A Canadian Perspective on the 'NCLEX-RN World': Pragmatism When the Stakes are High

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Submitted in partial fulfillment of the requirements for the degree of

Master of Arts in Applied Health Sciences

(Nursing)

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© June 2019

Abstract

According to the Ontario nursing regulatory body, the American-designed high stakes nursing licensure examination, the NCLEX-RN, is a valid measure to assess the Canadian entry-to-practice competencies requisite of each new graduate registered nurse. This examination is used to "…ensure that it grants registration only to those who demonstrate the nursing knowledge to provide safe care" (para. 1). However, limited research exists that explores, examines and evaluates the impact of the NCLEX-RN in Canada since adoption from the United States of America in January 2015. Particularly, no studies existed that explored the experiences and perceptions of practicing Registered Nurses (RNs) who have written the NCLEX-RN, outside of the first-year test-takers. This thesis document describes the findings of a collective case study to better understand the NCLEX-RN, as experienced by six Canadian RNs from both acute and non-acute healthcare environments in Ontario, Canada. A within-case, document, and cross-case thematic analysis was used. The participants described their experiences with, and perceptions about, the NCLEX-RN within four main themes – influencing preparedness; examining the Canadian RN; becoming ready for safe practice; and reflecting as a practicing RN. The findings of this study support existing literature that a lack of content reflective of Canadian healthcare values exists in the NCLEX-RN. The educational impact and consequences of high stakes testing such as, curricular molding to external evaluation and concerns related to exam validity, are also highlighted. Presently, Canadian nurse educators and future test-takers must approach the NCLEX-RN pragmatically to ensure licensure of graduates with minimal disruption to the Canadian baccalaureate nursing education.

Key words: NCLEX-RN, Canada, RN experience

Acknowledgements

From the inception and refinement of my research question to completion of this thesis document, I have received a great deal of support, guidance and encouragement that has been instrumental in this accomplishment.

I must first thank my supervisor, Dr. Jenn Salfi, whose expertise in this research area and methodological approach were invaluable. Thank you for your guidance, words of encouragement, understanding and considerately answering all my queries throughout the research process. I have not only advanced academically and professionally but also in my overall ability to adopt a well-rounded and flexible outlook in the pursuit of academia.

I would also like to thank the members of my research committee, Dr. Joyce Engel and Dr. Dawn Prentice, for their expertise, guidance and constructive feedback throughout the research process. I must also thank you both for your patience and personal time given to the refinement of my research plan and thesis document.

I must also thank my research participants for their involvement in this study and commitment to contributing to the research community.

Lastly, I would like to thank my family and friends for their ongoing support and understanding during the completion of my thesis. I must give special thanks to my fiancé, Dr. Justin Ramanauskas, for his loving support, sacrifice and motivation every step of the way. I must also thank my son, Elias, for being the best motivation I could have from the start of my degree at five months old to my big toddler standing with me at convocation.

Table of Contents

List of Tables

Chapter 1: Introduction

In North America, a new graduate nurse must pass the licensure examination before holding the ability to practice under the title 'registered nurse' (RN). In 2015, the National Council Licensure Examination for Registered Nurses (NCLEX-RN) was adopted as the entry-to-practice exam for baccalaureate prepared nurses in Canada (College of Nurses of Ontario [CNO], 2018). The NCLEX-RN was adopted to "…ensure that it grants registration only to those who demonstrate the nursing knowledge to provide safe care" (CNO, 2018, para. 1). The NCLEX-RN is an American-based, clinically focused exam, that had never been utilized as an entry-to-practice standard outside of the United States of America (USA) until its uptake in Canada (National Council of State Boards for Nursing [NCSBN], 2013). Despite student, educator, and nurse administrator concerns, the NCLEX-RN was implemented in January 2015 as planned by Canadian nurse regulatory bodies. To this day, nursing students, educators and leaders in the clinical environment continue to adapt to the NCLEX-RN with little known about their experiences with the exam and how it has impacted their professional practice.

The NCLEX-RN is the standard entry-to-practice exam for both diploma and degree prepared nurses in the USA (Blustein, 2011; LaRocco, 2010). In Canada, a baccalaureate education is required to qualify for the entry-to-practice exam and to practice as an RN in all provinces and territories, except for Quebec (Canadian Nurses' Association [CNA], 2018b). In an attempt to summarize a Canadian perspective on the use of the NCLEX-RN in Canada, one cannot ignore the commonly cited concerns that the decision to adopt the NCLEX-RN in Canada was completed without adequate and transparent stakeholder engagement, without an evaluative plan in situ, and without reliable evidence of exam content applicability to the Canadian testing population (McGillis-Hall, Lalonde, & Kashin, 2016; Salfi & Carbol, 2017).

Of the literature examining NCLEX-RN use in Canada, one study conducted by McGillis-Hall and colleagues (2016) explored the experiences of new graduate first-time test-takers. No further research in Canada has been conducted to explore the experiences and perceptions of practicing RNs about the NCLEX-RN. There is also a paucity of research exploring the experiences and perceptions of key nursing stake holders such as nurse managers and educators, who frequently interact with new graduate nurses. Considering the acute care focus of the NCLEX-RN, there is also a gap in Canadian research exploring the perspective of RNs in acute versus non-acute areas of care. This thesis study will utilize a collective case study design to better understand the NCLEX-RN in Canada, as experienced by six RNs from both acute and non-acute care environments in Ontario, Canada.

Background to Research Question

Positioning myself. In qualitative research, the underlying ontological belief is that multiple realities exist (Creswell & Poth, 2017). Since the researcher is the primary research instrument, the realities of the participants interact with the reality of the researcher to generate an interpretation of participants' experiences through the researcher's lens (Merriam, 1998). The researcher brings not only skill and ability but also personal characteristics, personal and professional experiences, values, and inherent biases to the study (Berger, 2015; Creswell & Poth, 2017; Merriam, 1998). According to Merriam (1998), the researcher must be aware of, and acknowledge that, these characteristics, traits, values, and biases brought to the study cannot be eliminated completely. The researcher must also consider how these factors may influence the research process since the primary research instrument is the researcher (Merriam, 1998). Reflexivity involves consciously acknowledging the existence of these factors and is essential to the research process to ensure trustworthiness of findings.

Upon review of the literature, there is a gap in studies that explore the experiences with, and perceptions about, the NCLEX-RN among RNs in both acute and non-acute settings in Canada. I must first acknowledge my position in relation to my proposed research. I graduated with a Bachelor of Science in Nursing (Honours) from Brock University, Ontario, Canada, in June 2016. I began working as an RN on a temporary license in a 34-bed telemetry unit in February 2016, prior to the completion of my licensure examination, the NCLEX-RN, in May 2016. Since then, I have practiced nursing in acute, rehabilitation, palliative, and long-term care settings in Southern Ontario, and worked with individuals and families across the lifespan.

My experience with the NCLEX-RN involved lengthy preparation post-graduation to ensure I had the right tools to pass the exam. In my baccalaureate degree, I had paid to complete the Health Education Systems Incorporated (HESI) exam, an American resource, and despite being a straight-A student, I failed miserably. Prior to deciding on a study strategy, I spoke with other nurses who had successfully passed the exam to determine what worked for them. I did not want to risk failing the exam due to the cost and only having three attempts to pass. I decided to use multiple preparatory materials, all of which I must note are American. My NCLEX-RN study preparation materials consisted of two textbooks I purchased, *Saunders comprehensive review for the NCLEX-RN examination* (Silvestri, 2015) and *Kaplan NCLEX-RN: Strategies, practice & review with practice test* (Irwin & Burckhardt, 2016). I reviewed the NCSBN (2015) test plan, paid for an online preparatory course offered by the NSCBN, and paid for access to an online question bank, UWorld (n. d.). These preparation resources cost approximately $600.00 CAD in addition to the $200 American fee I paid to write the NCLEX-RN. Although I had just spent $60,000 to obtain my baccalaureate degree, I could not risk failure of the exam because I fully supported myself and had a sizeable amount of debt to address. I also feared the reputation

I would receive if I was unsuccessful – even with being a straight-A student. I did not utilize any material from my undergraduate degree to prepare for the exam, aside from the critical thinking abilities that I had acquired. When speaking with my colleagues, all had incurred similar costs, and prepared with additional American resources as I had.

Upon booking my exam, I had a positive experience with selection of test centres and the ability to choose a date and time that fit with my schedule. At the test centre, the instructions were easy to follow and to my surprise, the layout and schematic of the exam was identical to the preparatory question bank that I had utilized. I proceeded to finish my exam in 75 questions with a total writing time of approximately 40 minutes. Despite the delivery time of just three days, the three days were a dreadful wait for my potentially life altering exam results in the mail. I felt elated when I opened my envelope and saw that I had passed. I thought to myself, my life is not over – my bills will be able to be paid and no one will think I am a failure! I can continue working in my position as an RN in Canada.

Reflecting on the exam content, most questions dealt with delegation and prioritization of care with a few questions included that related to interpretation of lab tests and medication administration; all hospital-based. I understand that these areas are important to my ability to provide care in an acute care setting, but I began to wonder what happened to everything else I had learned in my baccalaureate degree. I recall a focus on holistic care in a variety of settings, not only in acute care, and learning about nursing research, leadership, public and population health, the impact of the social determinants of health, provision of culturally sensitive care, interpersonal skills and building an effective therapeutic relationship, and ethical concerns for the individual, family, and community. Where was this tested in my exam? What if I choose to

not practice in acute care … did this exam still ensure that I am able to "…provide safe care" (CNO, 2018, para. 1) in these settings and with these populations?

From my experiential knowledge, I developed a keen interest in whether or not the NCLEX-RN is a valid measure that the CNO (2018) states, "tests the competencies nurses need at the beginning of their careers … [and to] … ensure that it grants registration only to those who demonstrate the nursing knowledge to provide safe care" (para. 1). Looking back, I still struggle to see a connection between the NCLEX-RN and my baccalaureate nursing education, based on my experiences preparing for, writing the exam, and the nursing roles and areas of practice I have worked in during my first year as an RN in Canada. I am particularly curious about the perceptions of Canadian RNs regarding the applicability of the NCLEX-RN in acute care settings compared to applicability in non-acute settings, such as community health, public health, occupational health, home care, hospice, and palliative care, with respect to the entry-to-practice competencies and baccalaureate education requirement of RNs in Canada. I also wonder how the NCLEX-RN focus on hospital-based care fits into the Canadian healthcare system, which I learned has a strong emphasis on primary health care (PHC).

Now that I have situated myself within my research intent, I will provide context from relevant literature for my research purpose prior to explicating the literature review specific to my research question. A brief overview of the Canadian healthcare system contrasted to the American system will be described, followed by the role of the RN in Canada, including current trends in nursing. A brief summary of the roles of one Canadian regulatory body, the College of Nurses of Ontario, will be presented. Further detail will be provided about the mandatory nursing education requirements and the entry-to-practice licensure examination set by the CNO.

The Canadian healthcare system. Healthcare in Canada has undergone significant legislative changes throughout history. The *Canada Health Act* passed in 1984, merged the *Hospital Insurance and Diagnostic Services Act* (1957) and the *Medical Care Act* (1966), and continues to directly influence healthcare delivery across Canada today (CNA, 2000a). The primary objective of the *Canada Health Act* is to promote physical and mental health and well-being through the provision of reasonably accessible healthcare services (Health Canada, 2017). The Act encompasses five principles: public administration, comprehensiveness, universality, portability, and accessibility (CNA, 2000a; Health Canada, 2017). Further, the *Accord on Healthcare Renewal* was embraced in 2003. The Accord provides a plan to facilitate change within the Canadian healthcare system in hope of sustaining our publicly funded approach in the long-term. Within this reform, targeted areas include an emphasis on PHC, enhancing coverage for home care, access to technology, and greater government accountability to healthcare (Health Canada, 2017).

The importance of PHC is not a new concept. In 1978, an international conference produced the *Declaration of Alma-Ata*, which outlines the importance of PHC in the achievement of health for all (World Health Organization [WHO], 2018a). Primary healthcare "…is the first level of contact of individuals, the family and community with the national health system … and constitutes the first element of a continuing healthcare process" (WHO, 2018b, para. 5). The PHC approach encompasses five types of care: Promotive, preventative, curative, rehabilitative, and supportive/palliative, with a primary focus on illness prevention and health promotion (WHO, 2018a). Individual, family and community-centered care is integral to the PHC approach, where patients are encouraged to actively participate in healthcare decisions and identification of community healthcare needs (CNA, 2000b). The WHO explains the need for

PHC in their 2008 report, *Now More Than Ever*, and state that healthcare systems must adapt to the ever-changing health needs of the global population. Within Canada, the healthcare system has faced a variety of ongoing challenges, including fiscal constraints, changes in healthcare delivery, increase in chronic disease prevalence, and an aging population (Health Canada, 2012). Publicly funded healthcare delivery has shifted since its inception in Canada to adjust with these trends. Once reliant on hospitals, the focus of care delivery has transitioned to a greater emphasis on community-based health promotion and PHC services (Health Canada, 2012).

In contrast, the USA utilizes a privatized healthcare system. Individuals have several avenues to obtain health insurance. These include privately purchasing, through an employer, or if qualified, receiving government sponsored insurance through Medicaid or Medicare (Centers for Medicare & Medicaid Services, 2017). To ensure that all Americans have reasonable access to healthcare, the *Patient Protection and Affordable Care Act*, otherwise known as Obamacare, mandates that all Americans have insurance (Rosenbaum, 2011). However, nearly 30% of individuals remain uninsured (Centers for Disease Control and Prevention [CDC], 2017a). Although an emphasis on PHC is also evident in the USA, an imbalance exists between the availability of primary PHC services versus specialized healthcare services (Phillips, 2005; Shi, 2012). According to Shi (2012), this imbalance exists due to the market approach to healthcare in the USA, where the acute care specialties receive greater remuneration and technological access. The CDC (2017b) support this imbalance by stating that preventative care services are used at approximately half the recommended rate due to primarily financial reasons. In April of 2019, a regional agreement in the USA titled, *PHC 30-30*-30, was established to address healthcare barriers such as, a lack in PHC funding, with the goal of achieving universal health by 2030 (Pan American Health Organization [PAHO], 2019). This regional agreement is based on

the PAHO and WHO (2019) *Universal Health in the 21st Century: 40 Years of Alma-Ata, Report of the High-Level Commission*, which emphasizes the necessity of a PHC focus to achieve universal health. This report in combination with the subsequent launch of the *PHC 30-30-30* (PAHO, 2019) regional agreement illustrate the necessity of PHC to achieve universal health and confirm the absence of a PHC focus, lack of PHC funding, and overreliance on hospital-based services in the USA.

In summary, the Canadian healthcare system is publicly funded whereas the USA utilizes a privatized system. In Canada, the healthcare system has transitioned to a greater focus on community healthcare services including the delivery of PHC. Although the focus has begun shifting towards the importance of PHC in the USA healthcare system, the focus of healthcare delivery has remained reliant on acute care services and this reliance is reflected in the design and composition of the NCLEX-RN licensure examination. Now that context has been provided about the healthcare systems in which the NCLEX-RN is used as the entry-to-practice exam for RNs, roles of the RN specific to the Canadian context will be described.

Roles of the registered nurse in Canada. In Canada, all four regulated nursing groups – registered psychiatric nurses, licensed practical nurses (also referred to as registered practical nurses (RPNs) in some provinces), RNs, and nurse practitioners (NPs) must acknowledge and incorporate the PHC principles of accessibility, public participation, health promotion, technology, and intersectoral cooperation (CNA, 2000) into their daily practice as part of the country's mandate to improve health of all individuals (CNA, 2015). Registered nurses are self-regulated healthcare professionals who provide leadership and collaborate with individuals, families, and populations over the lifespan through health and illness and in a variety of settings to assist in the achievement of optimal health, well-being and quality of life (CNO, 2017a). Self-

regulation refers to the ability of the RN to govern their own practice in an ethical manner with the obligation to place public interest as a paramount concern (CNO, 2017a). The privilege of self-regulation in nursing requires a combination of regulatory activities from both the provincial or territorial regulatory body and the individual RN. For example, the regulatory body is responsible for establishing entry-level competencies for registration, licensing processes, scope of practice, and standards for ethical practice, whereas the individual RN is responsible to independently meet these standards, practices, and processes (CNA, 2015).

There are five primary areas of nursing practice throughout the provinces and territories in Canada. These domains include clinical practice, education, administration, research, and policy (CIHI, 2018). The baccalaureate education has broadly prepared each new graduate nurse to provide safe, competent, ethical, and compassionate care to individuals, groups, and populations across the lifespan at various stages of health and illness (CNA, 2015). Since 2012, all Canadian provinces except Quebec, require completion of a four-year baccalaureate degree in nursing or equivalent, before an individual is qualified to write the RN entrance examination and subsequently begin nursing practice (CNA, 2018b). This baccalaureate education, combined with knowledge acquisition and skill development through continuing education and practice enables the new graduate to transition into leadership roles in these five areas (CNA, 2015). The CNA (2009) asserts that "nursing leadership is about critical thinking, action and advocacy – and RNs demonstrate these attributes in all roles and domains of nursing practice" (para. 1). Critical thinking is defined by the CNO (2018) as "…the ability to apply knowledge and comprehension in complex situations through problem solving" (para. 1).

The clinical practice domain can be divided into acute and non-acute areas of nursing. Acute care is synonymous to tertiary care with overlap in some areas of secondary care, whereas

non-acute care relates directly to primary care with overlap into secondary care. Tertiary care involves care of the individual who is experiencing a pathological condition that is often extensive and complex. This care occurs in a hospital-based setting where diagnostic and treatment interventions can occur. Secondary care can occur in hospital or community-based settings. This care involves referral by a primary care provider for further diagnostic or screening interventions. Primary care focuses on prevention of illness or disease and early diagnosis of such conditions (Potter, Perry, Stockert, & Hall, 2017). This non-acute care often occurs through community care, home care, public health, occupational health, physician clinics and telehealth services (CNA, 2017). In 2016, the CIHI (2017c) reported that 63.5% of RNs worked in hospital practice areas in Canada, whereas 35.5% of RNs worked in other areas such as community health or long-term care.

The remaining four domains of practice within the nursing paradigm – education, administration, research and policy – allow the RN to indirectly assist in the achievement of health and well-being for individuals, families, and populations (CNA, 2015). The RN can teach clinically or in an academic institution, as well as provide administration services in these areas such as coordination and supervision of care. The RN in a research role conducts the research process with a high standard, aids in the dissemination of findings, and facilitates an environment conducive to evidence-informed practice. Registered nurses are also able to assist with policy development, implementation, and review in the direct clinical environment or at a broader level that affects local or global health (CNA, 2015). The ability for RNs to provide leadership in these domains is derived from the baccalaureate education in combination with commitment of continuing education and professional advancement to holistically better the health of individuals, families, and populations (CNA, 2009).

Within the different nursing domains in Canada, several current trends can be observed. In 2017, a total of 301, 010 RNs, 70.7% of the regulated nursing workforce, were employed in various sectors throughout Canada (Canadian Institute for Health Information [CIHI], 2018a). In 2017, a total of 101, 912 RNs, 33.4% of all RNs registered for practice in Canada were registered in the province of Ontario (CIHI, 2018a). Among these RNs, 9, 312 were new graduate nurses (CIHI, 2018a). According to the CIHI (2018a), the number of new graduate RNs obtaining licensure in Canada before two years post-graduation has declined by 10.7% since 2006. This decline has been attributed to baccalaureate program acceptance rates and legislation, regulatory, and licensure changes and requirements, such as removal of the New Graduate Guarantee (NGG), a government funded initiative to support the transition of new nurses into clinical practice, and the introduction of the NCLEX-RN in January of 2015 (CIHI 2017).

The hospital setting continues to employ the highest number of regulated nurses in Canada, 52.8% to be exact (CIHI, 2018b). However, a shift can be observed when examining each nursing group individually. According to the CIHI (2017), a decline of 4.9% since 2007 has been observed in the number of RNs and NPs working in a hospital setting. Conversely, an increase of 4.9% of LPNs/RPNs working in hospital is noted. This shift in regulated nursing groups can be attributed to stagnancy of funds for financial expenditure of hospitals in the Canadian healthcare system, an increase in utilization of community-based healthcare services (CIHI, 2018c), or to the declining supply of RNs in Ontario (CIHI, 2018a). An increase of 2.4% of regulated nurses employed in community care is noted, which coincides with the observed shift toward increased use of community-based healthcare services. Registered nurses encompass 75.9% of regulated nurses working in the community but a decline of 10.5% since 2007 is noted. Specific to Ontario, a decline of -1.4% and -2.2% of RNs working in hospital and

community health, respectively, has been observed since 2007 (CIHI, 2017). However, a 4.4% increase of RNs working in 'other areas' of care in Canada has occurred (CIHI, 2017). According to CIHI (2017), 'other areas' of care include business, government, occupational health, private nursing agencies, self-employment and educational institutions. An increase from 17.2% in 2007 to 20.1% in 2016 of all RNs working in Ontario were employed in these 'other areas' of care (CIHI, 2017). This trend may be due in part to the mandatory entry-to-practice requirement of a baccalaureate degree as preparation to enter the nursing workforce, equipping Canadian RNs with knowledge and a skill set that extends beyond clinical psychomotor skills.

Regulation of nursing in Canada. Each province and territory in Canada have a governing body who is responsible for the regulation of nurses. The CNO is the governing body for the self-regulation of RPNs, RNs and NPs who practice nursing in the province of Ontario (CNO, 2017d). The College maintains requirements for entry-to-practice, provides practice guidelines, communicates and enforces standards for practice, and administers a quality assurance program to ensure provision of high-quality nursing services in Ontario. The practice guidelines and standards apply to all nurses in Ontario regardless of their role or area of practice (CNO, 2017d). According to the CNO (2013), the guidelines and standards are "designed to support nurses in providing safe and ethical nursing care" (para. 1). One of the responsibilities of the CNO is to ensure adequate educational preparation of RNs in the province, which includes educational requirements and licensure examinations.

Educational requirements. The first baccalaureate program for nursing in Canada, a 'sandwich' program, was offered by the University of British Columbia in 1919. The 'sandwich' program involved students taking university courses during year one and four, with years two and three completed in hospital (Canadian Association of Schools of Nursing [CASN], 2012).

Criticism of this program structure led to further development of the baccalaureate education model. In 1942, a baccalaureate program at the University of Toronto was established where the university held full control over course content throughout the four years. However, the requirement of baccalaureate education as the standard for RN entry-to-practice was not established until 2005 (CASN, 2012). Since 2012, all Canadian provinces except Quebec, require completion of a four-year baccalaureate degree in nursing before an individual is qualified to write the RN entrance examination (CNA, 2018b). Accelerated programs in nursing are also offered for those who already hold a baccalaureate degree from another discipline and wish to pursue nursing education (CNA, 2018a).

