing occurring afterwards. This likely means that nursing students will need ongoing support, even after their clinical placements are completed to promote psychological safety. Through targeted interventions and supportive environments, ICU consolidation programs can equip students with the skills, confidence, and emotional resilience needed to thrive in this demanding yet rewarding area of nursing practice.

It became apparent throughout the analysis process that this placement motivated participants to seek further growth and knowledge in advanced practice roles. Therefore, institutions should potentially create pathways for ICU nurses to explore advanced practice roles, supporting their professional growth and satisfaction.

4.5. Limitations and Strengths of the Research

This study was limited by its small sample size, given that there were only four participants interviewed; however, this was mitigated through multiple interviews with participants and

yielding a rich data-set. It is possible that having interviews with additional participants could have revealed new themes and theme clusters during the analysis process. This study was also limited by only having female participants. Having additional interviews with male consolidation students may have also revealed new themes or strengthened existing themes during the analysis process. The ages of all participants were between 21 and 22 years, which may further limit transferability. Future research should be completed to increase transferability of results, given that this was a single study with only 4 participants in a similar age range, with all participants being from one Canadian province. Doing this study with a more diverse participant population may exhibit new and differing perspectives that were not shared by the participants in this study.

While this thesis was guided by experienced qualitative researchers, ultimately the study was primarily investigated by a novice researcher with limited experience conducting qualitative research. Additional themes and connections could possibly be made by a more experienced primary investigator, though it should be noted that there was much consultation with the more experienced members of the thesis supervisory team throughout the research process.

4.6. Conclusions

This study explored the lived experiences of fourth-year nursing students completing their consolidation in the ICU, guided by van Manen's interpretive phenomenological approach. Through in-depth interviews and thematic analysis, the research highlighted the trajectory of students' lived experiences before, during, and after their consolidation. This thesis captured the interplay of several crucial key aspects of the overall ICU consolidation experience, including preparation, growth, and professional development.

The findings demonstrated that exposure and preparation prior to consolidation strongly shaped students' readiness and placement choices, demonstrating the value of early encounters

with critical care through coursework, clinical placements, or personal experiences. During consolidation, students navigated steep learning curves and emotional challenges but also experienced profound growth, aided by interdisciplinary support and a culture of belonging within the ICU team. After consolidation, reflections revealed consolidation's impact on professional development, influencing career aspirations, confidence, and recognition of the emotional demands of critical care nursing.

These insights extend the current scholarly literature by highlighting the ICU as both a demanding and transformative learning environment. Importantly, the study underscores the need for intentional supports, such as structured mentorship, simulation-based learning, and resilience-building resources, to optimize the student experience and promote psychological well-being. By creating pathways from undergraduate education into critical care practice, nursing programs and healthcare institutions can better prepare students for the complexities of ICU nursing while fostering their long-term professional growth.

While limited by its small, homogenous sample and novice-led design, this study contributes valuable insights into how ICU consolidation shapes nursing students' development. Future research with more diverse participants and larger samples is needed to strengthen generalizability and deepen understanding of this phenomenon.

Ultimately, the lived experiences captured here reflect both the challenges and rewards of ICU consolidation. They reveal consolidation as not only a critical step in the transition from student to professional nurse but also a pivotal opportunity to cultivate resilience, competence, and inspiration for future nursing practice.

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Appendix A

Semi-Structured Interview Guide

1. **Can you tell me why you chose to do your consolidation in the ICU?**

   Prompts:

   - What did it mean to you?
   - What were some of the challenges you faced during your ICU consolidation placement?

2. **Can you describe your first impressions of the ICU?**

   Prompts:

   - What was it like in the ICU?
   - What type of ICU was it? What did it look like?
   - How did you feel during your ICU consolidation placement?
   - What surprised you? Was it what you expected?

3. **What was it like working with your preceptor?**

   Prompts:

   - How many preceptors did you have?
   - Did your relationship change with your preceptor from the beginning to the end?
   - What kind of support did you receive from your preceptor, and/or other ICU staff (physicians, RTs, PTs, etc.) during your consolidation placement?

4. **What was your experience like working with patients and families in the ICU?**

   Prompts:

   - Can you describe a particularly meaningful interaction you had with a patient, family member, or healthcare team member during your ICU consolidation placement?
   - Are there any shifts that stand out in your mind because of what happened during them? What was that experience like? How did you feel?

5. **What did you learn during your ICU consolidation placement that you think will be most valuable to your future nursing practice?**

   Prompts:

- How did it compare to your previous clinical experiences?
- Can you describe a situation during your ICU consolidation placement when you felt particularly competent as a nurse?

6. After your consolidation experience, would/did you decide to pursue a nursing career in the ICU?

   Prompts:

   - Why? Why not?

Additional Interview Questions and Prompts:

1. **Did you feel prepared to work in the ICU after your consolidation? If not, what could have been done to better prepare?**

2. **a. How did consolidation help with your integration into the social environment of the ICU? (Social relationships with other nurses, preceptors, manager, etc.).**
   b. **How did consolidation help with your integration into the nursing practice environment of the ICU? (Tasks, ICU skills, etc.).**
   c. **How did consolidation help with your integration into the ICU team? (functioning as a part of the ICU team during rounds, participation during codes, etc.).**
3. **After reflecting on your own experiences, what advice would you give yourself before you started your ICU consolidation? What advice would you give others who are interested in consolidating in the ICU?**

4. **Did you develop any routines or rituals to help you cope with the demands of consolidating in the ICU? How did these routines affect your experience? (These routines could be in or outside of work that helped students cope with their placement).**

5. **How did the physical environment and sensory aspects of the ICU (sounds, smells, lighting) affect your experience and emotions during your consolidation? (Think alarms, bright lights, families talking, smell of CDiff, etc.).**

6. **Did you experience any ethical or moral dilemmas during your consolidation in the ICU? How did you navigate those?**

7. **Did you notice any changes in your nursing philosophy (values, ethics, morals) because of your time consolidating in the ICU?**

8. **How did your experiences during consolidation shape your future goals as a nurse?**

Appendix B

Email Invitation to Participate

Hello everyone,

My name is Paul Renick. I am an adult ICU nurse and Master of Science in Nursing (MScN) student at the University of Ottawa. The purpose of this email is to invite you to participate in a research study exploring the lived experiences of 4th year nursing students consolidating in an adult ICU setting. I am reaching out because, as you may remember, a permission to contact form was sent to you via SurveyMonkey and you expressed interest in being contacted for possible participation in this research project. Your participation would involve one online demographic questionnaire (approximately 5-10 minutes to complete) and one interview (approximately 45 to 60 minutes) at a date and time of your choosing. Interviews will be conducted via the University of Ottawa's Microsoft Teams or by phone. You may be invited to participate in a second followup interview for further discussion and/or clarification of your experiences.

Little is known about the experiences of nursing students consolidating in ICU. Yet, there are several new graduate nurses entering the critical care environment, especially with the ongoing nursing shortages. By addressing this knowledge gap, we hope to inform interventions that will support consolidation students to ease the transition from nursing student to independently practicing ICU nurse. We hope that this study will enlighten and inspire new knowledge on how to better prepare nursing students interested in entering the field of critical care.

Attached to this email, you can find the recruitment poster for this study. The study is supervised by Dr. Brandi Vanderspank-Wright and is being conducted as part of my MScN thesis requirements. The study and has been reviewed and received ethics clearance through the University of Ottawa's Research Ethics Board.

If you would like to learn more, or are interested in participating, please contact me by email at [REDACTED]. Thank you for your agreeing to be contacted and for your continued interest in this project.

Sincerely,

Paul Renick BScN, RN, CCRN

Appendix C

Study Information Sheet and Consent to Participate

Name of Study: Understanding the Lived Experiences of Nursing Students Consolidating in the Intensive Care Unit

Principal Investigator (PI)
Paul Renick BScN, RN, CCRN
Master of Science in Nursing Student
University of Ottawa, Faculty of Health Sciences, School of Nursing

Research Supervisor
Dr. Brandi Vanderspank-Wright PhD, RN, CNCC(C)
Associate Professor
University of Ottawa, Faculty of Health Sciences, School of Nursing

An initial demographic survey followed by an accompanying interview will be part of a qualitative study investigating the lived experiences of 4th year nursing students that consolidated in an adult intensive care unit (ICU). This project is being conducted as part of the PI's Master's thesis. Participants should keep a copy of this consent form for their personal records.

To participate in this study, you must meet the following requirements:

1. You are a 4th-year BScN student or new graduate BScN that consolidated in an adult ICU within <1 year.
2. You did not consolidate in another critical care area (emergency department, PACU, etc.).