The educational requirement in Canada differs from the USA, where there are three different educational routes that an individual may take to become an RN. These American routes include obtaining a three-year hospital-based diploma program, a two-year college-based associate degree, or a four-year, university-based baccalaureate degree. Accelerated programs also exist for students who hold a baccalaureate degree in another discipline and wish to enter nursing (Blustein, 2011; LaRocco, 2010). The diploma and associate degree programs are highly technical in focus with greater emphasis placed on physiological needs and psychomotor skills, as compared with baccalaureate degree programs (Davis-Martin, 1990; Johnson, 1988; Salfi & Carbol, 2017). Regardless of educational preparation, all individuals are required to write the same RN entrance examination, the NCLEX-RN. Despite the presence of these three educational pathways, organizations such as the Institute of Medicine (2011) and more recently, the American Nurses Association and the Organization for Associate Degree Nursing (2015), advocate for the baccalaureate education as entry-to-practice in the USA. McEwen (2015) suggests that four main areas within a baccalaureate degree that are not emphasized in associate

or diploma programs include leadership and management, public and population health concerns. In Canada, these areas are identified in the CASN (2015) *National Education Framework: Final Report*, a national guideline for baccalaureate, master and doctoral level nursing students, along with the areas of foundational, in-depth and advanced knowledge development, critical inquiry, generalized practice, communication and collaboration. This framework is foundational for baccalaureate program development, evaluation and modification to generate RNs that possess the entry-to-practice competencies outlined by the CNO (2018).

Irrespective of geography, research demonstrates the pragmatic benefits of baccalaureate prepared nurses. For example, Aiken et al. (2003) found that mortality and unsuccessful rescue attempts were lower in Pennsylvania hospitals who employed higher proportions of baccalaureate prepared RNs. Aiken et al. (2014) assert that increasing the proportion of baccalaureate prepared nurses in hospitals could reduce mortality. This second study was based on findings throughout 300 European hospitals where mortality within 30 days of admission was reduced by 7% with a 10% increase in baccalaureate RNs. Blegen, Goode, Park, Vaughn, and Spetz (2013) also found lower incidence of heart failure, decubitus ulcers, unsuccessful rescues, post-surgery deep vein thrombosis and pulmonary embolism, and overall shorter hospital stays across 21 American hospitals with an increase in baccalaureate prepared nurses. Kutney-Lee and Aiken (2008) found similar findings with patients experiencing serious mental illness and Zolotorofe and colleagues (2018) with patients in ambulatory care. Gkantaras and colleagues (2016) conducted a retrospective cross-sectional study in North America and Europe, which supports the increase in baccalaureate prepared nurses to reduce patient mortality. The IOM (2011) has also acknowledged these benefits with the recommendation that 80% of the nursing workforce in the USA have baccalaureate education by 2020 to enhance quality of care and

reduce healthcare expenditure. Yakusheva, Lindrooth, and Weiss (2014) support the IOM (2011) recommendation from both a pragmatic and fiscal perspective but advance that a combination of a baccalaureate workforce and appropriate staffing ratios are required to enhance care quality and reduce financial expenditure.

Licensure examinations. Regardless of educational preparation, all RNs in North America now write the NCLEX-RN. From the 1970s through 2014, the Canadian Registered Nurse Examination (CRNE) was used as the Canadian entry-to-practice exam for RNs. Canada adopted the NCELX-RN from the USA in January 2015, as the nursing licensure examination to ensure the provision of "safe care" (CNO, 2018, para. 1) within the nursing discipline. The CNO (2018) also state that the NCLEX-RN was adopted for it provides "…year-round access to the exam and faster results" (para. 2). The NCLEX-RN had not previously been utilized as the licensure examination for RNs outside of the USA (NCSBN, 2013).

Prior to adoption of the NCLEX-RN, the CNA was responsible for the design and distribution of the CRNE. The CRNE was offered at set times throughout the year in either English or French. The CRNE contained a mix of 200 multiple choice or single answer questions, with 20 of these acting as pilot questions that did not contribute to the examinee's overall score. This paper and pencil exam tested the four competency categories of professional practice, nurse-patient partnership, health and wellness, and changes in health, outlined by the CNA. These categories were based on the 148 Canadian competencies expected of new graduate nurses, which were annually reviewed by experts of the association. Within these competency categories, the five contextual variables of health care recipient, lifespan, diversity, health situations, and practice environment set the content (Hobbins, & Bradley, 2013)

Within the CRNE, an examinee's competence was assessed utilizing Bloom's taxonomy (as cited in Hobbins, & Bradley, 2013). The original taxonomy contains six classes of cognitive levels which range from lower to higher cognitive processing: knowledge, comprehension, application, analysis, synthesis, and evaluation (Wendt, Kenny, & Marks, 2007). The CRNE tested critical thinking via knowledge and comprehension (40% of questions) and higher order cognitive levels (40% of questions), with the remaining 10% of questions composed of any cognitive level (Hobbins, & Bradley, 2013). The ultimate strengths of the CRNE include that the exam was based on Canadian nursing competencies, baccalaureate nursing curriculum, the Canadian healthcare system, administered and assessed by a Canadian nursing organization, the CNA, and the content and preparation resources were available in both English and French. The weaknesses of the CRNE include that the exam was only offered at set times throughout the year and that the exam was paper-and-pencil.

Conversely, the new entry-to-practice exam for Canada, the NCLEX-RN, is an American-based exam created and distributed by the National Council of State Boards for Nursing (NCSBN). The NSCBN is an American-based organization as the title implies. Originating in 1994 (NCSBN, 2018a), the NCLEX-RN is a Computerized-Adaptive Test (CAT) that contains a variety of question formats including multiple choice, multiple response, fill in the blank, audio-based, and charts. The examinee can receive anywhere between 75 up to 265 questions based on the CAT algorithm (NCSBN, 2018b). According to the NCSBN (2018c), CAT targets questions to the writer's level of ability by generating each subsequent question based on assessment of the writer's previous answers. In relation to the NCLEX-RN, NCSBN (2018c) states that CAT is used to reduce the number of 'easy' and 'difficult' questions, reduce

security risks due to exam content exposure, and to precisely and reliably measure nursing competence.

Whereas the CRNE tested on diverse competencies, the NCLEX-RN exam items are created based on job analyses of new graduate nursing positions conducted every three years (Higher Learning Technologies, 2018). The NCSBN (2013) state that the content areas of the NCLEX-RN test across diverse settings and along the lifespan of client needs through the categories of safe and effective care environment, health promotion and maintenance, psychosocial and physiological integrity. However, upon review of the *2016 NCLEX-RN Test Plan* provided by the NCSBN (2015), the exam content categories focus on acute, hospital-based care with minimal to no inclusion of community, population, or public health. According to the NCSBN (2013), the NCLEX-RN also primarily tests at or above the cognitive level of application within Bloom's taxonomy.

In 2015 upon implementation of the NCLEX-RN, the overall pass rate for first time test-takers was 69.4% compared to 84.5% of American test-takers (NCSBN, 2018d), and to an 84.7% pass rate with the CRNE in 2014 (CNO, 2016). In 2016, the overall pass rate for Canadian first time test-takers of the NCLEX-RN increased to 80.3% (CNO, 2017f). The current literature suggests that this increase in overall pass rate may result from changes in baccalaureate nursing curriculum to accommodate the content of the NCLEX-RN (MacMillan et al., 2017), including integration of resources such as the HESI preparation exam (Cobbett, Nemeth, & MacDonald, 2016). The increased purchase and utilization of American-based preparatory resources by Canadian test-takers may also explain the rise in overall pass rates (McGillis-Hall et al., 2016).

In summary, I have provided context for my research purpose by differentiating the Canadian healthcare system from the American system, describing the role of the RN specific to

Canada along with observed trends in nursing, identifying the role of one Canadian regulatory body, the CNO, and contrasting mandated nursing education and licensure examination requirements between Canada and the USA as the NCLEX-RN is used as the licensure examination for RNs in both of these countries. From my experiential knowledge and review of the literature to provide context to my research purpose, I still struggle to see the connection between the NCLEX-RN and my baccalaureate degree and I remain curious about the experiences with, and perceptions of, Canadian RNs and the NCLEX-RN. A review of current literature will now be provided to identify what is currently known about the NCLEX-RN use in Canada and to identify any gaps present in the literature.

Chapter 2: Literature Review

An extensive review of current literature in relation to the NCLEX-RN has been conducted. An overview of the recent literature about NCELX-RN use in the USA has been examined. My search strategy will be described followed by a summary of findings to provide context to my research purpose. An overview of the current literature about NCLEX-RN use in Canada has also been explored. My search strategy will first be elucidated followed by a summary of findings. As the Canadian literature relates specifically to my research question of Canadian RN perceptions of, and experiences with the NCLEX-RN, a critique of the Canadian research studies identified will be provided. Since the NCLEX-RN is considered a 'high stakes exam' (National League for Nursing, 2012), literature around high stakes examination use will also be briefly discussed.

The NCLEX-RN in the USA

A review of current literature was conducted to explore the most recent research evidence about the NCLEX-RN use in the USA. The databases searched include the SuperSearch Brock Database, Cochrane Database for Systematic Reviews, CINAHL, MEDLINE, Nursing and Allied Health Database and ProQuest Sociology Collection. The key search terms used were "NCLEX-RN" AND "United States" with the key term "perceptions/experience" to further refine results. The search was limited to publication date of 2016 to 2018, scholarly journals, and English language. The publication date was initially limited to the past two years due to the plethora of research available since the inception of the NCLEX-RN in 1994 (NCSBN, 2018a). The search of the literature based on the American RN experience with the NCLEX-RN was used to provide context and limited in quantity because the focus of this study was the experience of the Canadian RN with the NCLEX-RN. Inclusion criteria included studies that

explored NCLEX-RN use in the USA. Exclusion criteria included studies that did not discuss the NCLEX-RN in relation to the American testing population. A total of 16 studies were identified that meet these criteria, which will be described as follows.

Derived from the broad search of "NCLEX-RN" and "United States", 14 articles were identified with relevance to my proposed research question. Of these articles, 13 focused on predictors of NCLEX-RN success or failure and on how to improve NCLEX-RN pass rates. With inclusion of the search terms "perceptions/experiences" and no limit of date of publication, two articles were further identified that explore the experiences and perceptions of RNs in relation to the NCLEX-RN. One of the articles extracted from the broad search provides insight into the prevalence of articles focused on improving NCLEX-RN success. The findings from the literature review are summarized below.

Specific to predictors of failure with the NCLEX-RN, Kaddoura, Flint, Van Dyke, Yang, and Chiang (2017) and Pullen (2017) posit that nursing students with a grade average at or below C (60-69%) are less likely to experience success. Lown and Hawkins (2017) also found that a significant positive correlation existed between 532 undergraduate students at one American university with a preference for group learning and NCLEX-RN failure. Mc Farquhar (2014) conducted a phenomenological study to explore the lived experiences and perceptions of 18 RNs who had initially failed the NCLEX-RN. The overarching themes identified were disappointment with self, depression, avoidance of repeating the exam, acceptance of failure, and aspiration to re-take the exam. From the in-depth interviews, Mc Farquhar (2014) elucidated factors that the participants identified as contributing to failure such as distraction, possession of poor test taking skills, lack of awareness related to exam content, and an overall sense of poor preparation for exam success.

In relation to NCLEX-RN success, four of the articles recommend use of the HESI examinations. The HESI A2 is a preadmission assessment exam, whereas the HESI exit exam is used to prepare students for the NCLEX-RN. Pullen (2017) describes increasing a requisite score of 80% or higher on the HESI A2 exam for nursing program entry. Robert (2018) reports a positive correlation between preadmission HESI A2 examination scores and both completion of the Associate Degree nursing program and NCLEX-RN success. Johnson, Sanderson, Wang, and Parker (2017) and Kaddoura and colleagues (2017) both found that students who scored higher on the HESI exit examination were more likely to experience success with the NCLEX-RN. Further, Jefferys, Hodges, and Trueman (2017) report that among 15 at-risk nursing students who completed NCLEX-RN preparation modules from Kaplan, the Kaplan readiness exit exam was a significant predictor of NCLEX-RN success. Both the HESI and Kaplan examinations are like the NCLEX-RN in that they are computerized exams. Libner and Kubala (2017), Mager, Beauvais, and Wallace Krazer (2017), and Shoemaker, Chavez, Keane, Butz, and Yowler (2017) all recommend the use of computerized testing within a nursing program to enhance success on the NCLEX-RN.

The use of standardized testing within nursing education to prepare students for the NCLEX-RN is shown to be successful and recommended (Libner, & Kubala, 2017; Mager et al., 2017; Quinn, Smolinski, & Bostain Peters, 2018). Palmer, Shanty, Labant, and Rossiter (2017) also suggest turning off rationales when students complete standardized practice assessments. This intervention encouraged greater exam content review prior to the assessment, resulting in a 10% increase of students reaching the NCLEX-RN passing benchmark. Consistent across the current literature was also the importance of ensuring that the nursing program curriculum was in alignment with the most recent NCLEX-RN test plan, the implementation of NCLEX-RN

content-based exams (Mager et al., 2017; Pullen, 2017) , and use of NCLEX-RN preparatory resources (Libner, & Kubala, 2017; Quinn et al., 2018). Mager and colleagues (2017) also recommend, based on their findings, the use of higher-level application questions like the NCLEX-RN and increasing the use and weight of final examinations in nursing school.

Quinn and colleagues (2018) further found that provision of psychosocial support is essential to improving NCLEX-RN success. Fiske (2017) reports that the integration of contemplative practices including meditation and guided imagery into an NCLEX-RN preparatory course, enhanced student self-efficacy towards completion of the exam. Lutter, Thompson, and Condon (2017) describe a tutoring approach that focuses on question analysis as a remediation strategy. The authors report a 95% success rate of this tutoring approach implemented by three faculty members. Finally, Blozen (2017) explored perceptions of 12 accelerated nursing students about what contributed to success on the first NCLEX-RN write. The reported facts that were considered instrumental to the participants NCELX-RN success included clinical experience, participation in preparatory review courses and use of question banks, and receipt of psychosocial support (Blozen, 2017).

Foreman (2017) explains that within the USA, 48 states and the District of Columbia, mandate State Pass Rate Standards for the NCLEX-RN. The remaining two states require their accrediting bodies to identify the pass rate standard. Nursing programs must meet these standards in order to receive accreditation. This accreditation requirement provides insight into the prevalence of studies in the literature with a focus on predictors of NCLEX-RN failure and success, and how to improve pass rates. Foreman (2017) computed 95% confidence intervals for NCLEX-RN pass rates of 1792 nursing programs in the USA from 2010 to 2014 to examine the reliability of pass rates for accreditation. Foreman (2017) found that nearly 30% of programs

that met the standard, and approximately 17% of programs that did not meet the standard, were accidental. Foreman (2017) concludes that State Pass Rate Standards may not be appropriate as evaluative criteria to measure the quality of nursing programs based on these findings.

In summary, predictors of NCLEX-RN failure include an academic average at or below a C level, and a preference for group learning. Contributing factors to failure identified by RNs who experienced failure include distraction, poor test taking skills, lack of awareness of expected exam content, and overall poor preparation. To improve chances of success on the NCLEX-RN, the literature suggests use of computerized testing including HESI and Kaplan exams, standardized testing including turning off rationale provision, use of higher level application questions, and higher weighted exams, ensuring curricula alignment with the NCLEX-RN test plan, use of NCLEX-RN content-based exams and preparatory resources, and provision of psychosocial support and use of contemplative practices. The mandated Pass Rate Standards to ensure nursing program quality in the USA also provides potential reasoning for a focus on NCLEX-RN success in the literature, because nursing programs must meet a certain exam pass-rate to receive accreditation.

The NCLEX-RN in Canada

A review of current literature was also conducted to explore the most recent research evidence about the NCLEX-RN in Canada, particularly in respect to the experiences and perceptions of Canadian RNs who have completed the exam. The databases searched include the SuperSearch Brock Database, Cochrane Database for Systematic Reviews, CINAHL, MEDLINE, Nursing & Allied Health Database and ProQuest Sociology Collection. The key terms searched included “NCLEX-RN” AND “Canada”, “NCLEX-RN” AND “Canada” AND “perceptions/experience”, “NCLEX-RN” AND “Canada” AND “perceptions/experience AND

"registered nurse/RN/nurse". The search was limited to English Language with no restriction on year of publication. Inclusion criteria included studies that explored NCLEX-RN use in Canada. Exclusion criteria included studies that did not discuss the NCLEX-RN in relation to the Canadian testing population. A total of five studies were identified that met these criteria, which will be described and critiqued as follows.

McGillis-Hall and colleagues (2016) conducted a qualitative study utilizing a narrative approach to collect data from semi-structured interviews via telephone from 202 nursing students representing 28 universities across 9 out of 10 provinces in Canada. McGillis-Hall and colleagues (2016) explored the experience of first-time Canadian NCLEX-RN writers. The authors implemented snowball sampling, which resulted in a sample of first time NCLEX-RN writers, 109 (54%) who passed, and 93 (46%) who did not. The authors conducted content analysis and continually discussed emerging themes throughout data interpretation. McGillis-Hall and colleagues (2016) stated that "… relevant resource materials [were integrated] into the interpretation of the overall findings" (p. 44). The authors found that the predominant theme related to policy issues, which consisted of the subthemes of 1) test centre accessibility, 2) Canadian versus American content and context, 3) French language concerns, 4) stakeholder communication, 5) limited opportunity to re-write the exam, 6) financial cost of the exam, and 7) reputational cost of having an unsuccessful attempt(s). McGillis-Hall and colleagues (2016) concluded that the experience of these students was not positive, and that the policy issues that were highlighted must be addressed for future exam writers.

The use of qualitative inquiry to explore the experience of first-time NCLEX-RN writers is appropriate to generate rich data for the posed research question. However, according to the evaluative criteria of a "good" narrative study outlined by Creswell and Poth (2017), this study

raises methodological questions. A narrative study is to focus on an individual, or two to three individuals. McGillis-Hall and colleagues (2016) had a total sample size of 202 students. Temporality is important for the telling of a narrative story for the contextual details of each case, such as description of physical, emotional, or social positioning of the individual. Reflexivity within this form of inquiry is also integral to ensure reliability and trustworthiness of finding interpretation (Creswell & Poth, 2017). However, contextual descriptions and evidence of author reflexivity in this study were lacking. The collection of data through semi-structured interviews and content analysis conducted by McGillis-Hall and colleagues (2016) is consistent with, and appropriate for, narrative inquiry. Overall, this study provides valuable insight into the experience of first-time NCLEX-RN writers in Canada and barriers that were faced. The question of exam content applicability to the Canadian population is evident as are the need for additional testing materials to pass the exam. However, these findings do not directly answer my question of exploring perceptions of practicing RNs and nurse managers in acute and non-acute care environments.

McGillis-Hall and colleagues (2018) also completed a content analysis of 48 media reports about the adoption of the NCLEX-RN in Canada collected over a 6-month period, July to December 2015. The purpose of this study was to examine Canadian perceptions of the adoption of the NCLEX-RN. The authors revealed that most media reports negatively portrayed the nursing profession. The themes generated from the analysis included questioning the exam applicability in Canada and the alignment of nursing curriculum to exam content, translation into French language, and lack of communication from regulators when asked to comment on the high failing rates. Overall, the authors highlight the consequences of change without active stakeholder engagement through negative portrayal of the nursing profession in the media. The

authors identified the use of reflexivity, audit trails, and intersubjectivity reliability through use of multiple coders for data analysis, adding trustworthiness to data interpretation. However, I must also note the possibility for bias in both studies discussed thus far, related to the primary researcher's background in nursing. This study not only demonstrates the negative portrayal of nursing in the media with the NCLEX-RN implementation but also generates questions about the applicability of the American-based exam content to Canada. Further exploration about the NCLEX-RN use in Canada including experiences and perceptions of RNs is warranted.

Salfi and Carbol (2017) examined two studies completed by the NCBSN that were cited by Canadian regulatory bodies as evidence to support the applicability of the NCLEX-RN as the entry-to-practice exam in Canada. The authors reviewed the methodology including survey design, administration, response rates, reported confidence intervals, and sampling technique, along with the results and conclusions. Credible sources were referenced in consideration of this assessment including the American Psychological Association, American Educational Research Association, and the National Council for Measurement in Education in addition to current literature. Salfi and Carbol (2017) reported multiple issues in the NCSBN study reports methodology, survey development and process, and results reported. Overall, the authors concluded that the data provided in these studies alone did not suffice to justify exam adoption or the direct applicability of the NCLEX-RN to the Canadian testing population. Salfi and Carbol (2017) also called attention to several misinterpretations made within one of the NCSBN documents, between Canadian competencies and American activity statements, which was cited as evidence in support of the applicability of the NCLEX-RN to the Canadian testing population. As a result of these inconsistencies, the authors concluded that it is highly unlikely that the NCLEX-RN accurately reflects the key competencies and core values that Canada has mandated

and used to define their RNs. This review is thorough, transparent, and based on credible source material. These findings add insight into reasoning for initially low pass rates with an abrupt rise the following year but does not explore the perceptions of practicing nurses or stakeholders about the exam use in Canada.

McMillan and colleagues (2017) describe the strengths, weaknesses, and ultimate impact of the American-based NCLEX-RN in Canada as the entry-to-practice examination for baccalaureate prepared nurses based on current literature. The authors report that the gaps between the NCLEX-RN content and Canadian nursing curriculum, including evidence-informed practice, interprofessional collaboration, and cultural health and safety, and lack of French language preparatory materials were present. A formal plan for evaluation of the implementation of the exam in Canada was also not in place. The authors discuss the reasoning for adoption of the NCLEX-RN in Canada and compare the CRNE and NCLEX-RN. In this study, the key issues identified with NCLEX-RN implementation in Canada included lack of evaluative plan and consultation with key stakeholders, potential bias of appropriateness to Canadian testing population, reflection of the American healthcare system in exam content, risk of Canadian curriculum altering to match exam content, loss of ability to set licensing standards, negative impact on Canadian French language programs, and contribution to the nursing shortage in Canada related to ease of transition to the USA. McMillan and colleagues (2017) also identify a need for further research exploring the use and impact of NCLEX-RN implementation in Canada. This article contributes to the reasoning for conduct of a study to explore the perceptions of practicing RNs and key stakeholders, such as nurse managers, about the implementation of the NCLEX-RN in Canada.

Sears, Othman, O'Neil, and Hopman (2017) examined the relationship between NCLEX-RN performance and undergraduate academic performance of one Canadian undergraduate program in the first two years of NCLEX-RN use. The authors also sought to investigate factors that led to NCLEX-RN success, or failure. Sears and colleagues (2017) state that data was collected over a two-year period and guided by a cross-sectional design. However, based on review of the article, the data was collected at two points in time – within the baccalaureate program and post-graduation, after NCLEX-RN completion – therefore, this study is of longitudinal design. This non-experimental, within-subject design involved nonrandom sampling techniques, convenience and purposive sampling, resulting in a total sample size of 215 participants from one university in Ontario, Canada. Sears and colleagues (2017) report that of the 215 participants, 141 (66%) passed the NCLEX-RN, and 74 (34%) failed. The authors analyzed course and final grades, GPAs, time for undergraduate completion, and NCLEX-RN pass and fail rates with t-test and Chi Square statistical testing. The authors found that with each GPA point increase, the likelihood of an NCLEX-RN pass was increased by 10 and with a 4.0 GPA, there were no failures noted. Based on these findings, Sears and colleagues (2017) concluded that academic success is a predictor for success on the NCLEX-RN examination. However, without a power analysis of the sample size, the statistical conclusion validity of the results is low. This analytical absence in combination with the use of non-probability sampling and a single-site design threaten generalizability of these results to other populations and contexts. Sears and colleagues (2017) identify this impact without randomization and control for the confounding variables with a logistic regression analysis. Karpen (2017) supports the necessity of a logistic regression analysis with a nonrandom sample because this technique considers the correlation between covariates and converts these into orthogonal variables prior to

analysis. Sears and colleagues (2017) are the first to examine the relationship between NCLEX-RN performance and academic success in Canada. Sears and colleagues (2017) acknowledge the validity threats and state that further studies exploring this relationship must be conducted to ensure adequate preparation of new graduate nurses for the NCLEX-RN.

In summary, research on the NCLEX-RN use in Canada has focused on student experiences (McGillis-Hall et al., 2016), an examination of media content about exam adoption in Canada and repercussions for the nursing profession (McGillis-Hall et al., 2018), a review of two studies conducted by the creator of the NCLEX-RN, the NCSBN, used as partial means to justify adoption of the exam into Canada (Salfi & Carbol, 2017), a review of literature to describe the current and potential impact of NCLEX-RN use in Canada (McMillan et al., 2017), and an examination of NCLEX-RN success and academic success (Sears et al., 2017). McGillis-Hall and colleagues (2016) were the only researchers to explore the views of Canadian NCLEX-RN test-takers. Although the methodology is questionable, the authors identified policy issues including questions about American-based exam content in Canada, French language translation, lack of stakeholder communication, test centre accessibility, cost, and lack of opportunity to rewrite the exam as well as reputational concerns due to unsuccessful attempts. McGillis-Hall and colleagues (2018) identified lack of communication with stakeholders regarding the implementation of the NCLEX-RN in Canada, resulting in negative media portrayal. Salfi and Carbol (2017) concluded that, based on their review, the NCLEX-RN is not directly translatable to the Canadian testing population as the education and health care systems within each country differ considerably. MacMillan and colleagues (2017) also identify lack of stakeholder engagement, absence of an evaluative plan, and question the applicability of exam content to Canada while identifying potential repercussions of this political reform. Finally, Sears and

colleagues (2017) advocate for further rigorous research examining the relationship between academic and NCLEX-RN success to ensure adequate exam preparation of new graduate nurses.

Purpose Statement

Based on my review of the current literature, there remains a paucity in research exploring the experiences and perceptions of Canadian RNs with the NCLEX-RN. Outside of the first-year test-takers, no studies exist that explore the experiences and perceptions of practicing RNs who have written the NCLEX-RN. More specifically, there is a lack of research data collected from Canadian RNs who experienced the NCLEX-RN and are now working in various professional roles such as clinician, manager, and educator. Considering the emphasis of acute, hospital-based care within the NCLEX-RN compared to the greater emphasis of PHC in Canada, there have been no studies that explore the experiences and perceptions of RNs who work in non-acute care environments in Canada. Thus, the purpose of this collective case study will be to better understand the NCLEX-RN in Canada, as experienced by RNs from both acute and non-acute care environments in Ontario, Canada.

Research Question

What are the experiences and perceptions of Canadian registered nurses with the NCLEX-RN?

Sub-Questions

1. How do Canadian RNs, working in both acute and non-acute care settings, perceive the NCLEX-RN and their baccalaureate education?
2. How do Canadian RNs, working in both acute and non-acute care settings, perceive the NCLEX-RN in relation to their past and present areas of professional practice?

3. What factors do Canadian RNs perceive contributed to their success with the NCLEX-RN? What factors did not?
4. What do Canadian RNs perceive as important competencies and qualities of an RN working in the current Canadian healthcare system and why?
5. Do Canadian RNs perceive that the NCLEX-RN accurately assesses the key competencies required of an RN to practice safely in Canada? Why or why not?

Chapter 3: Methodology

Within this chapter, the selected study design and guiding methodologist will be described and reasoning for selection elaborated. The respective sampling strategy will be explained, and characteristics of the selected sample displayed. The enrollment strategy utilized will also be elucidated. The two primary data collection techniques implemented to develop an understanding of the phenomenon under study – experiences and perceptions of RNs regarding the NCLEX-RN in Canada will be explicated. The analytic steps specific to the selected study design and methodologist will be described and summarized to ensure the presence of a viable audit trail. The strategy maintained for data storage and organization throughout and after the research process will also be delineated. The strategies implemented to promote trustworthiness of the research findings and ethical considerations related to data collection, storage and use; rights as a research participant; and the possible benefits and risks of participation in the study will be presented.

Study Design

Qualitative inquiry was selected to explore the unique experiences and perceptions of clinicians, nurse managers, and nurse educators about the adoption of the NCLEX-RN in Canada. Qualitative inquiry focuses on understanding how an individual interprets and derives meaning from life experiences with emphasis placed on the impact that context has on these interpretations (Merriam & Tisdell, 2016). This approach to research is also inductive with the researcher positioned as the primary data collection and analysis tool (Merriam & Tisdell, 2016). The qualitative paradigm was selected to approach the phenomena under study because of this focus on understanding an experience from the perspective of an individual encompassed by contextual emphasis.

Among the various methodological approaches within this paradigm, a case study approach was selected to better understand Canadian RN experiences' with, and perceptions' about the NCLEX-RN. Case study research emphasizes the importance of context in the analysis and discussion of each selected case. The use of a collective case study design allowed the researcher to select and contrast multiple cases (Creswell & Poth, 2017). A collective case study design is appropriate and useful to explore the perceptions and experiences of RNs with various backgrounds, who are from a variety of nursing roles, and who work in different settings and physical locations. This design allows for in-depth and detailed analysis of each participant's experience with the NCLEX-RN, identification and description of impacting contextual conditions, and a thematic analysis across all selected cases.

Within case study research, multiple methodologists have proposed specific methodological approaches to offer guidance in research conduction and to add trustworthiness to the approach taken (Creswell & Poth, 2017). The methodological approach of Sharan Merriam was selected to guide this case study. Merriam (1998) was selected because of her constructivist position, her educational lens, and her structured yet flexible procedural steps. My philosophical beliefs align with those held by Merriam. Merriam (1998) assumes that reality is multiple, subjective and value laden. This methodologist further assumes that knowledge is constructed through cognitive processes that are influenced by an individual's interaction with their physical and social environments (Merriam & Tisdell, 2016). An educational lens situated within constructivism was also sensible with my research because of the underlying focus of nursing education and registration in Canada.

Merriam (1998) offers flexibility in the definition of a case but generally defines, "… the case as a phenomenon of some sort occurring in a bounded context" (p. 27). A case can be a

person, a group, a process, or an event – if able to be bound by time and place (Merriam & Tisdell, 2016). Specific to my research, a case was defined as a Canadian RN's experience with the NCLEX-RN, bound by time (between January 2015 to May 2018), and place (Ontario, Canada). Merriam (1998) stipulates that a case study has three distinct attributes that differentiate this method from other forms of case-based inquiry. A case must be (1) particularistic, maintaining devotion to the phenomenon under study and the specified case boundaries, (2) descriptive, described accurately with great contextual detail, and (3) heuristic, enabling the reader to engage with the study content to develop a better understanding of, a new perspective on, or to confirm current knowledge of, the phenomenon of study (Merriam, 1998). In addition to these three attributes, Merriam (1998) emphasizes the importance of a thorough and extensive literature review as essential to generating research questions.

Sampling and Enrollment

Merriam (2009) states that there is "… no answer" (p. 80) to determining a specific sample size for single or collective case study research design. According to Creswell and Poth (2017), a maximum of four or five cases can be included in a single research study. This sample size allows for collection of extensive detail about each individual case and provides enough variability to generate an in-depth, yet manageable, cross-case analysis. Specific to my research, a total of six cases were purposively selected. Initially, four cases were selected but the opportunity arose to include Canadian RN's, who have written the NCLEX-RN, from a greater variety of nursing positions and settings. The decision was made to include two additional cases to add breadth and depth but still maintain a manageable amount of data for within-case analysis.

Purposive sampling was used to select the cases, consistent with Merriam's methodology (Merriam & Tisdell, 2016). Specifically, under the umbrella of purposive sampling strategies, a

combination of maximum variation and criterion sampling was used. Maximum variation sampling seeks the most diverse sample possible, within the case boundaries, to explore whether patterns exist that transcend a single case (Merriam & Tisdell, 2016). Maximum variation sampling was used for this collective case study to ensure enrollment of RNs from a variety of nursing roles and settings with diverse backgrounds, who have direct experience with the NCLEX-RN in Canada (Merriam & Tisdell, 2016). The inclusion criteria for each RN case was that the RN has written the NCLEX-RN in Canada and passed the exam (regardless of attempts), and that the RN has graduated from an accredited nursing program in Ontario, Canada; and is currently in good standing with the CNO. Exclusion criteria included that the NCLEX-RN was written outside of Ontario, Canada or not passed, the RN graduated from a nursing program outside of Ontario, the RN is not in good standing with the CNO, and if the RN was working with a temporary license or not practicing. Specific to case study design, this sample was bound by profession (registered nurse), by time (NCLEX-RN written since its adoption in Canada in January 2015), and by geographic location (practicing in Ontario, Canada). The NCLEX-RN has been in situ in Canada for over three years, thus this time frame allowed for maximum sampling possibility of RNs who have written the exam.

Participants were recruited through the Principal Student Investigator's (PSI) colleagues and professional contacts across Ontario, Canada, and through the social media platform, Instagram. Close friends and colleagues were excluded to limit bias. Snowball sampling use was intended but was not required to collect a diverse sample of participants who met both the inclusion and exclusion criteria. The initial points of contact were also diversified, for example, colleagues in both community and hospital care settings were contacted to achieve a sample with

RNs from a variety of roles and settings, consistent with maximum variation sampling (Merriam & Tisdell, 2016). Sampling continued until a diverse sample of cases was obtained.

After receipt of ethics clearance from the Research Ethics Board at Brock University (17-416-SALFI), a brief message describing the purpose of the study and inclusion criteria (see Appendix A) was sent to the PSI's colleagues and professional contacts to determine if they knew of any RNs interested in study participation. Two participants were recruited through this approach. The two participants provided their corresponding contact with consent to share their contact information with the PSI. Two participants were also recruited indirectly through the PSI's professional contacts. However, the PSI contacted these individuals directly through the private message function on the social media platform, Facebook, to assess for study participation interest. A Letter of Invitation [LOI] was provided to all six of these contacts who had communicated interest and met the inclusion and exclusion criteria. Communication occurred through the PSI's university email, and personal Facebook and Instagram.

A token of appreciation was offered to encourage enrollment – each participant had the opportunity to enter a draw to win one $150 VISA gift card, which was redeemable at any establishment that accepted VISA as a form of payment. Zutlevics (2016) posits that although historically and commonly used, financial remuneration to encourage study enrollment has the potential to reduce altruistic intrinsic motivation among study participants. However, the exploration of this perspective is hypothetical at present and the author suggests further non-hypothetical research to explore the potential long-term effects on research. A draw, as opposed to financial remuneration to each individual participant, was selected to limit the possibility of guaranteed payment in attempt to limit the concerns voiced by Zutlevics (2016) yet ensure participation from RNs.

Data Collection

Three data collection techniques can be utilized within the case study methodological approach outlined by Merriam and include interview conduction, observation, and document analysis (Yazan, 2015). Creswell and Poth (2017) and Merriam and Tisdell (2016) state that the use of multiple sources of data collection are requisite to case study research conduction to ensure development of an in-depth understanding of the phenomena. Semi-structured interviews were used to elicit data on a variety of RN experiences with, and perceptions about, the NCLEX-RN. Pertinent demographic data was also collected to help provide context to the study findings (see Appendix C). Prior to data collection, the interview guide was piloted with a homogenous sample, inclusive of two volunteers, to ensure clarity of concepts and quality of questions. According to Yin (2014), a prominent case study methodologist, the pilot sample will be selected based on access, convenience, and proximity. The interview guide adjustments based on feedback from the pilot interviews are found in the following table.

Table 1

Changes to Interview Guide Based on the Pilot with a Homogenous Sample

	Change	Reason
i.	Question four wording from "baccalaureate educational experience" to "baccalaureate education"	V1 stated "too wordy" and difficult to understand as participant.
ii.	Included "What is your educational background?"	V1 had RPN background and volunteered this information by chance; wanted to ensure this information was identified.
iii.	Inclusion of ETP competency document	V1 was uncertain if she had seen this document; mentioning competencies from this document elicited further information for question two.
iv.	Script layout and order	V1 suggested using less structure to avoid staring at paper for face-to-face interviews.

v.	Included demographic questions related to gender and age	V1 and V2 of different ages and sexes. PSI wanted to ensure this information was included for contextual description.

A consent form was then sent to each participant after the interview guide had been piloted and the sample selected. The purpose of the consent form was to ensure that the participants understood the research purpose and their rights as a research participant (see Appendix D). Ideally, the interviews would have been conducted face-to-face to allow the PSI to observe body language and facial expressions. Telephone interviews were more convenient for the participants compared to organizing a face-to-face meeting and were thus used. On initiation of the interview call, the PSI asked each participant if he or she had reviewed the Participant Information-Consent Letter (see Appendix D) that was sent to through their preferred method of communication. All six of the participants stated that the Participant Information-Consent Letter was reviewed and that no unanswered questions existed. Verbal consent was then sought and received from each participant prior to proceeding with the telephone interview.

The semi-structured interviews were conducted via telephone because this mode of interview conduction was convenient for participants based on their physical location and schedules. The PSI called each participant, at a previously agreed upon date and time, from her home office to ensure that no phone costs were incurred by the participants and to maintain privacy. Creswell and Poth (2017) emphasize the importance of a private physical location for interview conduction to maintain confidentiality and to minimize distraction. The interviews were recorded with a digital recorder and the PSI's iPhone. Occasional field notes were written down on each interview guide about content discussed and thoughts regarding this content as suggested by Merriam (1998).

Throughout the interview process, the PSI withheld sharing personal experiences with the phenomena under study because this sharing could have reduced the amount of, or altered, the information shared by the participants (Creswell & Poth, 2017). The PSI transcribed each of the six interviews verbatim using Microsoft Word while listening to the audiotaped data. Merriam and Tisdell (2016) encourage inexperienced researchers to transcribe interview data because although tedious, this action helps the new researcher develop familiarity with the data and offers the opportunity to record analytic notations throughout the process. The PSI recorded her notations from the transcription process along with explanations and rival explanations to these thoughts in her reflexive journal. The audiotaped interviews ranged from half an hour to an hour and a half in length. The transcripts ranged from nine to 14 single-spaced pages in Microsoft Word. Each transcript was then summarized and sent to the respective participant to ensure accuracy of the PSI's interpretation of the data and for the participant to amend or clarify any content. Three out of the six participants responded to confirm accuracy and clarify an additional question or two posed by the PSI. The PSI sent one reminder email to the three unresponsive participants and after ten business days without response, deemed these three interview summaries to be interpreted accurately, with no changes necessary. Confidentiality was ensured by use of a finger-print protected iPhone with only the PSI's fingerprint registered on the device. The digital recorder was kept in a separate drawer in the locked file-cabinet in the PSI's home office. After each transcription, the corresponding digital recording was permanently deleted from the iPhone and digital recorder. The field notes were also kept in the PSI's home office in a locked file cabinet, where only the PSI holds the key. These measures helped ensure that confidentiality of participant data was maintained.

Other sources of data that were collected for the purpose of this study that helped enhance understanding of Canadian RN experiences with, and perceptions about, the NCLEX-RN included the CNO (2018) *Entry-to-Practice Competencies for Registered Nurses* document and the CCRNR (2018) *NCLEX-RN 2017: Canadian and international results report.* Merriam (1998) recommends a minimum of two documents from different sources to limit potential bias and the use of public records. The two selected documents meet these criteria proposed by the methodologist. The entry-to-practice document was selected as an objective measure of Canadian competencies compared to those described by participants in relation to the NCLEX-RN. This document was sent to each participant via password-protected email during the interview to collect data that accurately represents the participant's knowledge about the document. The CCRNR (2018) NCLEX-RN report was selected to obtain information about the NCLEX-RN, and current and past results from a Canadian source that was not the provincial regulatory body. The content of this document was analyzed for pertinent information to the study purpose and guided by Merriam's unrestrictive approach (Merriam & Tisdell, 2016). As per Merriam (1998), the accuracy, authenticity, and original intent for the creation of each document were assessed. An additional two documents about nursing trends in Ontario, Canada were originally proposed for inclusion in data analysis but were excluded during the simultaneous data collection and analysis stage of the research process. These documents were ultimately excluded due to a lack of relevancy to the research question and resulting data.

In summary, semi-structured telephone interviews and document content analysis were guided by Merriam's methodology (Merriam & Tisdell, 2016) and used as data collection techniques to develop an understanding of the phenomenon under study – experiences and perceptions of RNs regarding the NCLEX-RN in Canada. The interview guide was piloted and

amended based on the volunteer participant's feedback. The consent form was sent to each participant to review and informed consent was taken verbally prior to interview commencement. The interviews were digitally recorded, transcribed, summarized, and member checked with a response rate of 50%. The CNO (2018) *Entry-to-Practice Competencies for Registered Nurses* document, and the CCRNR (2018) *NCLEX-RN 2017: Canadian and international results report* documents were included in addition to interview data to enhance understanding of the Canadian experience with the NCLEX-RN.

Data Analysis

Specific to case study research, data analysis focuses on generating an in-depth description of the case with great importance placed on illustration of the case setting (Creswell, & Poth, 2017). Merriam (1998) emphasizes the importance of constantly revisiting the central research question when completing data analysis to not lose sight of the study purpose. According to Merriam (1998), data analysis is "the process of making sense out of the data… [which] involves consolidating, reducing, and interpreting what people have said and what the researcher has seen and read – it is the process of meaning making" (p. 178). As a qualitative researcher, Merriam (1998) advocates for an interactive and emerging design by emphasizing the importance of simultaneous data collection and analysis as preliminary results may influence the research process. Thus, data was collected and analyzed simultaneously to coincide with the methodology proposed by Merriam. Merriam (1998) suggests that three levels of data analysis are possible with case study design: (1) narrative description, (2) category or theme generation, and (3) theory development. The data analysis of this study ceased at level two, theme development, and did not lead to level three, theory development. The importance of achieving

higher level data analysis and surpass the "merely descriptive" (Merriam, 1998, p. 130) first level is rationalized in a quote from Goetz and LeCompte (1984, p. 196):

> [Researchers who] fail to transcend what has been termed the 'merely descriptive' … fail to do justice to their data. By leaving readers to draw their own conclusions, researchers risk misinterpretation. Their results also may be trivialized by readers who are unable to make connections implied, but not made explicit, by the researcher" (as quoted in Merriam, 1998, p. 131)

Within-case analysis. Merriam and Tisdell (2016) define data analysis as an inductive "… process of meaning making" (p. 202) that ultimately seeks to answer the posed research question. The purpose of within-case analysis is to develop an in-depth understanding of how the individual has created meaning from the phenomenon of interest in consideration of the case context (Merriam & Tisdell, 2016). Thus, the PSI completed data analysis of each individual case to describe the unique experiences and perceptions of each participant and to discern contextual variables. After completion of member checking, the PSI sent the six interview summaries to her faculty supervisor via password protected email. The PSI and faculty supervisor acted as the primary tool for thematic analysis by using hand coding, with no assistance from computer software. As suggested by Merriam (1998), the PSI read through the raw case data multiple times while jotting down thoughts and questions on each transcript. When identified, similarities and differences between the six cases were recorded in anticipation of cross-case analysis. Once this initial analysis was complete, the PSI and her faculty supervisor met to discuss their independent within- and cross-case analyses until consensus had been reached about individual case context and key themes across cases. The within-case analysis was completed with the development of a case description for each of the six cases.

Cross-case analysis. After the six within-case analyses were completed, a cross-case analysis was conducted to explore the potential presence of patterns that transcended an individual case (Merriam & Tisdell, 2016). Akin to within-case analysis, Merriam (1998) advances that each case, inclusive of all data related to that case, is independently read and re-read multiples times. During and after this process, units of information were identified and sorted based on convergent and divergent reasoning. The PSI and her faculty supervisor then met to collaboratively discuss patterns that were, or were not, present across the six cases. Once consensus was reached about the data patterns, the PSI revisited independent analysis to ensure that all raw data was considered to begin refinement of theme development.

This cross-case analytic approach implemented by the PSI involved the tentative organization and basic coding of the raw interview data. The data were organized chronologically by interview date for the within-case analyses, and then by setting, acute and non-acute care, for cross-case analysis. The data were sought to be organized topically by RN roles, for example, clinician, manager, educator, researcher, or policy maker, but this organization was not plausible because all six of the participants were categorized as clinicians. Therefore, the setting of current RN practice categorized broadly as either acute or non-acute, were used to tentatively organize and code data.

Within the raw data, Merriam (1998) asserts that units of information, which may comprise of a single phrase, a sentence or paragraph, must be identified as these will serve to ultimately define themes in the study. The unit must reveal pertinent information about the study purpose and possess the ability to both be the smallest section of information possible but be interpreted without additional data from the study (Lincoln & Guba as cited in Merriam, 1998). Merriam (1998) advances that once identified, the researcher will then begin to organize units

into undefined categories based on convergent and divergent reasoning; refining the categories once derived. Specific to this study, these units were identified, organized, and re-organized into emerging themes based on this reasoning. This organization differs from the initial chronological and setting-based coding that was used to organize the raw data.