Your participation is voluntary. Completing the initial demographic survey constitutes implied consent. It is anticipated that the initial demographic survey will take 5-10 minutes and the interview will take approximately 45-60 minutes to complete. An additional follow-up interview may be asked for by the research team. This follow-up interview will also take approximately 45-60 minutes.

Participation: My participation in this study will involve a 5-10 minute online demographic questionnaire, followed by an interview via Microsoft Teams or by phone. The interview will ask about your experiences consolidating in an adult ICU (interviews will be approximately 45-60 minutes in length). There is also possibility of a second, follow-up interview if needed (45-60 minutes). Please note that interviews will be audio-recorded and transcribed verbatim as part of the research process.

Risks: There are no known risks to completing the initial demographic survey. In terms of the interview process, it is well-known that the ICU is a stressful environment. As such, interview questions relating to participants' lived experiences may bring about stressful memories or

emotions for participants. However, these questions would likely be no more distressing than the participants' day-to-day tasks in the ICU.

Benefits: My participation in this study will provide a richer understanding of the ICU consolidation experiences of nursing students. This knowledge will be used to inform interventions and inspire future research that supports the transition from student to ICU nurse.

Confidentiality and anonymity: I have received assurance that the information I share in this survey will be used only for activities directly related to the research. Only the research team for this study will have access to the research data. My anonymity as a participant will be protected with the use of an alpha-numeric participant code, which I will create upon completing the demographic survey. I am aware that the research team recommends I take standard safety measures while completing this survey, such as signing out of any personal accounts, closing my browser when the survey is complete, and locking my screen or device when I am done using them.

Conservation of data: I understand that audio-recordings of my interview will be stored on an encrypted, password-protected recording device and immediately uploaded to the University of Ottawa's secure SharePoint server. Upon successful transfer to SharePoint, audio files will immediately be deleted from the encrypted recording device. These audio files will be retained on SharePoint for a period of 5 years as recommended by the University of Ottawa's Research Ethics Board. Interviews will also be transcribed verbatim and retained on the University of Ottawa's SharePoint server for 5 years after data collection is complete. Only the research team will have access to the data and the passwords required to open files containing study data. My audio-recording will be transcribed with all names and identifying information removed. While direct quotations from my transcript may be used in publications, my name and the hospital I was placed at for my consolidation will not be shared. Please note that Microsoft Teams may automatically generate video-recordings when the record feature is enabled. Any video-recordings will be securely and permanently deleted immediately following the interview. Only audio-recordings will be uploaded to SharePoint using an encrypted recording device.

Compensation (or Reimbursement): There is no compensation for participation in this study.

Voluntary Participation: I am under no obligation to participate in this study. If I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions without suffering any negative consequences. I do not need to answer questions that I feel uncomfortable answering. If I choose to withdraw, the data from the demographic survey and interview will not be used. Please notify the PI, Paul Renick, to withdraw from this study.

If I have any questions regarding the ethical conduct of this study, I may contact the University of Ottawa's Office of Research Ethics and Integrity at:

[REDACTED]

I may also contact the PI or research supervisor should I have any questions about this study using the emails listed at the top of this form.

Appendix D
Demographic and Contextual Data Questionnaire

Participant Identification Code

Answers to the following questions will be used to create your participant identification code to ensure that your data remains anonymous.

1. What is your favourite colour? _____
2. How many pets do you have? _____
3. What is the first letter of your paternal grandfather's first name? _____ 4. What is the number associated with your birth order (e.g., first born, second born, third born, etc.)? _____

Demographic and Contextual Questionnaire

To help us better contextualize your experience, we would like to learn more about you and your practice setting. Please fill in the blanks or select the response that best applies. You do not have to answer questions that you do not feel comfortable answering.