Through this analytic process, conceptual themes and sub-themes developed. Conceptual themes are "higher level, overriding and integrating, conceptualizations – and the properties that elaborate them – tend to come later during the joint collection, coding and analysis of data" (Glaser, & Strauss, 1967, p. 36 as quoted in Merriam 1998, p. 133). Merriam (1998) explains that each theme must reflect the study purpose, be independent, exhaustive, and mutually exclusive. This thematic guideline was followed during finalization of themes. The master copy of raw data was also reviewed prior to completion of thematic development as per Merriam (1998), to determine if any pertinent information to the study purpose had been missed.

An identical process was used for document analysis. Merriam (1998) states that content analysis, "…a systematic procedure for describing the content of communications" (p. 116) and is used to mine data from documents. Merriam (1998) also asserts that quantification in content analysis, such as counting frequency of words or messages, is not requisite. The methodologist explains that content analysis within qualitative inquiry focuses on exploring insights and meanings related to the phenomenon under study – experiences and perceptions of RNs regarding the NCLEX-RN in Canada. The two public records were explored by the PSI to identify relevant data that were pertinent to the central and sub-research questions. The basic classification system was used to sort pertinent data from each document by RN role and setting, where applicable. Units of information were identified in relation to the study purpose and organized into tentative categories based on convergent and divergent reasoning. These tentative

categories were compared with the conceptual themes derived from the interview data to determine relevancy. Relevant data were incorporated into the study findings. A final review of each of the two documents was completed prior to theme development closure to ensure that no pertinent data to the study purpose had been missed. The faculty supervisor received the findings in full and had access to the incorporated documents for relevancy review.

Data storage. Data was organized following the basic strategy outlined by Merriam (1998) – file folders but adjusted to the use of electronic file folders on my personal, password protected computer. With this approach, Merriam (1998) states that the researcher prints a hardcopy of the entire case study data base to review. I alternatively maintained a master document of the case study data in Microsoft Word. The coded sections, or units of information, were then cut and placed into a separate chart in the word document, as opposed to a file folder, labelled with the tentative themes. The pertinent data derived from the four documents was also kept in this chart and highlighted to differentiate the source of data. The units of information were labelled with interview and page number to ensure ease of reference and retrieval. The reflexive journal was however, not kept electronically. The PSI kept her reflexive writing in a hard copy journal, which she stored in a drawer in the locked file cabinet in her home office. The interview guides and printed transcripts were also kept secure in the locked file cabinet to ensure confidentiality. All electronic data was kept secure on both the PSI and faculty supervisor's personal, password-protected computers.

Summary of analytic steps. Concisely, the purpose of data analysis in case study research is to generate a description of the case with emphasis placed on the setting and the associated contextual factors (Creswell & Poth, 2017). As per Merriam and Tisdell (2017), simultaneous data collection and analysis was implemented to coincide with the interactive and

emerging qualitative research design. Corresponding to the first level of data analysis described by Merriam (1998), within-case analysis was first completed to understand and describe the context of each case. After each interview was transcribed, summarized, and member checked, the PSI and the faculty supervisor independently conducted descriptive and thematic analysis via hand coding. The PSI sent all six of the summaries to the faculty supervisor for descriptive and thematic analysis via hand coding. The independent analysis steps taken included reviewing each transcript separately and multiple times and organizing data chronologically and by setting to contextually describe each case.

Corresponding to the second level of data analysis described my Merriam (1998), cross-case analysis simultaneously began as within-case analysis progressed to explores if patterns were present that transcended an individual case. The independent analysis steps taken included reviewing all case data successively and multiple times followed by basic coding of data by RN setting. Units of information then began to be identified and sorted into tentative themes based on convergent and divergent reasoning, refined as analysis progressed (Merriam, 1998). Conceptual themes and sub-themes began to manifest. The PSI and faculty supervisor then met to discuss their independent within and cross-case analyses until a consensus was reached. Independent analysis was then revisited by the PSI including a final review of all data before closure of case description and theme development. The completed findings were then sent to the faculty supervisor for final review.

After finalization of themes, document content-analysis began to explore for additional insight and meaning related to the phenomenon under study. The specific analytic steps included use of a basic classification system to sort pertinent data by RN role, clinician, and setting, acute or non-acute care. Units of information related to the study purpose were organized into

tentative categories based on convergent and divergent reasoning. These tentative categories were compared to the conceptual themes derived from the interview data and included into these established themes if deemed relevant. The PSI completed a final review of the two selected documents prior to closure of theme development. The faculty supervisor was then sent the complete findings for relevancy review related to the interview and document data.

Strategies to Promote Trustworthiness

Specific to naturalistic, interpretive qualitative inquiry, Angen (2000) defines validation as "a judgment of the trustworthiness or goodness of a piece of research" (p. 387). The use of validation strategies within research are essential to ensure production of useful findings. Creswell and Poth (2017) suggest that regardless of form of inquiry, multiple forms of validation should be used to ensure trustworthiness of findings and suggest that a minimum of two strategies be utilized. The terms advanced by Lincoln and Guba (1985) will be used to discuss the validation measures implemented within this study to enhance trustworthiness. Lincoln and Guba (1985) provide terms that the authors posit are closely aligned with qualitative inquiry but which parallel the quantitative validation strategies: credibility as opposed to internal validation, authenticity versus external validation, dependability versus reliability, transferability versus generalizability and confirmability versus objectivity.

Credibility. Merriam and Tisdell (2016) define credibility as the degree to which a researcher demonstrates upholding of ethical standards and moral responsibility. Merriam (1998) advances six strategies to ensure credibility of findings: triangulation, member checks, long-term observation, peer examination, participatory research, and reflexivity. Specific to this study, the strategies of triangulation, member checking, and reflexivity were implemented. Triangulation involves the use of two or more sources of data for data collection and analysis

(Yazan, 2015). A hallmark of case study research is the use of multiple sources of data. Three sources are used within this study – demographic data, interviews with a variety of RNs, and document analysis. Investigator triangulation was also used by the PSI and faculty supervisor via independent analysis of data prior to collaborative discussion. The findings of both investigators were compatible, which enhanced credibility of the research findings.

Member checking involves seeking feedback from participants regarding data collection and analysis (Creswell & Poth, 2017). Lincoln and Guba (1985) state that member checking is "the most critical technique for establishing credibility" (p. 314). Once transcribed, a summary of the interview transcript was emailed to each respective participant to ensure accuracy of information and to clarify anything that the participant wishes.

Reflexivity involves identifying the researcher's position in relation to the research by explicating personal experiences and perspectives held about the phenomenon under study (Creswell & Poth, 2017). I have described my experiences with, and my perspectives on the NCLEX-RN in Canada. I also maintained a reflexive journal throughout the research process to separate and acknowledge my past experiences and perspectives as they related to this study.

Authenticity. Merriam and Tisdell (2016) relate authenticity to the distinct attributes of particularism and description in case study design. The presence of a particular phenomenon focus within the set case boundaries in combination with in-depth description of each case impacts the authenticity of the research findings. Merriam (1998) describes three primary strategies to ensure authenticity: thick description of research findings, use of modal categories, and multi-site designs. As in-depth description is essential to case study design, thick and rich description was used to describe each case including context and settings. Modal categories are

implicit in the main and sub-themes because these themes derived from transcendence of patterns across cases.

Dependability. The dependability of a case study not only requires detailed description of the employed methodology but considers the ethical stance of the researcher (Merriam & Tisdell, 2016). Merriam (1998) recommends the validation strategies of acknowledging the researcher's position in relation to the study, triangulation, and use of an audit trail. All three of these strategies were implemented in this study to enhance dependability of findings. As mentioned, the PSI had described her position in relation to this study and triangulation of three data sources were utilized. An audit trail involves the transparent identification and description of all steps taken in the research process, including but not limited to, data collection and analysis (Creswell & Poth, 2017). The data collection and analysis steps that were utilized in this study have been carefully and thoroughly outlined.

Transferability and confirmability. Transferability considers the ability of the research methodology and findings to be applied in alternate contexts and with different populations while confirmability questions the relation of data to reality. Merriam and Tisdell (2016) identify maximum variation sampling as a means to enhance transferability of findings due to the diverse sample used. Reflexivity is identified as a strategy that enhances confirmability of findings because of the purposeful separation of researcher values and beliefs, assumptions, experiences and emotions from the study data (Merriam & Tisdell, 2016). Lincoln and Guba (1985) offer further insight into these two criteria because Merriam (1998) lacks description of further strategies to promote trustworthiness in these areas. According to Lincoln and Guba (1985), transferability is ensured through thick and rich description of each case while confirmability is met using an audit trail. Maximum variation sampling, reflexivity, thick and

rich description and an audit trail were all integrated into this research study to enhance the trustworthiness of the findings.

Ethical Considerations

Prior to data collection, verbal consent was sought from each research participant. Each participant was provided with the Participant Information-Consent Letter (see Appendix D) for review prior to their pre-arranged telephone interview. This letter explained the purpose of the study; outlined what was asked of the participant including how much time was required; described potential benefits and risks; explained how confidentiality was maintained, how data was stored and for how long, and how study findings will be accessible; and offered participants the opportunity to ask questions before involvement. The letter also ensured that each participant was aware that participation was completely voluntary, that consent for participation could be withdrawn at any time, and that participation in this study would not impact their job position in any manner. The contact information for the Research Ethics Board at Brock University was also provided if the participant had any questions regarding their rights as a research participant.

Verbal consent was sought from each participant since all six of the interviews were completed via telephone. Prior to beginning the telephone interview, the PSI asked each participant if he or she had time to review the Participant Information-Consent Letter that was previously sent to them. All six of the participants responded that they had reviewed the letter. The PSI followed up by asking each participant if there were any questions that needed to be addressed. Again, all six of the participants responded that there were no questions the PSI had to address prior to beginning the interview. Verbal consent was then received from each participant and the telephone interview commenced.

If a participant had decided that he or she wanted to withdraw consent of participation at any point during the interview, and communicated this to the PSI, the PSI would have thanked the participant for their time, willingness to assist in this project, and informed the participant that a reason for withdrawal was not necessary. The PSI would also have stated that if any further questions arose, the participant could contact the PSI or the Brock University Research Ethics Board directly. If consent was withdrawn prior to interview conduction, no data would have been collected. If the participant withdrew during or after the interview, the researcher would have asked the participant if the collected data could be included in the analysis and with consent, the data would be kept. However, no participants requested to withdraw. Transcript data will be kept for five years after which time any hardcopies of data will be shredded and any electronic copies permanently deleted.

Possible benefits of participation included contributing to the advocacy for, or reform against, use of the NCLEX-RN with the Canadian testing population by elucidating the experiences with and perceptions about, the NCLEX-RN in Canada. Hutchinson, Wilson, and Skodol Wilson (1994) also identify potential benefits to participants from participating in an in-depth qualitative interview derived from the authors' personal experiences, the experiences of colleagues and students, and a review of the literature. The benefits described by Hutchinson and colleagues (1994) include catharsis, self-acknowledgment and awareness, a sense of purpose, empowerment, healing, and a potential avenue for a voice of the marginalized. The authors posit that these benefits provided spontaneously by participants and not elicited by researchers. Thus, additional benefits of this study for participants may have included the provision of a confidential avenue to share their experiences through, and perceptions about, the

NCLEX-RN, validation of their experience and feelings towards the exam, and bestowing a sense of empowerment for contribution to the nursing profession in Canada.

Qualitative inquiry emphasizes the presence of multiple realities and subjective experiences of individuals. As Hutchinson et al. (1994) state, "people construct their own meanings… therefore what is highly sensitive and emotional for one person may be matter-of-fact for another" (p. 162). The potential risk associated with participation in this study was that participants may have experienced distress associated with discussion of the NCLEX-RN, dependent upon the participant's unique construction of meaning. This potential risk did not occur, and the study participants did not communicate a need for further information on counselling or crisis numbers prior to or after completion of the interviews.

Chapter 4: Findings

The findings are presented in correspondence with Merriam's (1998) levels of data analysis: case description and theme development. The within-case analysis provided a description of contextual variables for each of the six cases. The cross-case analysis simultaneously began during within-case analysis and resulted in the manifestation of conceptual themes and sub-themes from the interview data. The additional insight related to the phenomenon under study derived from the document content-analysis was incorporated within the findings from the cross-case thematic analysis. Therefore, the within-case analysis will first provide context for each individual case and the cross-case analysis will elucidate the patterns that transcended an individual case with data incorporated from the two analyzed documents.

Within-Case Analysis

According to Merriam and Tisdell (2016), cross-case analysis cannot begin until the researcher has developed an understanding of the contextual variables for each case. The within-case analysis allows the researcher to develop this understanding. Within-case analysis began at the beginning of the data collection phase of the research process. Merriam (1998) and Creswell and Poth (2017) assert that a description of each case is beneficial to ensure that both the researcher, and those reading the research, demonstrate an understanding of context for each case. These case descriptions also allow for greater transferability of findings from the cross-case analysis (Merriam & Tisdell, 2016). Therefore, a description of each of the six cases is provided. The characteristics of each case are summarized in Table 2. When education is discussed, an arbitrary letter (e.g. University A) is used to ensure confidentiality is maintained.

Case 1. The first participant was a 24-year old female who completed a four-year baccalaureate degree at University A in Ontario, Canada. This participant identified the

curriculum at University A to be strongly focused on acute, hospital nursing. She completed a mix of both acute and non-acute clinical placements throughout her degree, which began in first year. Her final placement prior to graduation was in a non-acute setting. She wrote the NCLEX-RN in 2016 and passed her NCLEX-RN on the first attempt. This participant identified an online question bank, referred to as question bank U from henceforth, as her primary study tool for the NCLEX-RN because both the exam and this question bank were clinically focused. Her first position post-graduation was in a non-acute care environment working with the elderly. After three weeks, the participant began work in a different non-acute environment focused on primary healthcare. This participant also completed a Master of Public Health two years post-graduation at University G in Ontario, Canada.

Case 2. The second participant was a 32-year old female who completed an accelerated baccalaureate degree over two and a half years at University B in Ontario, Canada. This participant previously obtained a certificate from College A to work as a personal support worker (PSW), and a diploma from College B to practice as an RPN, respectively. These programs were also completed in Ontario, Canada. This participant identified biology and pathophysiology classes in her degree as most important for work preparation but found that her degree was heavily focused on non-science-based courses. She completed a greater proportion of her clinical placements in non-acute care settings, including her final placement prior to graduation. This participant wrote her NCLEX-RN in 2018 and passed on her second attempt. She identified question bank U as her primary study tool for her first attempt, and then a combination of this question bank with an in-person preparatory course, course K, for her second attempt. Her first position post-graduation was in an acute-care setting and she is still practicing in this position.

Case 3. The third participant was a 22-year old female who completed a four-year collaborative program with her first two-years completed at College C and her remaining two years completed at University C in Ontario, Canada. This participant identified the curriculum within her collaborative degree to lack an acute-care, pathophysiology focus. However, she highlighted the use of NCLEX-RN resources, content, and question-styles throughout her degree. She completed most of her clinical experiences in acute-care, teaching hospitals with only one placement in community nursing. Her primary study resource post-graduation was question bank U, and she passed the exam on her first attempt in 2017. Post-graduation, she practiced in two non-acute clinical areas. She currently still works in one of these non-acute positions, in another outpatient role that is generally considered non-acute but has the potential to require acute intervention, and in an acute-care, hospital nursing position.

Case 4. The fourth participant was a 25-year old male who completed a four-year baccalaureate degree at University A in Ontario, Canada. This participant explained that the curriculum was not heavily based on anatomy, pathophysiology, or disease processes. He completed most of his placements in acute care settings with various populations including his final pre-graduation placement. The primary resources identified for his NCLEX-RN studying included question bank U and a review textbook, book S. He wrote his NCLEX-RN in 2016 and passed on his first attempt. This participant worked in a fast-paced, acute environment post-graduation on an NGG. He continues to practice in this care environment and nursing position.

Case 5. The fifth participant was a 24-year old female who completed an accelerated three and a half-year baccalaureate degree at University A in Ontario, Canada. She identified the curriculum to focus on psychosocial and community health with a lack of acute care content. Her clinical placements were a mixture of acute and non-acute environments with her final two

placements being in a community setting. This participant wrote the NCLEX-RN in 2016. She identified her primary post-graduation study resources to include both question bank U and an NCLEX-RN preparation book. This preparation resulted in her success on the exam with one attempt. Her post-graduation nursing position was in a non-acute setting working with older adults on an NGG. She currently works in a psychosocial-based community setting, notably as part of an interdisciplinary team. This participant is also working on her Master of Public Health part-time at University H in Ontario, Canada.

Case 6. The sixth and final participant was a 24-year old female who completed a four-year baccalaureate degree at University A in Ontario, Canada. She commented on the curriculum containing a wide variety of courses based in nursing, the sciences, and the humanities. This participant found her clinical placements to be diverse in both acute and non-acute care settings. Her final placement pre-graduation was in a care setting with high acuity. She was among the first group of graduates in Canada to write the NCLEX-RN in 2015 and passed on her first attempt. This participant commented on the three-attempt limit for the exam during 2015 and 2016 versus the unlimited number of attempts at present. She began her post-graduation studying by reading the NCLEX-RN review book S, followed by use of question bank U. This participant completed an NGG in the same high acuity care setting as in her pre-graduation placement. Upon graduation, this participant determined that high acuity care was her passion and turned down a graduate study offer of admission to obtain her certificate in critical care from College D and continue practicing in this area.

Summary of cases. Although each one of these six cases are unique, a common experience exists – the NCLEX-RN. The uniqueness stems from contextual conditions that are naturally present in individual real-life settings. Specific to this sample, five out of the six

participants were female with the remaining participant being male. The participants' age ranged from 22 to 32 years. Four participants obtained their baccalaureate degree from the same university with one participant who completed an accelerated stream. The remaining participants completed their degrees at various universities across Ontario, Canada. Four participants also either held, or were in progress, of additional education – one completed a college level program; one a post-graduation certificate; and the remaining two either completed or were in progress of a non-acute based Masters' degree. Five participants passed the NCLEX-RN on their first attempt and all six participants used additional resources to study post-graduation. Among these participants, the NCLEX-RN was written by one participant from the year of implementation in 2015, and the remaining participants wrote the exam at some point between 2016 to 2018. All six participants practice within a clinician role, in different care settings, with varying levels of acuity. Three participants work in an acute care setting, two in a non-acute setting, and one practicing in both an acute and non-acute area of care. Practice experience varied between three months to three years. Now that each case has been described, the themes and sub-themes that began to emerge during within-case analysis and evolved during cross-case analysis, will be elucidated.

Table 2

Comparison of Individual Case Characteristics and Contextual Variables

	Case Number					
	One	Two	Three	Four	Five	Six
Gender	Female	Female	Female	Male	Female	Female
Age	24	32	22	25	24	24
Education						
Pre-BScN	-	PSW '07 RPN '13	-	-	-	-
BScN						
All university	UA '16	-	-	UA '16	-	UA '15

Collaborative*	-	-	CUA ‘17	-	-	-
Accelerated	-	UB ‘17	-	-	UA ‘16	-
Post-BScN						
Certificate	-	-	-	-	-	CC ‘16
Graduate	UG ‘18	-	-	-	UG ‘IP	-
NCLEX-RN year	2016	2018 (Feb./Apr.)	2017	2016	2016	2015
Attempts	1	2	1	1	1	1
Position	Clinician	Clinician	Clinician	Clinician	Clinician	Clinician
Area of Practice						
Post-grad**	LTC	Hospital	Outpatient	Hospital	LTC	Hospital
Mentorship	NGI			NGI	NGI	NGI
Current	Public health	Hospital	Outpatient + Hospital	Hospital	Community	Hospital
Time in practice	2 years	6 months	< 1 year	2 years	2 years	3 years

*Collaborative is defined as a BScN program with years one and two completed at a college and the years three and four completed at a university.
**Post-grad under area of practice is defined as the first paid nursing position assumed after graduation of the BScN program.
***University is denoted by ‘U’. College is donated by ‘C’. University and college program are denoted by the second arbitrary letter ‘A’, ‘B’, ‘C’, or ‘G’.

Cross-Case Analysis

After an understanding of the contextual variables for each case had been established, cross-case analysis became the focus to determine if patterns transcended a single case. Patterns became apparent through the analytic process. The PSI organized these into central and sub-themes. These themes, and supporting evidence derived from participant interviews and nursing stakeholder documents coincide with the path for NCLEX-RN completion – influencing preparedness, examining the Canadian RN, becoming ready for safe practice, and reflecting as a practicing RN. The pertinent results from the document content-analysis were integrated throughout the thematic findings from the interview data. The quotes, or supporting evidence, from each participant were identified with an acronym that corresponds to the chronological organization of their case. For example, ‘C1’ for case one, ‘C2’ for case two, and so forth. This

approach ensured that the case description and contextual variables remained identifiable to the supporting evidence. An overall summary of the main and sub-themes is presented in Table 3 at the end of this chapter.

Theme 1: Influencing preparedness. The participants identified factors from both their baccalaureate programs and post-graduation exam preparation strategies that influenced their feeling of preparedness for the NCLEX-RN. The factors identified from their baccalaureate education that impacted preparedness include clinical placements and experiences, the program curriculum, and the faculty members. The primary post-graduation factors that impacted preparedness included the use of American preparatory materials in combination with consistent studying for the exam. These findings were also viewed in relation to the CCRNR (2018) *NCLEX-RN 2017: Canadian and International Results Report*.

Expectations and downfalls of the BScN. Across all six cases and regardless of baccalaureate program, the clinical placements and experiences were identified as helpful in respect to NCLEX-RN preparation. Two participants described the utility of a tactile, "hands on" (C1, C4) approach to learning. One participant stated that, "…having my [clinical] placements was definitely what helped me [with] certain questions from the NCLEX…" (C4). Three participants further explain that clinical experiences were particularly useful when confronted with a skills related question on the exam. For example, one participant explained that:

> …if it was skills/-lab related, I would try to think of a time I've had a patient or like any type of clinical experience to help me get through the question. So, it was a lot of like, just recalling if I was in the situation, I think I did this, this, this, in those steps (C3).

The participants also identified clinical placements as helpful for NCLEX-RN preparation because of the overall acute-care focus. One participant from a non-acute position explained that, "I feel like, if I had completed a pre-grad in medical, I'd probably have been more prepared to write the NCLEX" (C1). This participant attributed this to not having "a lot of experience" interpreting "labs" or learning about "medication" (C1). Another participant identified a specific clinical placement to be helpful because this placement was "intensive", three days per week, and in an "acute care setting" (C5). Overall, five of the six participants felt that *skills-based* and *acute-care focused* clinical placements were more useful for NCLEX-RN preparation compared to the curriculum of their respective baccalaureate program.

Five out of the six participants critiqued their baccalaureate curriculum for lacking proper NCLEX-RN preparatory content. The most cited critique was an inadequate focus on acute-care courses resulting in a disconnect with the NCLEX-RN content. The participants described 'acute-care' courses to include pathophysiology, care of the hospitalized patient, pharmacology, medical-surgical, anatomy, and biology. One participant commented on this disconnect by stating:

> … I feel like my degree didn't prepare me a whole lot for the NCLEX…because like I said earlier, like our, the program at [University A] was not, it wasn't incredibly acute-care focused and the NCLEX is very much acute-care focused or like, not even acute-care, but like pathophysiology and that sort of stuff that we didn't get a whole lot of… (C5).

One participant also felt that his degree, "… kind of left a lot of open gaps which I found I really had to study a lot extra to make up for", in respect to the NCLEX-RN (C4). When another participant was asked how she would describe the relationship between courses in her degree

compared to the exam content, she responded, “I don’t feel that any of it links together” (C2). Naturally, participants identified the aforementioned ‘acute-care’ courses as the most helpful when preparing to write the NCLEX-RN.

Two of the six participants also critiqued their baccalaureate curriculum for inadequate exposure to NCLEX-RN style testing. One participant stated that, “…nothing in the program prepares you for that NCLEX whatsoever…” and that at C4, “you [may get] 10 questions that they say are for the NCLEX but … those questions were nothing similar to what was on the NCLEX” (C2). Another participant commented that, “…we were the first ones to write the NCLEX. So, there was no curriculum that had really been adjusted…” (C6). She felt that “…they could have adjusted some exam questions to just be more NCLEX style”, to increase NCLEX-RN question comfort, and allow the curriculum “to be more NCLEX friendly” (C6). Although this participant felt that her degree, “…wasn’t teaching [her] how to write an exam…”, she also felt that:

> An exam is just a moment in time, and I think that your education should be something that you can take across your entire career…So I think [my education] did a good job at teaching me how to be a nurse. I don’t think it did a good job at teaching me how to write the NCLEX, but I also don’t think it should be focused on… teaching you how to write the NCLEX (C6).

One of the six participants described being prepared with NCLEX-RN style testing throughout her degree. Unlike the other two participants who described inadequate exposure, this participant found that she had ample exposure throughout her degree. She stated that, “…I think all of the tests that we’ve had throughout nursing were basically NCLEX form questions” (C3). She firmly advocated for the integration of NCLEX-RN style questions into baccalaureate

curriculum to ensure that each graduate felt prepared for the newly adapted licensure examination in Canada. For example, she discussed the effect of having a "whole different test" for graduates who had been prepared to write the CRNE throughout their degree. This participant stated:

> …I think it was just all preparing yourself through those four years that you're going to write this whole different test… I guess it was harder for people who had transitioned and there was option of writing the CRNE, and then it went into the NCLEX, maybe their testing, or like the way they were tested throughout school, it was a new transition, but my four years prepared me well (C3).

The effect that nursing program faculty members had on the feeling of NCLEX-RN preparedness among participants also became apparent when curriculum was discussed. Three of the six participants commented on this influence. One participant stated that, "…I feel like the teachers don't even know really what the NCLEX is about, or what's on it, or anything of the sort" (C2) due to a lack of NCLEX-RN content and question style throughout her degree. Another participant acknowledged the importance of learning about holistic nursing but in reference to the NCLEX-RN, she attributed the lack of acute-care focus in her program to the faculty members nursing background. This participant stated:

> They're wonderful faculty but their nursing practice is mostly focused in community, mental health, things that are not acute-care based and so there's a bit of that lacking from the courses but I think that [University A] offers a really good job at… offering a holistic view of nursing… and um, the things that are, that are probably more difficult to teach than just, like lab values and stuff like that (C6).

One participant identified most of her faculty members to be knowledgeable about the NCLEX-RN and to incorporate NCLEX-RN style questions throughout her four-year baccalaureate degree. She did, however, comment on one professor that she felt was not knowledgeable about the NCLEX-RN by stating:

> I think I had one class [with] a newer prof…I found [the questions] weren't really NCLEX-based. It was kind of straightforward questions, more definition. There was no thinking involved. So, I think a lot of our profs who knew about the change in the NCLEX…worked to make all of the questions we write, tested on, NCLEX-based…If I was just doing basically definition questions, basically no thinking at all during my 4 years, I would have found the NCLEX to be a disaster (C3).

The faculty members were overall viewed positively by the participants if they demonstrated knowledge about the NCLEX-RN content, or if the faculty member incorporated NCLEX-RN style questioning into the curriculum. If the participants felt that the faculty member lacked knowledge about the national licensure exam, the faculty member was not viewed as helpful. If the faculty member also lacked an acute-care focus or did not incorporate NCLEX-RN style testing into coursework, the faculty member was viewed negatively. The participants' related this perspective due to a feeling of inadequate preparedness for the final examination of their baccalaureate venture to become a practicing RN.

Necessity of post-graduation preparation. The most cited NCLEX-RN preparation method involved the use of additional preparatory materials post-graduation. All six of the participants attributed their success to purchasing American NCLEX-RN resources. One participant considered the potential of only preparing with resources from his undergraduate degree and concluded that:

> …with my BScN compared to writing the NCLEX, like I said if I didn't have the [book S] and the NCLEX resources to study from, I mean, that was where I find that I learned so much and [had] more information about nursing that I had to use on the NCLEX rather than like just what I had learned from course content in school… (C4).

The use of American preparatory books and courses were identified as instrumental to exam success by the participants. Specifically, the online question bank U, was identified as the most useful by all six of the participants. The participants initially selected this resource because of 'good reviews' from other graduates, either in person or on internet forums. When one participant was asked about her reasoning for selection of this question bank, she stated that "honestly because everybody said, use [question bank U], it will get you far" (C3). Another participant responded:

> …I mean for as far as [question bank U], I just saw a bunch of positive feedback online. I mean at the time, I was on Facebook, and I saw a lot of people commenting on their posts saying how it made them so successful. So that just made me inclined to try it out (C4).

A participant who was among the first group of Canadian graduates to write the NCLEX also responded that:

> …I had read online, since I, I was the first year that wrote the NCLEX in Canada, there wasn't like anybody I knew who had written the NCLEX…but I had read online from Americans that had written the NCLEX that [question bank U] was the best question bank that they had used (C6).

The participants further explained that they found [question bank U] to be propitious to the NCLEX-RN for three primary reasons. These included that the format was identical to the NCLEX-RN, the content was comparable to the NCLEX-RN, and that feedback on progress was

provided. The participants found that the format of this question bank was like the NCLEX-RN because of the interface, the inability to switch between questions, the question styles, and a comparable level of difficulty when answering questions. One participant commented that, "…it was just like the NCLEX computer screen. The questions were really comparable to NCLEX questions…" (C6). Another participant stated that, "and [question bank U] was really challenging. So it was, it was the best resource because it was exactly like the NCLEX…exactly the same layout and kind of questions" (C5). A third participant also commented on learning how to "think" like the NCLEX-RN:

> I heard good reviews from [question bank U] and I found the questions to be challenging and help me, I guess, kind of think in the way the NCLEX was looking for. And then, [course K] – I found the questions were too easy and weren't very, I guess challenging, to have, like a big variety of types of questions, like [question bank U] did (C3).

The participants also explained that the content in [question bank U] was comparable to the NCLEX-RN because the content was acute-care focused and spanned across all age groups, genders, and body systems. For example, one participant commented that:

> …[question bank U] prepared me better than I think the, my degree did [because] the program at University A was not, it wasn't incredibly acute-care focused and the NCLEX is very much acute-care focused or like, not even acute-care, but like pathophysiology and that sort of stuff that we didn't get a whole lot of, so my studying was what made me pass for sure (C5).

Finally, the participants found question bank U favourable for NCLEX-RN preparation because the program provided feedback about their progress in the form of rationales, explanation of nursing skills, and recommended study materials. One participant commented on the benefit of

the program providing further resources to study if she answered questions incorrectly. She explained that:

> …I found at first when I started to do the practice questions on [question bank U], I was failing miserably, so I basically used their study guide…So then I would just use those resources and it was fabulous, like it was, it was a great study material because it was a lot of stuff that I, that I just wouldn't have thought to study before and it helped prepare me really well (C5).

Overall, all six of the participants advocated for the use of additional American preparatory materials post-graduation. [Question bank U] being identified as the most useful because of the interface, format, and program content. According to a participant, "if I had not purchased all those resources and I had just gone based on my education, I don't know how well I would have done on my NCLEX" (C5).

The second most cited successful NCLEX-RN preparation method involved consistent studying post-graduation. Four of the six participants attributed their success to studying consistently between one and two months until their examination date. One participant commented on his daily study schedule, "…I was at least doing [question bank U questions] 6 days a week or I want to say at least an hour, two hours a day" (C4). Another participant approached her daily studying similarly with the [question bank U] program. She explained that:

> I would do at least 50 questions a night on each system and then I would make notes on all the rationales…. then I'd go over my notes at the end of the week…before I go onto the next system (C3).

The remaining two participants who studied consistently also chose to utilize [question bank U] up until their exam date. One participant who failed her NCLEX-RN on the first attempt

commented on a "lack thereof" (C2) regarding a consistent study schedule. Although she studied for approximately a month and a half up until her exam, she explained that:

> I didn't take notes, I didn't write anything down, I just simply opened up the app on my phone whenever I had time and I just did questions whether I had time to do 100 in a row or 5 in a row when I was at work, that is what I did (C2).

For her second attempt, she enrolled in an online course offered by an American-based company to provide consistent structure for her studying, and overall found this effective – evidenced by passing her exam.

The content-analysis of the CCRNR (2018) *NCLEX-RN 2017: Canadian and international results report* revealed congruence with the participants' feeling of unpreparedness for the NCLEX-RN established from their baccalaureate curriculum and the use of additional resources post-graduation. The CCRNR (2018) explained that nurse educators, in the participating provinces and territories, were provided with exam resources from the NCSBN when the NCLEX-RN was selected as the new Canadian entry-to-practice exam in 2011. These American-based resources were intended for distribution to ensure that new graduate nurses were prepared for both the new exam format and content to be introduced in 2015. The CCRNR (2018) further explained that Canadian RNs were involved in the development of the test questions to ensure appropriateness to the Canadian entry-to-practice competencies. The first-attempt pass rate in Ontario was 67.7% despite the distribution of these resources (CCRNR, 2018). The CCRNR (2018) report that the pass rate has trended upwards for Canada as a whole, and in Ontario as well.

Summary. The participants' baccalaureate program and post-graduation preparation strategy overall influenced their feeling of preparedness to write the NCLEX-RN. The factors

from their degree included clinical placements, curriculum, and faculty. Clinical placements were identified as helpful and relatable to the exam content if they were acute-care, with a skills-based focus. Curriculum was described as not helpful for exam preparation related to an inadequate acute-care focus and lack of NCLEX-RN style testing throughout their degree program, which resulted in a disconnect from the exam content. A dichotomy was clear between faculty being viewed as helpful or not. The faculty were viewed positively if they taught acute-care courses, had an acute-care background, and were knowledgeable about the content and format of the NCLEX-RN, and viewed negatively if these areas were lacking. The post-graduation factors that effected feeling prepared included use of American resources, particularly question bank U, because of a similar format and content to the NCLEX-RN, and the provision of feedback, and consistent, independent and structured studying for one to two months before the exam. The content-analysis of the CCRNR (2018) *NCLEX-RN 2017: Canadian and international results report* identified the need for additional American-based resources for Canadian NCLEX-RN preparation but also communicated the involvement of Canadian stakeholders in exam development.

Theme 2: Examining the Canadian RN. The participants discussed the exam within three primary areas. The first involved the exam format in respect to mode of delivery, relation to prior testing modalities, and the physical testing environment. The exam content was then discussed in relation to what was, and was not, addressed within their exam content, and then the disassociation between the NCLEX-RN and the 'real world' was articulated. The participants also commented on their familiarity with the entry-to-practice competencies. The CNO (2018) *Entry-to-Practice Competencies for Registered Nurses* was analyzed in relation to the

participants' responses around this topic. Finally, the participants explained if they felt that the ETP competencies were assessed by the NCLEX-RN.

The NCLEX-RN disconnect from Canada. The participants, overall, shared mixed opinions about the exam format. Four of the six participants viewed the format positively, while the remaining two participants described the format as "nerve-wracking" (C2) and "intimidating" (C6). Two of the participants enjoyed the online delivery. One participant stated that, "I liked it being online; it was nice and quick to get through" (C1). Another participant commented that, "…I really liked the exam format. I think that doing it on a computer was good (C5)". Another participant explained that he found the randomization of the question format and content areas to be effective. He commented that, "…I mean, how do they put something that you study for four years and something that covers such a broad spectrum into a certain amount of questions, right? So, I found [that the format] was good…" (C4). Three of the participants also commented that they appreciated the format because it was like previously experienced testing, either in their degree or through a preparatory resource. For example, one participant commented that because her undergraduate testing was "NCLEX form questions", that the NCLEX-RN questions, "weren't that hard to answer, and I knew what the questions were asking, or how to depict them" (C3). She elaborated that, "… [question bank U] helped prep for that as well…There wasn't anything surprising for me. Mm, so generally I would, I don't think the NCLEX was bad" (C3).

Conversely, one participant described the exam format as "unique" (C6) due to lack of exposure to this testing style throughout her degree but she appreciated exposure to similar testing through a preparatory program. She stated that:

> The format [was] quite unique because I had never written a computer-based exam before, especially one that you could, you could not go back or forth on. You had to

> answer the question in front of you. So that was a little intimidating, just mentally to get over but once I did, because of using [question bank U], it helped me get over that mental hurdle of you have to answer the question and move on (C6).

Three participants reflected on their experience at the test centre when the topic of exam format was discussed. One participant recounted her experience, beginning from her arrival to the test centre. She particularly focused on this aspect compared to discussing the exam interface, question styles, or comparison to previous testing modalities. She explained that:

> Going into the test centre, I thought was very nerve-racking…The whole process of having your hand, both hands, scanned multiple times, getting your picture taken, waiting to get called in. Then you go to the next room and they tell you to pat yourself down – I was a nervous wreck. (laughter). It just seems so intense and then you know you have a camera right in your face and, somebody sitting behind you looking at all these cameras…(C2).

The participants overall described the exam format in relation to the mode of delivery, whether the format was like previous testing methods, and in respect to the testing environment.

In respect to the exam content, the participants described content that they felt the exam addressed and that the exam did not address. All six of the participants identified the exam as clinically or hospital-focused or identified content in relation to these areas. This content included nursing skills, assessment, care prioritization, patient safety, pharmacology and medication administration, lab values, pathophysiology, and leadership and delegation. When one participant was asked how the exam content related to her current positions, she responded that, "…the NCLEX was more useful when it came to working at the hospital…" (C3). Another participant who was from an acute-care background commented that, "…I mean everything is

applicable in a sense or I can relate it. With emergency I see everything, right, so I found that it was all pretty applicable, yeah (C4). A participant from a non-acute care background mentioned that, "…the NCLEX is very much acute-care focused or like, not even acute-care, but like pathophysiology and that sort of stuff…" when comparing her education to the NCLEX-RN content.

The participants then continued in greater depth about the areas the NCLEX-RN did address. In reference to her hospital nursing position, a participant explained how the NCLEX-RN helped her in this role because of content pertaining to "nursing skills", "assessments", and "lab values" (C3). Two participants who also practice in a hospital setting remarked on the relatability of the NCLEX-RN content to their roles. One participant explained:

> I guess [the NCLEX content] relates in … how you're prioritizing care, who you would see first. Because every morning when you come on, depending on your patient's position or status, you have to definitely prioritize who you're going to see first (C2).

The other acute-care nurse commented that, "I think that [the NCLEX-RN] was a great review for the pathophysiology going into critical care" (C6). She continued to account that the NCLEX-RN:

> …covers a lot of content like I said that we didn't perhaps cover as in-depth in my education because there wasn't as much focus on acute pathophysiology, critical care, critically ill patients, and so reviewing that and the pharmacology really helped being a new nurse and then a new nurse also in a critical care environment (C6).

When asked about primary content areas on their individual NCLEX-RN experience, a participant recalled her exam to primarily focus on "labs" and "a lot of nursing skills" (C3). This participant did, however, comment on the presence of questions that addressed communication

and patient education without identifying an explicit connection to an acute-care setting. She explained that these questions were useful in clinic "when discussing with patients, like plans of care" (C3).

Within the content that participants identified as addressed by the NCLEX-RN, four of the six participants stated that the NCLEX-RN exam experience helped "develop" (C3), "improve" (C4), and "strengthen" (C5) their ability to 'critically think'. These participants also felt that critical thinking was primarily what the NCLEX-RN assessed. One participant stated that, "Not only did [NCLEX-RN preparation] improve my knowledge but improved my critical thinking when encountering real life clinical scenarios" (C4). Another participant elaborated on her preparation with a specific American resource. She stated:

> I think the big thing I liked with [question bank U] was just kind of like, critically thinking my way through the questions, and kind of figuring out how to answer the questions even if I didn't know exactly what they were about (C1).

Specific to the actual exam, one participant commented on the validity of the exam in Canada. She asserted that the exam, "…was really useful with developing critical thinking skills, which carry on for like, actual practice" (C3). Another participant explained that she felt the NCLEX-RN prepared her to practice safely in her non-acute care position because, "… it allowed me to further kind of… strengthen my critical thinking…I mean the content wasn't obviously not that focused on what I do but I think the, like the aspect of critical thinking is universal, so for sure" (C5). This participant elaborated that the NCLEX-RN is a valid measure of requisite competencies for an RN to practice in Canada due to the assessment of critical thinking, irrespective of the actual exam content. She stated:

> I think it's really about the critical thinking and being able to problem solve through

> the questions. It's not a lot about what you, how much you can memorize, it's how you can answer the question…and I think that's relatable to nursing because you're not going to know every little thing that your, that's thrown at you, it's about how you solve the problems… (C5).

Logically, four of the six participants identified the NCLEX-RN to lack a focus on non-acute areas of practice considering the heavily identified focus on clinical, hospital-based nursing. The lack of a Canadian focus within the exam was also highlighted, and a discrepancy between the NCLEX-RN and the "real world" was commented on by the now practicing nurses. The primary areas of practice identified by the participants to be lacking in the exam included community-based care, mental health, and health promotion. One participant did, however, assert that approximately "a third" (C3) of her test involved questions related to mental health. She attributed this to a lack of studying on the topic in combination with the exam algorithm. Notably, she did not identify if these questions were acute or non-acute care focused. One participant with a community mental health background commented on the lack of content regarding this area of practice but overall felt that the exam was appropriate "for entry level nursing" (C5). She explained:

> ... it's, not a very common nursing role like community mental health nursing isn't, it maybe isn't really like an entry level position so I don't think that they would have included a whole lot of that…when it's a specialized field like you learn that on the job. So, it's not really the role of the NCLEX to, to get into the really you know, specialized details of each, of each kind of field (C5).

Another participant reiterated the clinical focus when she stated, "I mean, health promotion didn't really seem to be the focus on the NCLEX-RN. It seemed to be a lot more clinical" (C1).

In addition to the absent focus on health promotion, another participant articulated her perspective about the paucity of Canadian-focused content within the NCLEX-RN. She explained that the content is "quite relevant to generalized nursing practice" and contains "different competencies…within one question" (C6). However, she felt that the exam was "more reflective of American education versus Canadian education" (C6). She explained:

> …[although] pathophysiology is important no matter where you're nursing but there's a strong emphasis in Canada and in the nursing culture here on therapeutic communication, psychosocial, social determinants of health… and I think that perhaps doesn't go as in-depth in the American education and I think that's reflected back in the NCLEX…(C6).

This participant elaborated that, "… [the NCLEX-RN] really helped me in terms of consolidating assessment and pathophysiology but it didn't help me in those uncomfortable interpersonal relationships…" (C6). She concluded by stating:

> …I think I would just like to see a more Canadian focus on…perhaps culture, communication, and social determinants of health and how that's impacting your relationships with your patients and …how they're presenting to you…whether it be in an acute care area or a community area, wherever you're working…I think that's kind of what's missing is, you know they're presenting with these symptoms or they're presenting this way to you but like, what is impacting how they're presenting to you externally (C6).

The emergence of another commonality between the participants arose when content that was identified as absent, or lacking, from the NCLEX-RN was discussed. Three of the six participants commented that the NCLEX-RN did not equate to the "real world" (C2), and that the exam is a "perfect world" (C3), or a "perfect vacuum" (C6). When one participant, who had

previously practiced as an RPN, was asked whether she felt if this prior experience helped or hindered her in relation to the NCLEX-RN, she responded:

> I would say, it probably, I don't know … probably hindered more so than helped only because now, I'm already in the habits of what you do as opposed to the perspective of a fresh nurse, which is what the NCLEX is basing everything on (C2).

She elaborated that the prioritization of nursing actions within the NCLEX-RN questions are not always synonymous to "real world" (C2) nursing actions. When the exam content was discussed, another participant commented on the difficulty of communication-focused questions due to this divide. She responded that, "I think that part would have been the hardest because it's kind of like, it's understanding, in the NCLEX, it's like it's a whole perfect world and everything is understanding how to perfectly communicate with a patient" (C3). Another participant commented on the existence of an "NCLEX world". She stated:

> …the exam is very much in its own world. It's in the NCLEX world and it, sometimes does not translate to things that you will see in practice or things that are appropriate in practice. Perhaps for just time constraint [and/or] resource constraint (C6).

This participant also provided a clinical example involving an experienced RN. She explained that she practiced question bank U questions with her mentor during down time at work. She worked on a temporary licence post-graduation while studying for the NCLEX-RN, mentored by an acute-care nurse with over 25 years of experience in practice. The participant explained that her mentor "…got quite a few of them wrong because, not because what she was saying was wrong, but because it wasn't appropriate in a perfect NCLEX world" (C6). This participant provided a specific example. She recounted:

> …there was [a question] about a heparin drip and you got a lab result back and it was subtherapeutic and …what should you have done next. And it was like, check to see if the IV is interstitial. Well she was like; I would have noticed that before the lab values came back. You know. So, she was, she was thinking … obviously I wouldn't do that, I would already know that as a nurse but in the NCLEX world that was the answer. So, I don't think it always translates perfectly to obviously what you would do in the real world because NCLEX is kind of just, a perfect vacuum (C6).