5. How old are you? _____
6. What gender do you identify with?
   - A. Male/Man
   - B. Female/Woman
   - C. Trans Male/Trans Man
   - D. Trans Female/Trans Woman
   - E. Genderqueer/Gender non-conforming
   - F. Prefer not to say
   - G. None of the above applies to me. I identify as: _____
7. Sex assigned at birth:
   - A. Male
   - B. Female
   - C. Intersex
   - D. Prefer not to say
8. Race/ethnicity: _____
9. What type of adult intensive care unit (ICU) did you consolidate in?
   - A. Medical
   - B. Surgical or Trauma
   - C. Cardiac
   - D. Other: _____
10. How many preceptors did you have during your consolidation experience? _____
11. Did you do any additional preparation or training to prepare for your consolidation experience (i.e. online resources, online courses, books, etc.)?
    - A. Yes
    - B. No
    - C. Prefer not to say

Thank you for completing this questionnaire. We look forward to learning more about your experience consolidating in the intensive care unit!

Appendix E

Telephone and Videoconference Verbal Consent

Understanding the Lived Experience of Nursing Students Consolidating in the ICU

Introduction: Hello, [Participant's name]. Thank you for agreeing to participate in this study. Have you had a chance to read and review the study information sheet that you received by email?

***

Study participant (scenario 1): No, I have not had time to review the information sheet.

Reply: No problem. I would like to read it to you. Is that alright with you? If the participant consents to the interview, proceed with the interview questions in Appendix A.

***

Study participant (scenario 2): Study participant requests information about the study.

Reply: After reviewing the contents of the "Email invitation to participate" in Appendix B. Do you have any questions or need any clarification? Answer questions and provide clarification. Once the participant is satisfied, verify that the client continues to consent to the interview and proceed with the interview questions in Appendix A.

***

Study participant (scenario 3): Yes, I have had time to review the information sheet.

Reply: Do you have any questions, or do you need clarification? Answer questions and provide clarification. Verify that the client continues to consent to the interview and proceed with the interview questions in Appendix A.

***

Study participant (scenario 4): I am sorry, but something has come up and I can't complete the interview at this time.

Reply: Not a problem. We can schedule an interview later if you would like. Is there a time or date that would work better for you? Take note of call back date and time.

***

Study participant (scenario 5): I no longer wish to participate in this research.

Reply: I understand. Thank you for your time.

Appendix F

Recruitment Poster

NEW GRADUATE REGISTERED NURSES NEEDED FOR RESEARCH

Are you a recent BScN graduate that consolidated in an adult ICU?

We are actively seeking volunteers to take part in a study of the lived experiences of BScN students consolidating in adult ICUs.

Why are we studying this?

- To understand the lived experiences of nursing students consolidating in ICUs
- To provide students and educators alike an awareness of the needs of nursing students in an ICU setting.
- To inspire research that supports new nurses as they transition from an academic environment to the ICU.

What does the study involve?

- A 5-10 minute online demographic questionnaire
- Participating in an interview about your experiences consolidating in an adult ICU (interviews will be approximately 45-60 minutes in length) via Microsoft Teams or phone.
- The possibility of a second, follow-up interview. (45-60 minutes).

You are eligible if:

- You are a new graduate BScN that consolidated in an adult ICU within <1 year.
- You are English or French speaking.

WANT TO PARTICIPATE?

Participants will be chosen on a first-come, first-serve basis.

For more information or to volunteer for the study, please contact the primary investigator:

Paul Renick BScN, RN, CCRN
University of Ottawa, Faculty of Health Sciences, School of Nursing
Email:

This study is supervised by Dr. Brandi Vanderspank-Wright and has received ethics clearance through the University of Ottawa's Health Sciences and Science Research Ethics Board.

Appendix G

Certificate of Ethics Approval

20/06/2023

Université d'Ottawa
Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

CERTIFICAT D'APPROBATION ÉTHIQUE | CERTIFICATE OF ETHICS APPROVAL

Numéro du dossier / Ethics File Number	H-06-23-9321
Titre du projet / Project Title	The Lived Experience of Nursing Students Consolidating in the ICU
Type de projet / Project Type	Thèse de maîtrise / Master's thesis
Statut du projet / Project Status	Approuvé / Approved
Date d'approbation (jj/mm/aaaa) / Approval Date (dd/mm/yyyy)	20/06/2023
Date d'expiration (jj/mm/aaaa) / Expiry Date (dd/mm/yyyy)	19/06/2024

Équipe de recherche / Research Team

Chercheur / Researcher	Affiliation	Role
Paul RENICK	École des sciences infirmières / School of Nursing	Chercheur Principal / Principal Investigator
Brandi VANDERSPANK	École des sciences infirmières / School of Nursing	Superviseur / Supervisor

Conditions spéciales ou commentaires / Special conditions or comments

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