Entry-to-practice competencies – Implicity with uncertainty. Another area respective to the NCLEX-RN that participants were asked to reflect on was in relation to the Canadian entry-to-practice competencies document for new graduate RNs. The researcher was unable to determine if the participants were truly familiar with the document content due to the uncertainty in responses. Four of the six participants recalled what the document was but expressed unfamiliarity because they had not reviewed the document recently. When asked about knowledge of the document, one participant responded that, "I probably had to read through it a million times in school but off the top of my head – no" (C2). Another participant commented that she was "somewhat familiar" with the document but stated that, "…the last time I looked at that was probably 4 or 5 months ago when I was writing my jurisprudence" (C3). The remaining two participants were confident about their recognition and knowledge of the document.

Despite explicit uncertainty, the implicit presence of the ETP competencies became apparent when the participants voiced their opinions about which competencies were requisite for the new graduate RN in Canada. The CNO (2018) *Entry-to-Practice Competencies for Registered Nurses* document was analyzed to confirm this presence. Words and phrases were derived from the participants' responses pertaining to requisite knowledge and skills of a new

graduate nurse in Ontario, Canada. The participants implicitly identified 44 out of 100 competencies in the document. An additional 19 of the competencies had the potential to be identified within the participants' implicit knowledge of the ETP competencies but were not explicit in the analyzed words and phrases.

The participants had implicit knowledge within all five of the overarching competencies described in the conceptual framework: professional responsibility and accountability, knowledge-based practice, ethical practice, service to the public, and self-regulation with clients identified as central (CNO, 2018). Most of the implicit competency knowledge fell under knowledge-based practice, specifically under the sub-category related to provision of RN care. The participants' responses related most to the acute-care environment. Participants also had great awareness of competencies related to professional responsibility and accountability. The last notable finding related to the clients as central to the competency conceptual framework. The CNO (2018) define the term 'client' to include individuals, families, groups, communities, and populations from the program to international level. The participants' implicit knowledge focused on the client as an individual and at the program to organizational level.

After the level of familiarity with the document was established, the participants were asked about the relation between the ETPs and the NCLEX-RN. The participants' responses were divided and lacked clarity regarding the presence of nursing competency measurement by the NCLEX-RN. One participant felt that the ETP competencies were presented in her exam. She explained that she felt that the NCLEX-RN was a valid measure of these competencies in a "hospital-based" setting particularly because of questions that focused on "…professional responsibility and accountability, knowledge-based practice and self-regulation" (C3). Another participant also claimed that the NCLEX-RN is "appropriate for ETP" (C5) but did not provide

reasoning for her belief. As previously mentioned, multiple participants believed that the NCLEX-RN assessed their ability to critically think as opposed to knowledge of the ETP competencies. One participant articulated:

> I think the NCLEX does a good job with testing your critical thinking skills. I'm not sure if it tests … those ETP competencies…which are hard to test in kind of like, a test environment (C1).

Summary. The participants discussed the exam in relation to the format, the content, and the entry-to-practice competencies. Most participants viewed the exam format positively. This perspective was influenced by the online and randomized method of delivery, and the similarity to previous testing methods. The two participants who critiqued the format related their perspectives to the physical testing environment and the unfamiliarity of the testing method. The participants felt that the exam content was clinically or hospital-focused, contained communication and patient education related content, and that the exam honed critical thinking skills. The participants felt that the exam did not address non-acute areas of practice and commented that the NCLEX-RN did not equate to the "real world". In respect to the entry-to-practice competencies, the researcher was unable to determine if the participants were explicitly familiar with these competencies. However, the five overarching competencies were identified to be implicit in participants' interview responses, particularly within provision of RN care to an individual in the acute-care environment. The participant responses were divided when asked if the NCLEX-RN assessed these ETP competencies. Notably, participants felt the exam assessed the competencies in relation to a hospital setting, no reasoning was provided for belief in assessment, and the participants spoke toward the exam's assessment of critical thinking as opposed to of ETP competencies.

Theme 3: Becoming ready for safe practice. The participants identified three main contributors to developing competence in their nursing practice and to becoming ready to practice safely. These three contributors occur at different time points on the path to NCLEX-RN completion – completion of the baccalaureate degree, preparation for and completion of the NCLEX-RN, and on-the-job mentorship experiences.

The importance of experiential education. Four out of the six participants elaborated on the value, importance, and impact of their baccalaureate education in preparing them to practice competently and safely. The participants commented that the acute or non-acute focus of their program impacted their competency and readiness to practice safely in their respective nursing role. One participant explained how her education prepared her for community practice because of the inclusion of community-focused courses in the curriculum, and that this preparation was evident when she began her consolidation. She stated:

> …we had some really good courses in mental health and community health and that's what I do so I think that was pretty solid… [and when I completed] … my pre-grad at [community organization], I was already pretty confident in doing like a mental status exam and that sort of thing. So, my instructor was pretty impressed that I was already able to do that… (C5).

Another participant, who worked in an acute-care setting, explained that although her program lacked an acute-care focus, the curriculum prepared her for "the things that are … probably more difficult to teach than just, like lab values and stuff like that" (C6). She explained that her program was:

> …very psychosocial based, very much focused on communication, therapeutic communication, the social determinants of health, which was really helpful to

> contextualize things, and to help once again in critical care, having those relationships with families in a very difficult emotional moment (C6).

Additional participants commented that "…undergrad and the studying prepared me…" (C1) to practice safely in a non-acute care role, and that a "combination" (C2) of factors including education allowed for safe practice in an acute-care nursing role.

The concept of exam preparation integrated into baccalaureate program curriculum was also sporadically discussed throughout the participant interviews. Two of the participants had notably different views on this integration in respect to the impact on competency development and readiness for safe nursing practice. One participant commented on the importance of this integration into baccalaureate curriculum to prepare graduates for the content and format of the NCLEX-RN. She explained that her "…four years prepared [her] well" (C3), and that, "I guess it was harder for people who had transitioned and there was option of writing the CRNE and then it went into the NCLEX, maybe their testing, or like the way they were tested throughout school [was different]…" (C3).

Another participant, who was among this transitionary group of graduates, conversely commented that, "…I feel like my baccalaureate education was more focused on when you're in practice, here are the tools to be a good nurse versus here are the tools to write a good exam" (C6). This participant explained:

> An exam is just a moment in time, and I think that your education should be something that you can take across your entire career. So, I think it, it did a good job at teaching me how to be a nurse. I don't think it did a good job at teaching me how to write the NCLEX, but I also don't think it should be focused on… teaching you how to write the

> NCLEX. I think that you can do that once you graduate. It's … just one exam. It's not like I said, your entire career… (C6).

Even with the expression of alternate views, all six of the participants commented, in some respect, on the necessity of their education to prepare them for the NCLEX-RN examination.

In addition to curriculum, the participants described their clinical experiences as a valuable contributor to a feeling of competency and readiness to practice safely. All six of the participants experienced various acute and non-acute clinical placements in different settings throughout their education; some identified as more valuable than others. Three of the participants identified knowledge consolidation and translation that occurred in clinical placements to be essential for the development of a competent and safe RN. For example, one participant explained that clinical is "…a good way to consolidate your knowledge of what you're learning" (C6). Another participant explained how clinical helped him translate knowledge acquired from curricular course work into the practice environment, which ensured competence in his current knowledge and skill set. He stated:

> …you can read a textbook so much and you can know how to do everything from a textbook perspective but translating that to actually apply it or how to, in like your working environment is completely different from each other … because it doesn't always work out quite the way obviously as the textbook says (C4).

The third of these three participants confirmed the importance of clinical practicum to consolidate and translate knowledge into practice for the RN to not only feel competent but confident in their ability to practice safely. When this participant described her penultimate placement, she expressed:

> [I] really felt in that placement that I was starting to make some strides and gain more confidence… I really got to do what the regular nurse would do day in and day out. So, going through that placement and realizing that I could do it and I was surviving, even though I had a buddy there beside me, it just gave me the confidence to know that I did have the knowledge and skill set to do so (C2).

Overall, baccalaureate education including a combination of curriculum and clinical experiences, were identified by the participants as essential to provide a good 'basis' for nursing practice.

The NCLEX-RN effect – Enhancement of critical thinking and acute-care knowledge.

The exam itself was identified as another main contributor for competence development and feeling ready to practice safely. The appreciation for this contribution did however differ among participants. Four of the six participants felt that the NCLEX-RN prepared them to practice safely. One participant who worked in both an acute and non-acute care setting felt that, "…the NCLEX was more useful when it came to working at the hospital, especially because that whole med-surg section was useful on internal medicine" (C3). She also felt that the exam focused on nursing skills requisite for practice in the hospital setting. The second of these four participants also communicated that her response was specific to setting. She explained that her response did not apply to "specialized areas" (C5) of nursing practice.

These two participants felt that the exam acted as a preparatory measure because of the impact on critical thinking. For example, the second participant felt that the exam prepared her for safe practice by strengthening her critical thinking. She asserted:

> …I think what it did was it… it allowed me to further kind of… strengthen my critical thinking. It, I mean the content wasn't obviously not that focused on what I do but I think … the aspect of critical thinking is universal… (C5).

The remaining two of the four participants who felt that the exam prepared them to practice safely identified enhancement of knowledge base as justification for this feeling. One participant elaborated that the exam contributed to her ability to practice safely by "drill[ing] it into your head" (C2). Another participant felt that the exam "…definitely prepared me to practice safely" primarily because the exam ensured "… knowing your own roles and responsibilities" (C4).

The final two out of the six participants felt that the NCLEX-RN did not quite meet the criteria to prepare them for safe nursing practice. These two participants were practicing in different settings, one in a non-acute care community setting, and one in an acute-care hospital-based setting. One participant felt that the exam was not an accurate assessment of her knowledge and that the exam could not be credited for preparing her to practice safely. She explained:

> I don't know if the NCLEX prepared me, I think the undergrad and the studying prepared me and then the NCLEX… I'm not sure if it was an accurate representation of what I know as a nurse but… I mean, I guess it gave me my nursing license, which helped me practice. So, that was helpful (C1).

The last participant perceived the exam to potentially filter "…out the people who are perhaps unsafe…" (C6) but also did not believe that the exam itself prepared her to practice safely. Her overall perception included that, "…I probably knew enough to not kill somebody myself after writing the NCLEX but I wouldn't say that it gave me the knowledge, skills, and abilities to be a 'competent' ICU nurse right out of the gate" (C6). Evidently, these two participants view the NCLEX-RN as a task to obtain nursing licensure and to ensure that graduates are, at the very least, not incompetent for clinical practice.

The value of mentor guided, on-the-job learning. The significance of mentorship as a contributor for new graduates to feel competent and ready for safe practice also became apparent. All six of the participants commented on the existence of a learning curve when entering practice and the importance of either informal, on-the-job learning or a formal mentorship to ease the transition from student to practicing nurse. One participant commented, "…like any job, there's going to be a learning curve when you start…" (C1). Another expressed that, "…I think everything's a learning curve so you kind of learn again on your own [post-graduation]" (C3). Two participants believed that competence is mostly developed "on-the-job" (C2; C5) in practice. Another participant felt that seeking knowledge in practice when uncomfortable with a skill is important as a new nurse, "so you're not on your own" (C3) and can continue learning through experience. She provided an example of this informal on-the-job mentorship, when she described:

> I've actually never done ostomy care throughout my whole four years of nursing school. And then I had a patient once, and I actually did not know what to do. I didn't even know what supplies I would be looking for. I knew how to do the assessment and everything but when it was actually doing, cleaning the ostomy and changing everything, I was like, I don't remember ever doing this. I had to go find out because I would not have known what to grab…So I just found a senior nurse to help me out (C3).

The participants also identified the importance of formal mentorship opportunities, in addition to the informal on-the-job learning, for new graduate nurses. Four of the six participants completed a government-funded mentorship initiative in which they were paired up with an experienced RN for a period of up to six months, based on the graduate's level of comfort in practice. One participant explained how her formal one-to-one mentorship helped her

become a competent and safe acute-care nurse. This explanation arose when she was asked if she felt that the NCLEX-RN prepared her to practice safely in her position. She responded:

> I think that that was more developed over my 6 month new grad period, having that one-to-one mentorship because you know like I said, I might have had that knowledge about pathophysiology but you know, actually seeing somebody present, you know, in a distressed state, sometimes you don't know what you don't know and you're not recognizing those distress symbols until it's too late and they're decompensating (C6).

Another participant commented on the utility of this type of mentorship when beginning in an acute-care environment. He felt that one-on-one mentorship helped him become confident in his practice while gaining exposure to the "working environment" (C4). The remaining two participants who experienced this formal mentorship were in non-acute care areas who stayed in this initiative for equal to, or less than three months compared to the six-month involvement of the acute-care RNs. These two participants did not exclusively comment on their formal mentoring relationships.

Summary. The participants attributed competence development and becoming ready for safe practice to completion of their baccalaureate degree, preparation for and completion of the NCLEX-RN, and on-the-job mentorship experiences. Within their baccalaureate degree, the participants positively viewed the curriculum if it was acute-care focused, and if they were taught how to take the exam. They viewed the curriculum negatively if there was a lack of acute-care focus and if they were not taught how to take the exam. The participants viewed clinical experiences as favourable because of the clinical focus, exposure to a variety of settings, and the opportunity to consolidate and translate knowledge into practice. Most of the participants also perceived the exam to prepare them for safe practice because the focus of the

exam content was applicable to acute-care settings, and enhance critical thinking and knowledge related to these settings. The participants concluded that most learning occurred on-the-job and that informal, unplanned learning from a colleague, and formal, pre-arranged support system with a colleague, influenced whether they felt competent and able to practice nursing safely.

Theme 4: Reflecting as a practicing RN. Exam improvement for the Canadian testing population was the second overarching theme that participants identified upon reflection on their NCLEX-RN experiences. Half of the participants felt that the exam required improvement, and the other half felt that the exam was presently appropriate. Three of the six participants discussed inclusion of a clinical component to the exam, addition of content more reflective and consistent with the four-year baccalaureate degree, the ETP competencies and nursing in Canada, and commented on the unlimited number of re-writes. The remaining three participants did not feel that improvement was required and that the exam was appropriate for use in Canada at present.

The three participants who identified areas for exam improvement included two RNs who worked in acute-care settings and one RN who practiced in both an acute and non-acute care setting. The format of the NCLEX-RN exam was discussed. One participant described the exam as "just a computer system" and commented:

> …it's kind of hard to evaluate your knowledge for something that is so vast in such a minimal amount of questions… and I mean, its ultimately just a computer system. It's not evaluating you physically in, in the workplace or how you're interacting in that sense… (C4).

Another participant also felt that a clinical component would be beneficial as opposed to the sole utilization of a computer-based exam to assess ability to practice safely in the clinical setting.

This participant explained that although there is, "…no tool that can be perfect…" (C6), she would like to see a clinical assessment alongside the exam. She did, however, empathize with barriers that the licensing body may have faced. She stated that, "… you have to take into account funding, resources, time, money…" and that it would be "outrageous" to coordinate this for every graduate, each year (C6). Another participant commented on the nature of the testing algorithm. He stated that he knew graduates who received a lot of questions related to a specific area or body system, "…which they felt wasn't fair for them" (C4).

In addition to these comments on the exam format, the participants criticized the content of the exam to lack consistency with that of their baccalaureate education and Canadian nursing roles. One participant acknowledged this inconsistency when she compared her exam content to her degree content:

> There wasn't a lot of questions on research actually, which I was kind of surprised with as we did take research courses and nothing, I don't think I ever got a question on like nursing research and informatics on my NCLEX, which I think is important too. Not everybody goes into research but it's still something we should know and a lot of the times since we're studying, or in general just reading, it's all based on research as well so I think that would have been useful (C3).

A second participant also found the exam to lack content reflective of that in her baccalaureate degree. This participant felt the NCLEX-RN had a pathophysiology focus and commented on this focus in relation to the nursing education in Canada versus America. She explained:

> …I think [that the NCLEX is] more reflective of American education versus Canadian education. Obviously pathophysiology is important no matter where you're nursing but there's a strong emphasis in, in Canada and in the nursing culture here on therapeutic

> communication, psychosocial, and social determinants of health are huge, and I think that perhaps doesn't go as in-depth in the American education and I think that's reflected back in the NCLEX because … it's not as strongly focused on versus a strong focus in our education (C6).

This participant also found that the exam lacked content reflective of the Canadian healthcare system, nursing role(s) within this system; and exclusion of settings outside of acute-care. She explained:

> …I would just like to see a more Canadian focus on, whether it comes, when it comes to perhaps culture, communication, and social determinants of health [inclusive of psychosocial areas], and how that's impacting your relationships with your patients and how that impacts how they're presenting to you, when, wherever you meet them, whether it be in an acute care area or a community area, wherever you're working (C6).

The structure of the exam in relation to number of attempts that each graduate is granted to pass the exam was also touched on. This participant communicated her disappointment with the decision by the CNO to "…take away the max number of writes and have it unlimited" (C6). She explained that she felt that this was a "quick decision right after the NCLEX was implemented" and that "…it was quite reactionary…" reflecting poorly on both the nursing profession and on the public (C6). She expressed:

> I felt [removing the max number of writes] reflected poorly on us as a profession that we have no standard for people to meet in terms of remediation and competency into entry to practice. I think that it was perhaps reactionary because people were so, a little bit you know, excited and riled up about the NCLEX in general and this change that's coming…I

> think there should be a standard that you have to meet. If you're not meeting that standard, then you need to go back and be remediated (C6).

Safety of the public was at the forefront of this participant's mind with the current unlimited number of exam attempts. She explained:

> … I think you know, anyone can pass a test if they have 300 tries … a monkey could eventually pass the NCLEX really, if they just kept taking it. And I know … most people aren't taking it 300 times but I do know people that have taken it … ten, twelve times and I… I think three, four is more than enough to overcome test anxiety but at some point, there needs to be a remediation of your knowledge, skills, and abilities. And I personally would want to know if my nurse passed it in three tries versus twelve (C6).

Contrary to the concerns voiced by half of the participants, the remaining three participants felt that the exam was appropriate for use in Canada in its current state. These participants included one acute-care RN who had passed the exam on her second attempt, and two non-acute care RNs who had written the exam once. The participant with an acute-care background did not provide reasoning for her conclusion about the appropriateness of the NCLEX-RN as the licensure exam in Canada.

The remaining two non-acute care RN participants explained the reasoning behind their beliefs about the appropriateness of NCLEX-RN use in Canada for assessment of entry-level nursing. One participant felt that "…it's hard to kind of get a wide range of different practice areas, or different topics" (C1) due to the randomization component of the exam. She did not have any questions related to her area of practice on the exam. Her statement, "I mean, health promotion didn't really seem to be the focus on the NCLEX. It seemed to be a lot more clinical"

(C1), explained that she felt that the exam was acute-care based. She felt that a greater number of her colleagues' practice in acute-care and that this focus of the exam was appropriate.

The remaining participant felt that the exam content "…was appropriate for entry level nursing" (C5) but did not relate to her non-acute care role, "I don't even remember a lot about mental health…" (C5). Despite this deficiency, she did not believe that the exam content should have been changed because, "…when it's a specialized field, like you learn that on the job. So, it's not really the role of the NCLEX to get into the really … specialized details of each … kind of field (C5). These participants evidently felt that the clinical focus of the exam was appropriate to assess readiness for practice of new graduate nurses.

Summary. Upon reflection of their individual exam experiences, the participants attributed the development of competence and practice readiness to curricular and clinical factors in their baccalaureate degree, informal and formal mentorship experiences, and completion of the NCLEX-RN itself. Specific to the baccalaureate education, competence development and readiness for practice was impacted by an acute versus non-acute focused curriculum, and if teaching students how to approach the NCLEX-RN was integrated into the curriculum. Clinical experiences contributed to competence development and practice readiness through exposure to a variety of care settings where participants consolidated and translated knowledge into practice. Informal, on-the-job learning, and formal, one-to-one learning also positively contributed to this development. Moments of informal mentorship were identified as where the most learning occurred. Half of the participants felt that the exam prepared them for safe practice because of the focus on general practice in an acute-care setting, and enhancement of critical thinking and knowledge due to reviewing acute nursing skills, scope of practice, and patient safety when

studying for the exam. The other half felt that the exam was not an accurate representation of their knowledge, and that the exam did not prepare them for safe clinical practice.

The participants were also divided about the need of exam improvement for the Canadian testing population. Half of the participants proposed ideas for exam improvement, and the other half of participants felt that the exam was an appropriate assessment of the Canadian testing population in its current state. The main exam improvement suggestions included the addition of a clinical component to the exam format, acknowledgment and inclusion of content more reflective of the Canadian baccalaureate education and reinstitution of a set number of exam attempts. The main reason voiced for current exam appropriateness was because of the assessment of clinical, general practice.

Table 3

Inclusive Summary of Main and Sub-Themes Organized into the Categories of Preparation for, Participation in, and Reflection on the NCLEX-RN

Main Theme	Sub-Theme	Theme Summary
Influencing preparedness	Expectations and downsfalls of the BScN Necessity of post-graduation preparation	Participants expect curriculum and nursing faculty to prepare them for the NCLEX-RN by focusing on science-based courses such as, pathophysiology and pharmacology, and acute-care hospital based nursing courses with NCLEX-RN style questions and exam format integrated throughout their four year baccalaureate degree. Participants expect to purchase American resources post-graduation and to study consistently for at least one month prior to the exam to ensure success on the first attempt.
Examining the Canadian RN	The NCLEX-RN disconnect from Canada	Participants expect the licensure exam format to match that in their baccalaureate degree. Although the NCLEX-RN required certain nursing skills such as, critical thinking,

	Entry-to-practice competencies – Implicity but uncertainty	problem-solving, and assessment abilities, and covered some content significant to Canadian RNs such as, patient education and care, leadership and delegation, and patient safety, as they relate to the hospital setting, the exam still seemed to lack key content related to the Canadian baccalaureate curriculum, health care system, and culture. The participants were implicitly knowledgeable about the ETP competencies but were divided if these were assessed by the NCLEX-RN.
Becoming ready for safe practice	The importance of experiential education The NCLEX-RN effect - Enhancement of critical thinking and acute-care knowledge The value of mentor guided, on-the-job learning	The participants developed competence, readiness to practice safely, and critical thinking from clinical experiences, studying for, and completing the NCLEX-RN, and from on-the-job learning. The participants recommended an acute-care focused curriculum with the inclusion of NCLEX-RN style questions to be prepared for the exam.
Reflecting as a practicing RN		Participants were divided about the need for exam improvement. The randomization and clinical, general practice content focus was favourable but the inclusion of a clinical exam component, content more reflective of the Canadian baccalaureate education, Canadian healthcare system, and Canadian nursing roles, with reinstitution of a set number of exam attempts was recommended.

Chapter 5: Discussion

The purpose of this collective case study was to better understand the NCLEX-RN in Canada, as experienced by six RNs from both acute and non-acute care environments in Ontario, Canada. The participants were asked to consider their baccalaureate education, past and current professional practice settings, factors that contributed to success and failure on the exam, requisite competencies of an entry-to-practice or new graduate Canadian RN, and if the exam assessed these competencies for safe practice assurance. A summary of the key findings is first presented prior to elucidation of meaning and comparison to previous, relevant studies. The impact of contextual variables on the findings are described next, before the findings are discussed in relation to educational impact on baccalaureate curriculum, nurse educators, nursing students, and the public. The implications of the findings at a pragmatic, theoretical, and political level are then illuminated. Limitations of this study are identified and recommendations for future research directions are posed. This chapter closes with final remarks about the study findings.

Summary of Key Findings

The baccalaureate education, course delivery and faculty at each institution, and the selected post-graduation preparatory strategy influenced how prepared the new graduate nurses felt for the NCLEX-RN. The participants overall expected the curriculum and nursing faculty at their attending university to prepare them for the NCLEX-RN by focusing on science and hospital-based courses with the integration of NCLEX-RN style questions throughout their baccalaureate degree program. This expectation was not met by most of the three institutions. The participants identified the purchase of American-based preparatory resources post-graduation as indispensable to successfully completing the NCLEX-RN. The use of certain

nursing skills, such as critical thinking, problem-solving and assessment, were identified as requisite for NCLEX-RN completion because the exam tested these abilities. Although the NCLEX-RN covered certain content significant to Canadian RNs, such as patient education, care, safety, and leadership and delegation (as they relate to the hospital setting), the participants found the exam to lack fundamental content related to the Canadian baccalaureate nursing education, healthcare system, and nursing roles. The ETP competencies outlined by the CNO (2018) for new graduate nurses were not confidently identified by participants as present in the NCLEX-RN. Notably, the explicit identification of ETP knowledge was limited but was inherent in participant responses.

The participants primarily attributed the development of competence and readiness for safe practice to participation in clinical practicums, studying for and completing the NCLEX-RN, and from on-the-job learning. The participants felt that the combination of skills practice and the translation of knowledge from courses to clinical were beneficial to developing competence. The exam itself was identified as a contributor to competent, safe nursing practice because the participants perceived an enhancement of critical thinking ability and an increase in acute-care knowledge. The participants also felt that most learning occurred on-the-job and therefore learning through spontaneous and pre-arranged mentorship experiences was essential to the development of competence and readiness for safe clinical practice. Half of the participants were content with the exam in its current state for licensing, and the other half of the participants felt that the exam required improvement to increase applicability to the Canadian testing population. The suggested changes included addition of a clinical component to the exam, inclusion of more content reflective of the Canadian baccalaureate education, healthcare system, and nursing roles, and reinstitution of a set number of examination attempts.

Impact of Contextual Variables

Qualitative inquiry acknowledges the presence of multiple realities and the subjectivity of experience (Creswell & Poth, 2017). The constructivist stance of the guiding methodologist of this study, Merriam, assumes that knowledge is constructed through experience (Merriam & Tisdell, 2016). This experiential knowledge construction is value-laden and cannot be considered without context. The presence of contextual variables and the impact that these variables have on participant experiences is particularly emphasized in case study research (Merriam & Tisdell, 2016). As an exemplar of the importance of context – imagine that you had brunch with friends where you consumed a large glass of orange juice, two coffees, and spicy, southwestern eggs benedict. You have no history of stomach issues but develop horrible stomach pain in the evening, unrelieved by antacids, and you become concerned and travel to the nearest clinic. Upon physician assessment, you provide this information and with a few physical tests, you leave with a diagnosis of indigestion and a stronger stomach medication. If you neglected to provide context to your situation, you may have endured unnecessary medical care. Thus, context is first discussed to help the reader develop an understanding of how the identified contextual variables impacted participants. These variables include age, gender, and socioeconomic status; institutional background, NCLEX-RN completion date, and educational background; preparatory resources and study strategy; and practice role, area, and experience.

Age, gender, and socioeconomic status. Age as a variable cannot be considered alone due to the nature of qualitative inquiry and the subjective, as opposed to objective, stance of this research approach. The participants' ages ranged from 22- to 32-years old with a mean age of 25 years. Most participants were within a few years from one another, apart from the 32-year old participant. This 32-year old participant is identified as the only adult learner based on her age

(Carlson McCall, Padron, & Andrews, 2018), therefore age as a contextual variable would theoretically vary most between this participant and the rest of the sample. This participant was also the only individual to complete a certificate in personal support work and a college diploma in practical nursing prior to beginning her baccalaureate degree. Age interrelates with other contextual variables such as learning style, past experiences, and educational background, as evidenced by these two characteristics and resultantly, is further discussed in these forthcoming sections.

Historically, the profession of nursing was inhabited solely by females, which is sensible since many nurses at that time were also nuns. The profession has progressed with current society but remains female-dominant. In 2017, female RNs comprised 93.2% of the Canadian RN workforce compared to 6.8% of their male counterparts (CNA, 2018d). This ratio is reflected in the sample of six participants for this study because only one participant was male. Liaw, Wu, Chow, Lim, and Tan (2017) confirm that gender stigma is present within the nursing profession and needs to be addressed. However, in relation to the purpose of this study – to explore experiences with, and perceptions about the NCLEX-RN among Canadian RNs, the impact of gender in relation to learning style and exam format is considered. The contextual variable of gender will be integrated into the forthcoming discussion about preparatory strategy, and within the section that discusses high-stakes examination use.

Socioeconomic status (SES), the combined measure of social and economic status, is another variable that was tacitly present when the NCLEX-RN was discussed. This data was not deliberately collected but became apparent through data analysis. All six of the participants communicated that additional resources were purchased in preparation for the NCLEX-RN. However, the participants did not directly comment on the cost of resources or identify this cost

as a barrier to NCLEX-RN completion. This data could be hypothesized to be a result of the participants residing in a higher SES. The impact that this variable had on the participants experiences was present but not significant enough to be distinctly mentioned. If a participant had identified as low SES, the cost of additional resources post-graduation may have negatively impacted their experience with the NCLEX-RN, such as increasing test anxiety. One participant disclosed that she worked full-time on a temporary license while preparing to write her licensure exam. She did not state that this decision was financially-based but she did comment on an increase in stress as a result. This participant was the only new graduate who stated that she worked full-time while preparing for her licensure examination.

The cost of the resources used by the participants has been calculated based on currently listed prices from each organization to illustrate the financial impact. All participants purchased the online question bank U, and most participants also purchased a preparatory book. The participant who failed on her first exam attempt purchased a course, course K, from an American-based company in preparation for her second attempt. The price of question bank U (UWorld, n.d.) was dependent on whether access to the question bank or question bank with assessments was wanted, and on how long access to these resources was required. For example, the least expensive and most restrictive option was a 30-day access plan with one resource for $119, and the most expensive and least restrictive was a 730-day access plan with three resources for $349. The average price for an NCLEX-RN textbook listed on the online marketplace, Amazon (2019), ranged from $50 to $100. The preparatory courses offered by an American-based company (Kaplan Nursing, n.d.) were either self-paced for $399 or instructor led for $499. These prices are all listed in American dollars and before taxes. At the current conversion and tax rate in March 2019, a participant could have roughly spent between $239 to $1120 Canadian

dollars on exam preparation. Please note that this estimate excludes the $360 pre-tax Canadian examination fee.

Institutional and educational background. The institution where a baccalaureate degree was obtained is another important contextual factor to consider with exploration of NCLEX-RN experiences and perceptions. In the sample of six participants, a baccalaureate degree was obtained at three different universities across Ontario, Canada. Three distinct pathways were taken by participants to obtain a degree at one of these three universities – completion of a four-year university degree, an accelerated university degree, or a collaborative college-university degree. The primary differentiating characteristics between these institutions to consider involved curricular focus, the state of NCLEX-RN integration, and faculty members. An illustration of this impact was unambiguously observed between C3 and C6. The participant identified as C3 was a 22-year old who completed a collaborative program to obtain her degree. She viewed the NCLEX-RN as reasonable and attributed this view to the integration of NCLEX-RN style testing into her degree, and the presence of NCLEX-RN knowledgeable faculty. Conversely, the participant identified as C6 was a 24-year old who completed all four-years of her degree at a different university than C3. This participant did not share the same view of the NCLEX-RN because her degree did not utilize NCLEX-RN style testing and the faculty were not knowledgeable about the exam.

Along with institution, the year that a participant graduated and wrote the NCLEX-RN is an important variable to consider also evidenced by a comparison of C3 and C6. In C6, the participant was among the first group of NCLEX-RN test-takers in Canada compared to the participant in C3, who wrote the exam after four years of use in Canada. The participant who was among the first group of writers commented on the lack of curriculum adjustment to match

the NCLEX-RN whereas the fourth-year writer emphasized the use and importance of NCLEX-RN style testing into the curriculum.

The educational background of each participant must be considered along with institutional background and year of graduation. For example, one participant had previously completed a diploma in practical nursing. The presence of this additional education and knowledge could impact her perspective of and approach to the NCLEX-RN. This participant perceived her past education in practical nursing to hinder her ability to succeed with the NCLEX-RN due to habitual thought processes. Conversely, two of the participants had either completed a non-acute based Masters' degree or were in progress of this degree. This additional education has undeniably affected neuronal structure and neurotransmitter activity in the brain due to the neuroplasticity of this organ. These changes affect how the brain activates previously obtained knowledge and integrates newly acquired knowledge, impacting cognitive processes (Rivera, 2017). These participants hold different perceptions of their past experiences related to continued learning in their field. Thus, educational background is important to consider when exploring perceptions and experiences of Canadian RNs with the NCLEX-RN.

Preparatory resources and study strategy. The resources selected and the approach taken for exam preparation are also important contextual variables to consider. These variables are important because of the underlying connection to awareness of personal learning style and the ability to identify and incorporate resources that match this style of learning but also prepare one for the testing format. Learning style refers to how your brain processes and retains information most effectively (Hussein Ibrahim & Hussein, 2016). For example, a visual learner retains information best by reading written questions and rationales, whereas a kinesthetic learner retains information best by writing the information down, creating a diagram, or

performing a related task. Within this consideration, acknowledgement of being an adult learner and utilizing the most effective strategies based on current evidence is essential (Merriam, 2018). Vizeshfar and Torabizadeh (2018) illustrated the importance of personal learning style identification and the utilization of materials and methods that match this style. A quasi-experimental design was used to collect pre- and post-test data from 40 nursing students to determine the impact of tailored to learning style teaching. Vizeshfar and Torabizadeh (2018) concluded that an enhancement in academic success was observed with tailored to learning style teaching and recommended to help train competent, professional nurses.

The participants in this study provided a list of used preparatory resources, how these resources were used, and commented on being a 'hands on' learner in reference to undergraduate discussion but the concept of personal learning style was not explored. For the successful participants, one could assume that the resources selected were appropriate for their learning style. For the participant who experienced failure on her first attempt, one could assume based on the information she provided, that she did not initially study with appropriate resources for her style of learning. As an illustration, this participant attributed her failure to insufficient studying but explained that her approach was no different than she had used in the past. Did this participant underestimate the amount of time required to study? Possibly. Did this participant select preparatory resources that were inappropriate for her learning style? Also, possible. She incorporated a virtual, instructor-led course with group discussion in preparation for her second attempt and succeeded. According to Merriam (1998), this additional resource is more effective for the adult learner because of the goal orientation and active involvement with others. The addition of this course impacted this participant's experience with the NCLEX-RN examination.

The impact of group learning on participants' experiences with the NCLEX-RN is necessary to briefly mention due to a discrepancy with current literature related to the purpose of this study. Three out of the six participants in this study mentioned group learning as a facilitator to exam success. Two of the participants, who were successful on the first attempt, identified in-person group learning as beneficial and the single adult learner, who passed on her second attempt, identified virtual discussion as beneficial. The contrasting data was derived from the American literature review for this study. Lown and Hawkins (2017) found a significant positive correlation between 532 undergraduate students at an American university with a preference for group learning and NCLEX-RN failure. This qualitative study has limited generalizability compared to that of the quantitative study based on sample size. Notably, the quantitative study is a single-site design and conducted outside of Canada, which equates to a distinctly different context particularly in relation to education. There is no current Canadian evidence aside from this study regarding group learning and the NCLEX-RN.

The impact of preparatory resources focused on NCLEX-RN style testing and format on participants' experiences with, and perceptions about, the exam was apparent. All six of the participants commented on the state of NCLEX-RN style testing integration into their respective baccalaureate curriculum and used a post-graduation preparatory resource identical to the NCLEX-RN interface, format, and testing style. The inclusion of HESI exams for NCLEX-RN preparation into Canadian baccalaureate curriculum to familiarize students with the testing style adds to the evidence of impact on the new graduate experience. The primary benefit of these resources, based on the data collected in this study, is a reduction in 'test anxiety' when the time came to sit in your cubicle at the examination site. The research conducted about the NCLEX-RN in Canada has not directly focused on factors that facilitate success or predict failure among

new graduates. However, findings derived from the American literature review for this study mention unfamiliarity with the NCLEX-RN as a contributor to failure (Mc Farquhar, 2014). The necessity of early NCLEX-RN preparation in American nursing programs is evident in the literature to ensure that educational institutions meet the mandated pass-rate standards (Foreman, 2017).

Role, area, and experience in practice. Three final contextual variables that impacted participant perceptions about the NCLEX-RN relate to practicing as an RN post-licensure. These variables include role held in practice, area of practice, and the amount of practice experience. Within Canada, the new graduate nurse can hold a role in any of the five primary domains – clinical, education, administration, research, or policy (CNA, 2015). The RN can transition into leadership roles within these domains with additional education and experience (CNA, 2015). The intent of this study was to collect data from RNs who inhabit different roles, in different domains, to obtain diverse perspectives about the NCLEX-RN in Canada. The final sample consisted of six RNs from the clinical domain who practiced as front-line workers. The focus of comparison then shifted to the division of acute versus non-acute areas of practice within the clinical domain. The inability to collect a diverse sample in respect to domain and role potentially resulted from insufficient time for NCLEX-RN test-takers to obtain the experience and education necessary for leadership roles such as, nurse manager, at the time of data collection due to the recent introduction of the exam to Canada in 2015. The sample could also simply be reflective of the Canadian RN profile. In 2017, the CNA (2018) reported that 74.2% of RNs practiced as front-line workers, 5.6% as managers, and 20.2% occupied other positions in Canada. The 2017 Canadian RN profile also detailed that 91.1% of RNs worked in the clinical domain compared to 6.6% in administration, 2.3% in education, and 0.0% in

research. Definitively, the experiences with, and perceptions about, the NCLEX-RN were collected from front-line workers who inhabited the clinical domain in differing areas of practice.

Prior to data collection and analysis, the PSI theorized that the acute-care participants would be in favour of the NCLEX-RN, and that the non-acute care participants would be opposed to the exam. The area of practice, acute versus non-acute, was thus considered an important contextual factor to consider. However, despite the presence of differences between individual participants, this speculation was not the case. The participants who advocated for further exam adaptation to the Canadian testing population both worked in acute-care settings. The remaining participants, one from acute-care, two from non-acute care, and one from both settings, detailed how the NCLEX-RN was acceptable in its current form. Based on this data, any conclusion about the relationship between practice setting and NCLEX-RN perceptions would be premature.

The participants experience levels varied from three months to three years in practice. The two acute-care RNs who advocated for exam change were at the opposite sides of this spectrum with one holding three months experience, and the other three years. The impact that practice experience had on participants' experience with, and perceptions about, the NCLEX-RN was, however, transparent. For example, a participant with two years in practice had trouble when asked to recount NCLEX-RN experiences. Another participant felt that her prior experience as a practical nurse had negatively impacted her experience with the examination.

Summary of contextual variable impact. The primary contextual variables that impacted participants' experiences with, and perceptions about, the NCLEX-RN have been identified and considered. These variables included age, gender, socioeconomic status; institutional background, NCLEX-RN completion date, and educational background; preparatory resources

and study strategy; and practice role, area, and experience. Age interrelated with other variables such as, learning style, past experiences, and educational background. Gender demonstrated impact on learning style and exam format. The impact of cost for additional preparatory resources was not mentioned. This cost was estimated to range from $239 to $1120 CAD. The curricular focus, state of NCLEX-RN integration, and faculty members at each university impacted the participants. The year of graduation reflected the state of NCLEX-RN integration into curriculum from the year of exam implementation to present. The educational background of a participant, either pre- or post-undergraduate education, demonstrated impact due to cognitive process development. The use of resources that matched personal learning style and were NCLEX-RN based, in combination with group learning, positively impacted participants. The sample included RNs from the clinical domain, both acute and non-acute care backgrounds, and in non-leadership roles. The impact of clinical background was unable to be determined. Practice experience demonstrated impact due to memory and habitual thought processes.

Re-Evaluation of the NCLEX-RN or the Canadian Baccalaureate Education?

The CCRNR (2018) reassured the stakeholders and students that Canadian RNs were involved with the NCLEX-RN transition to Canada to ensure applicability to the ETP competencies and the Canadian baccalaureate curriculum. Although these adjustments have been made for the Canadian testing population, current evidence conveys that these adjustments have not sufficed, and that Canadian curriculum has alternatively begun adjustment to ensure adequate preparation of nursing graduates (McGillis-Hall et al., 2016; McMillan et al., 2017; Salfi & Carbol, 2017). The findings of this study related to the NCLEX-RN, applicability to the Canadian testing population, and the expectations of baccalaureate trained nurses is contrasted with relevant literature to establish if evidence exists to support or refute these findings.

Prior to the conduction of this study, McGillis-Hall and colleagues (2016) were the only researchers to explore the views of Canadian NCLEX-RN test-takers. McGillis-Hall and colleagues (2016) collected data from 202 graduates from the first group of test-takers in Canada. In contrast, this study focused on an in-depth exploration of the experiences with, and perceptions about, the NCLEX-RN from six graduates, within different years of exam use. McGillis-Hall and colleagues (2016) found that students identified policy-related issues such as, French language translation, lack of stakeholder communication, test centre accessibility, cost, and lack of opportunity to rewrite as well as reputational concerns due to unsuccessful attempts, and American-based exam content in Canada. The participants in this study did not negatively comment on communication with regulators, did not voice French language concerns (likely due to non-involvement in a French-language program), did not find test centre accessibility as an issue, and did not comment on costs related to the exam. The participants did not comment on a limited number of writes because the NCLEX-RN was changed to accommodate unlimited attempts. One participant did comment that this change should be revoked.

This study does, however, contribute to the evidence advanced by McGillis-Hall and colleagues (2016), Salfi and Carbol (2017), and MacMillan and colleagues (2017), that the NCLEX-RN still lacks Canadian applicability. The participants found that although the NCLEX-RN addressed some key areas for Canadian RNs such as patient education and safety, a focus on acute-care in the hospital setting and a lack of content reflective of the Canadian baccalaureate education and healthcare system was present. The identification of the Canadian ETP competencies within the NCLEX-RN is difficult to determine from these six participants based on the initial uncertainty expressed when asked if the document was familiar. However, implicit knowledge of the ETP competencies was evident in the interview data, providing

evidence that the participants had some knowledge of the ETP competencies. Salfi and Carbol (2017) highlight an inconsistency between the action words in the Canadian ETP document versus the American activity statements. This inconsistency combined with the use of American resources for NCLEX-RN preparation and the lack of ETP document review since graduation, could explain the difficulty that participants experienced with determining if these competencies were reflected in the exam.

Despite identification of this Canadian applicability gap, participants focused on the need for curricular change to complement the NCLEX-RN content and format. All encompassing, the participants felt that the curriculum at their respective university should have had a heavier focus on the sciences such as pathophysiology and pharmacology, and acute-care hospital-based nursing to have better prepared them for the NCLEX-RN content. The importance of integrating NCLEX-RN style testing into the curriculum and the necessity of faculty to be knowledgeable about the exam was also highlighted in the findings. Finally, the participants fully expected to purchase additional American-based resources post-graduation for exam preparation. After three years of use, the participants inclusively accepted the NCLEX-RN as the licensure exam in Canada and focused on the identification of preparation strategies for exam success. Conversely, the first-time writers focused on the need for policy-level reform.

Lewin's (1951) three-stage model of change offers explanation for this difference in perspective. The first and second stages involve preparation for, and implementation of, the selected change. The first-time writers were informed of the new licensure exam, the NCLEX-RN, began to prepare for the new exam, and then experienced the exam because the implementation year matched their year of graduation. Lewin (1951) voices that a state of uncertainty often occurs within the first-stage, and with the second-stage comes the obligation to

not only accept but acclimate to the change. The political concerns of the first-time writers manifested due to disapproval of the newly introduced licensure examination based in Lewin's (1951) change theory. The third-stage of Lewin's (1951) model involves the acceptance of change. The participants in this study are evidently in the third-stage because acceptance has occurred and focus had shifted on how to adapt to the change – in this case, how to experience success with the NCLEX-RN.

Notably, one final difference discovered between a participant from this study and the data collected from the first-year writers involved the opinion of exam attempts. The concern voiced by the first-time writers is sensible due to a lack of preparation for the new licensure examination. One participant, C6, voiced the need to reinstitute a limited number of exam attempts combined with appropriate remediation as a measure to protect the public. Interestingly, this participant was among the first-time writers. In response to this participant's concern, the CNO (2017h, para. 6) asserts that since a participant cannot become familiar with the NCLEX-RN content due to the NCLEX-RN format "…there is no risk of memorizing content…". The CNO (2017h, para. 6) further states that, "regardless of the number of writes, the only way a person will be successful on the exam is if they are able to show they have the competence to practice safely as an entry-level RN". Evidently, the CNO demonstrates confidence of the NCLEX-RN as the final measure of competence assessment, without remediation measures for two, five, or ten attempts, to protect the public.

This study also provides evidence of repercussions identified by MacMillan and colleagues (2017) with the ongoing use of the NCLEX-RN in Canada. Specifically, an impact on the Canadian baccalaureate curriculum and the expectations of the nursing students was observed. The tangible education change observed was inclusion of NCLEX-RN style testing

into the curriculum, whether it be integrated into coursework, or the use of a HESI exam. However, considering that the NCLEX-RN is now the Canadian licensure exam, the participants communicated that their baccalaureate degree should prepare them for success on this exam, and suggested changes based on this expectation. The participants overall felt that the baccalaureate curriculum should have a heavier focus on the sciences such as, pathophysiology and pharmacology, and acute-care hospital-based nursing courses as opposed to courses that were described as "fillers" by two participants, such as communication, leadership, and cultural diversity. The participants also advocated for greater inclusion of NCLEX-RN style testing and for faculty to be knowledgeable about the NCLEX-RN content and format.

Summary. This study adds to the findings advanced by McGillis-Hall and colleagues (2016), Salfi and Carbol (2017), and MacMillan and colleagues (2017), that the NCLEX-RN still lacks Canadian applicability. The exam content areas that were directly applicable to Canadian nursing related most to the tertiary-based hospital setting. Exam content reflective of Canadian baccalaureate education and the Canadian healthcare system, however, remained insufficient. The presence of ETP competencies within the NCLEX-RN was unable to be determined. The participants acknowledged insufficiency of Canadian content but focused instead on the need to alter baccalaureate curriculum to reflect the NCLEX-RN. The participants concentrated on suggestions for curricular change to improve success on the exam such as, a heavier focus on the sciences and acute-care nursing practice, integration of NCLEX-RN style testing, and the presence of NCLEX-RN knowledgeable faculty members.

In contrast, McGillis-Hall and colleagues found the first-time writers to focus on the need for reform at the policy level. This dissimilar perspective, acceptance versus objection of the exam, relates to the inhabited stage in the process of change. The challenge for reassessment of

the impact that unlimited exam attempts in the absence of remediation has on public protection was considered. Evidence of educational impact, first considered by MacMillan and colleagues (2017), was established based on the inclusion of NCLEX-RN style testing into baccalaureate curriculum, and the expectations voiced by students. Evidently, the Canadian nursing curriculum has been impacted by NCLEX-RN use with the Canadian testing population.

Teaching to Generate Successful Test Takers, Competent and Safe Nurses, or Both?

The request for, and already observable, curricular adaptation to the NCLEX-RN testing format and content reflects the current educational impact, a concern voiced by MacMillan and colleagues (2017), on the Canadian baccalaureate nursing education. The observation of this educational impact generates query about the confounding influence on nursing students, faculty, and the public. However, the CNO (2017e, para. 25) affirmed that NCLEX-RN adoption was to ensure that the College, "…grants registration only to those who demonstrate the nursing knowledge to provide safe care". The use of high stakes examinations such as the NCLEX-RN, for professional licensure are prevalent in American nursing programs (Hunsicker, & Chitwood, 2018). The observable change to Canadian nursing curriculum, and the expectations of curricular change voiced by the participants, demonstrate the integration of a 'teaching to the test' (TTTT) approach (Copp, 2016). According to Copp (2016), the prevalence of TTTT in Ontario highly correlates with the increased use of high stakes exit examinations. Does the baccalaureate curriculum now teach to generate successful test-takers, create competent and safe nurses, or both? What is the impact of the TTTT approach? The definition, purpose of, and concerns related to high stakes examination use is first described. The associated TTTT approach is explained, and the reasoning for use identified. To conclude, the impact of this

approach is considered in respect to essential attributes for competency development identified by the participants and regarding current evidence.

High stakes for licensure. In many countries and across a variety of disciplines, high stakes examinations are utilized as the entry-to-practice licensure examination (Baker-Doyle & Petchauer, 2015; Desai, Allareddy, Donoff, Howell, & Karimbux, 2013; Exequiel, 2016; Monteiro, George, Dollase, & Dumenco, 2017; Schroeder, 2013). Broadly, the American Psychological Association (2018) defines high-stakes testing as a standardized test that is utilized to make 'high-stakes' decisions, or decisions with serious consequences for the test-taker. An examination for licensure refers to a test that is administered to qualified individuals to obtain license in their respective discipline to enter practice (Merriam-Webster, 2018). These tests are used to ensure the entry of competent, knowledgeable, and skilled professionals into the workforce (Baker-Doyle, & Petchauer, 2015; Sacket, Schmitt, Ellingson, & Kabin, 2001). According to Archer and colleagues (2017), these large-scale licensing examinations continue to remain a popular approach to guarantee quality assurance among healthcare professionals. Ranney (2006) exclaims that these exams are ultimately in place to protect the public.

Sackett and colleagues (2001) posit that high-stakes testing, "albeit imperfect … [are useful indicators of] …current level of knowledge, skill, ability, or achievement" (p.302). However, Ranney (2006) and more currently, Archer and colleagues (2016), state that there is lack of evidence in relation to the validity of these tests. Ranney (2006) argues that examining agencies have not published data that demonstrate the reliability and validity of these tests and that the reliability of these one-time exams is too low to be high stakes. Archer and colleagues (2016) conducted a systematic review of relevant literature and determined that there is no causal evidence for the validity of national licensing examinations. Sackett and colleagues (2001) also

noted that significant scoring differences based on race have been repeatedly observed with use of standardized high-stakes testing. In respect to gender, Leiner, Scherndl, and Ortner (2018) found that the gender differences in high-stake exam results relate to differing perceptions held by male and female test-takers and recommend consideration of equitable testing situations to enhance female performance. These findings are consistent with those of Foreman (2017) in relation to the potential inappropriateness of the NCLEX-RN, a high stakes exam, as a measure for nursing program quality in the USA.

Notably, Hunsicker and Chitwood (2018) completed a comprehensive literature review of high-stakes examination use in nursing education; highlighting both the positive and negative consequences of this approach identified in the literature. The positive aspects of high-stake testing integration into nursing education included: increased study motivation due to seriousness of failure consequences, increased confidence and decreased anxiety for the NCLEX-RN because of familiarity with the study approach, and greater knowledge and critical thinking ability. The participants in this study commented on a reduction in test anxiety from the use of an NCLEX-RN based testing format and enhanced knowledge and ability to critically think but from actual NCLEX-RN completion, not curriculum testing. Theoretically, the high volume of information review required for any high-stakes examination would likely produce this perception. The question of how each participant defined critical thinking given the discourse context – preparation for and completion of a high-stakes clinically-focused licensure examination – is also raised. The CNO (2018) define critical thinking as "…the ability to apply knowledge and comprehension in complex situations through problem solving" (para. 1). Comparatively, clinical reasoning is defined as the process of decision-making in a clinical scenario based on assessment findings and current research evidence (Gonzalez, 2018). The

process of clinical reasoning is comparable to the decision-making process required for the NCELX-RN, which could explain the perception of enhanced knowledge and critical thinking ability attained from high-stakes exam completion.

Hunsicker and Chitwood (2018) identified the negative consequences of this testing to include faculty stress due to a negative correlation between student curriculum grades and testing scores, student stress due to fear of program failure and related financial concerns (which impacted coping and learning ability), program attrition due to failure and litigation concerns due to insufficient knowledge of consequences of testing failure, minority and language prejudice, bias against poor test-takers because the exam assesses ability to test not necessarily learning and knowledge level, and finally, a focus on creating successful test-takers, which can alter focus from curriculum concepts to test content. The utilization of high stakes testing in American nursing education in preparation of the NCLEX-RN is evident based on this review. Copp (2016) attributes the increased presence of TTTT in Canadian curriculum due to increased presence of high stakes exit examinations. The associated impact of TTTT in consideration of the Canadian nursing education are now discussed.

To teach, or not to teach…to the test. 'Teaching to the test' (TTTT) is defined as the implementation of pedagogical methods that tailor learning to increase standardized test success (Copp, 2016). Canadian nursing educators have introduced this approach to the Canadian testing population, despite evidence of insufficient Canadian content in the NCLEX-RN. Petrovic, Doyle, Lane, and Corcoran (2019) remark on this insufficiency in a recent ethnographic study about a nurse regulator's experience with NCLEX-RN implementation. Petrovic and colleagues (2019) affirmed the presence of disarticulation between Canadian PHC values at the population level, reflected in baccalaureate nursing education and the acute-care individual level focus of

the NCLEX-RN, coinciding with current Canadian evidence. The emergence of NCLEX-RN style testing in Canadian baccalaureate curriculum corroborates the introduction of TTTT for NCLEX-RN preparation. Petrovic and colleagues (2019) identify the use of American NCLEX-RN based preparatory materials, in combination with early exposure to testing style and exam content, as contributors to exam success among Canadian nursing graduates. The benefits of early exposure to NCLEX-RN style testing and exam content is also evident in the American literature (Further et al., 2017; Johnson et al., 2017; Kaddoura et al., 2017; Mc Farquhar, 2014; Robert, 2018).

Although these TTTT modalities have proven effective in the USA and demonstrate effectiveness for early NCLEX-RN success in Canada, the adoption of this mentality could be problematic due to three primary concerns: (1) the exam content is not proportionately reflective of the Canadian healthcare values or nursing education; (2) the possibility of a disproportionate focus on, or ineffective integration of, TTTT with current pedagogical approaches; and (3) TTTT does not necessarily equate to enhanced learning (Copp, 2016), or higher order thinking (Segal, Snell, & Lefstein, 2016; Zohar, & Alboher Agmon, 2017).

The first concern with a TTTT approach relates to the disproportionate amount of Canadian exam content. The participants in this study communicated concern that their curriculum content was not congruent with the content of the NCLEX-RN examination. The participants found the NCLEX-RN content to weigh heavier in the sciences and acute-care hospital-based nursing compared to the curriculum of their respective baccalaureate programs. This disarticulation was also reported by Petrovic and colleagues (2019), who found that the Canadian curriculum focused on PHC at the population level whereas the NCLEX-RN held a restricted focus to tertiary-care at the individual level. The participants felt that the exam was

not an accurate assessment or reflection of their nursing knowledge; a concern also voiced by the first-year test takers (McGillis-Hall et al., 2016). The discrepancy in content and the utilization of American-based study material post-graduation could explain this perception, or as described by Hunsicker and Chitwood (2018), this perception could result from high stakes testing format that assesses ability to take tests, not necessarily knowledge level. Theoretically, the participants taught themselves how to both take the test and master the content contained in the test, through post-graduation materials. Petrovic and colleagues (2019) and Salfi and Carbol (2017) deftly identify the difficulty associated with accepting a licensure exam as a reliable measurement of nursing competency when the exam is not reflective of the healthcare values or the foundation of the nursing education in your country.

Accompanying the expectation of curriculum content to align closer with that of the NCLEX-RN, the participants in this study expected integration of appropriate preparatory format into their respective BScN programs. This expectation for effective NCLEX-RN preparation and exam success was anticipated of the nursing faculty. However, when asked what factors primarily contributed to competency development and readiness for safe practice, the participants identified the importance of experiential education inclusive of clinical exposure and on-the-job mentorship opportunities. The NCLEX-RN itself was minutely credited for the assurance of competence for safe nursing practice. The integration of a TTTT approach for NCLEX-RN preparation currently focuses on inclusion of NCLEX-RN style testing into Canadian baccalaureate curriculum to ensure effective student preparedness for exam success.

The second concern with TTTT relates to the incongruency between this approach and current pedagogical approaches. Nursing faculty are not only responsible for, but are instrumental in, nursing student preparation for exam success and the generation of future nurses

who maintain competence beyond the completion of a summative exam. Bristol, Nelson, Sherrill, and Wangerin (2018), Evans and Howarth (2019), and Segal and colleagues (2016) consider the ethical dilemma that this dual expectation can cause for nurse educators. These authors assert that the expectation to focus on standardized test preparation is demanding on educators due to the curriculum restriction and increased emphasis on tests, which can take away from valuable learning opportunities such as discussion and interactive learning. An educator may contemplate, are my current pedagogical practices mutually exclusive to a TTTT approach? Not necessarily.

Pragmatically, Segal and colleagues (2016) assert that educators must first acknowledge the reality of standardized test use in education to link TTTT with the pedagogical approaches currently integral to baccalaureate curriculum and identified as instrumental to knowledge and skill (competency) development. Segal and colleagues (2016) then recommend adoption of an 'ironic' stance toward TTTT and typical curricular learning. This stance ensures that students learn how to take the test but are also able to acknowledge the importance of learning from the curriculum. With this approach, the educator reveals the perspective of the 'test-maker' and asserts that through this perspective, one correct answer exists from one course of knowledge (Segal et al., 2016). The irony resides in the fact that the students are aware that knowledge is derived from many sources (Segal et al., 2016). This approach holds validity based on the findings of this study. In addition to a specific source of study resources, the participants commented on the existence of an 'NCLEX-RN world' in comparison to the 'real world'. These participants were able to discern NCLEX-RN knowledge from pragmatic nursing knowledge.

Although adaptation of an ironic stance helps maintain curricular learning, is a TTTT approach incompatible with an experiential and interactive approach to education? Shatto and

colleagues (2019) completed a comprehensive integrative review in the USA examining the relationship between interactive teaching modalities and the results of NCLEX-RN predictor exams. The authors found that interactive education was associated with higher NCLEX-RN predictor scores. Theoretically, based on these results, nursing students should not require the traditional TTTT approach to high stakes examination preparation. Further research is warranted to explore this connection. Presently, nurse educators must consider the impact of a TTTT focus in the curriculum compared to a focus on curricular content and active learning for long-term career development. The impact of TTTT is further discussed as the third concern related to this approach.

In addition to crediting competence development to experiential education, the participants attributed development of critical thinking and knowledge enhancement to the actual completion of the NCLEX-RN examination. The literature does not directly link this perception to the use of a TTTT approach but rather to the use of high stakes testing. Hunsicker and Chitwood (2018) identified a positive consequence of high stakes testing use in nursing education to include enhancement of knowledge and ability to critically think. The intent of a high stakes exam, or summative assessment, is to assess learning that has occurred as opposed to the use of a formative assessment, which would be implemented during the learning process to enhance learning and skill development (Ifeatu Efu, 2018). Theoretically, this perception could result from studying a high volume of material for a high stakes exam or be related to the fact that the primary study materials used by the participants were American-based with a different focus than the Canadian curriculum, which resulted in learning new material.

The third concern with TTTT relates to the impact of this approach on overall learning. As considered above, TTTT generally increases curricular focus on testing, use of multiple-

choice questions, knowledge related to the test, and how to approach the test, which typically results in a decreased emphasis on active learning. But why and how does this happen? The overall impact of TTTT on learning, rooted in current research evidence, is attributed to a trickle-down effect beginning at the policy-level (Bristol et al., 2018; Copp, 2016; Evans & Howarth, 2019; Segal et al., 2016; Zohar & Alboher Agmon, 2017). As an exemplar of this effect, the nursing regulatory body in Ontario, the CNO, adopted the NCLEX-RN as the new licensure examination. All baccalaureate nursing graduates must complete this exam to become registered with the College and practice nursing in Ontario. The onus now shifts to the academic institutions and nurse educators to prepare students for success on the NCLEX-RN. This pressure on educators results in increased stress and is observed to impact teaching quality. Zohar and Alboher Agmon (2017) report a decline in teaching quality due to increased focus on rote learning for exam preparation because of overhead pressure TTTT.

From this discourse, the pragmatic impact of TTTT is apparent. The benefit of increased pass rates with this approach must be considered with the observed impact on the quality of teaching, and the prospective impediment of higher order thinking, such as critical thinking, among nursing students. Aside from the salient NCLEX-RN-Canadian content concerns, does teaching nursing students to take the NCLEX-RN extinguish the development of RNs who are competent upon graduation and maintain this competency throughout their career? The acknowledgement of Canadian curriculum changes to reflect that of an American-derived high-stakes exit examination must not be overlooked. Copp (2016, p. 484) urges educators and political stakeholders to consider the correlation between substandard teaching and TTTT because "…it bears stating that change in order to meet the goals of external evaluation does not universally lead to improvement – it matters not only that we move, but also in which direction".

Summary. Since NCLEX-RN implementation in 2015 for the Canadian testing population, this study provides evidence of curriculum adaptation and student expectations of adaption because they believe their curriculum should prepare them for their licensure exam. High stakes exams, test with serious consequences for the test-taker, are used in many countries across multiple disciplines to determine competence for licensure in the test-takers respective field. Although these exams have been recognized as useful indicators of current knowledge, there is a paucity of research confirming the validity and reliability of these exams. Research has shown that these exam results differ based on ethnicity (Sackett et al., 2001) and gender (Leiner et al., 2018). A recent literature review conducted by Hunsicker and Chitwood (2018) revealed the reported positive and negative consequences of high stakes testing in American nursing education. The review identified increased motivation, confidence, knowledge, and critical thinking as positive outcomes. Enhanced knowledge and critical thinking from actual NCLEX-RN completion was also identified, which theoretically, any high stakes exam preparation would produce due to the high volume of information to study. The negative consequences of high stakes testing integration in nursing education included both student and faculty stress, attrition due to test failure, litigation due to insufficient provision of test failure consequences, prejudice against minority and English as a second language students, bias against poor test-takers, and a focus on TTTT rather than curriculum concepts (Hunsicker & Chitwood, 2018).

The impact of TTTT on Canadian nursing education was discussed in-depth due to the observed curriculum changes to reflect the NCLEX-RN, and the expectations of the participants to be taught how to take the NCLEX-RN. The TTTT approach has been introduced to Canadian baccalaureate nursing curriculum despite an evident disparity between the PHC, population level focus of Canadian healthcare versus the tertiary, individual level focus of the NCLEX-RN.

However, despite this content disparity, evidence of the positive correlation between TTTT and NCLEX-RN exam pass rates is plentiful in the American literature, and recently identified in a recent Canadian study. The adaptation of this TTTT mentality, albeit proven effective in the USA, can be problematic due to three primary concerns – the disproportionate amount of Canadian content, ineffective TTTT integration with current pedagogical approaches, and that TTTT does not directly equate to enhanced overall learning. The disconnect between exam-curriculum content and the use of American preparatory resources left participants feeling that the exam did not provide an accurate assessment of their nursing knowledge, which may attribute to decreased confidence in the exam as a valid measure of competence.

The participants attributed competency development primarily to experiential education, which is not necessarily synonymous with a TTTT approach. Nurse educators are responsible to ensure that nursing graduates are both proficient test-takers and long-term competent RNs, often resulting in an ethical dilemma due to the difference in pedagogical approach. Educators must acknowledge the reality of standardized test use in education and assume an ironic stance to differentiate the 'NCLEX-RN world' from the 'real world'. Some evidence exists that active learning contributes to NCLEX-RN success; however, further investigation is warranted. Educators need to ensure tailoring of their pedagogical method to both approaches. The attributed competence and knowledge development as a result of NCLEX-RN completion by the participants must also be considered in relation to the extensive amount of information review required for high stakes testing and the potential introduction of new material through using American preparatory materials.

Finally, the impact that TTTT can have on overall learning must be acknowledged. This impact is observed as a trickle-down effect from policy implementation, pressure on faculty to

accommodate to this change by restricting current curriculum content, faculty stress related to ethical responsibility to students and to policy accommodation, resulting in decreased teaching quality and ultimately, decreased learning by the students. All encompassing, are we going to progress to generate proficient test-takers, competent and safe nurses, or both?

Implications

The findings of this study have been described, summarized, and discussed in relation to current and relevant literature. The concluding question remains – why do these findings matter and to whom do they matter? These findings have utility at the pragmatic, theoretical, and policy level. The implications of these findings are delineated in relation to nursing students (identified as future NCLEX-RN test-takers), nurse educators and political stakeholders, whom reside in each level, respectively. The limitations of this study are then outlined and recommendations for further research, rooted in the findings of this study, are presented.

For future NCLEX-RN test-takers. The primary message that future NCLEX-RN test-takers should heed from these findings involves being pragmatic. The reality is that you will complete this high-takes examination to obtain nursing licensure in Ontario at this present time, despite the identification of issues in the exam's use in Canada. Future test-takers should be aware that, based on current evidence, the NCLEX-RN content differs from that in the Canadian baccalaureate curriculum. The NCLEX-RN emphasizes acute-care nursing practice at the individual level as opposed to a greater focus on PHC at the population level in Canadian nursing curriculum. This disparity exists due to the differences in healthcare values and systems between Canada and the USA, which is the country of NCLEX-RN origin. The classification of the NCLEX-RN as a high stake's examination should also be understood to allow for utilization of appropriate study strategies. Future test-takers should also consider the evidence-based

preparation strategies for exam success. Current Canadian-based evidence indicates that early familiarization with NCLEX-RN style testing format and the use of preparatory resources from the 'test-maker' perspective, presently American-created, are contributors to exam success. Distinct to the findings from this study, use of preparatory materials that correspond with your learning style such as independent versus group learning, or visual versus auditory learning, may also facilitate success.

For nurse educators. These findings equip nurse educators, inclusive of any professional involved in the education of future test-takers, with greater insight about student expectations and measures that can be taken to help students achieve exam success without impeding overall learning. Nursing program faculty are primarily responsible for preparation of future test-takers and nurses. Firstly, the importance of context has been highlighted when the goal is to prepare successful test-takers. The NCLEX-RN, a standardized high stakes assessment, does not consider contextual variables – the same exam is given to every test-taker under the same conditions. Educators should be aware of two variables that can be dependent on the educator. First, students with prior clinical experience in nursing before baccalaureate program entry or the completion of a temporary license post-graduation, may have trouble with the test, as they attempt to separate the 'NCLEX-RN world' from the 'real world'. Educators must direct students to acknowledge the presence of a 'test-maker' perspective and to select resources from the knowledge source based on this perspective. For example, the NCLEX-RN is an American-derived exam, thus the preparatory materials should originate from an identical source. The participants in this study unknowingly utilized this approach evidenced by attributing exam success to the selected American-derived study materials.

Second, nurse educators should also encourage future test-takers to identify their personal learning style and select preparation materials based on this style to encourage information retention. For example, utilization of an online question bank independently compared to participating in an instructor-led course with integrated group discussion. Albeit contrary to American literature, the participants found group learning effective.

The participants expected faculty to prepare them for the NCLEX-RN by focusing on science and hospital-based courses and through using NCLEX-RN style testing. This expectation perhaps resulted due to the attribution of exam success to American-based NCLEX-RN preparatory materials. Notably, however, the participants primarily attributed competence development and feeling ready for safe nursing practice to experiential education inclusive of clinical experiences and on-the-job mentoring. This data identified a discordance between having the competence to pass the NCLEX-RN versus the competence to feel ready for safe nursing practice. Teaching to the test (TTTT) is a pedagogical approach that commonly transpires with the presence of high stakes testing such as the NCLEX-RN. Educators should not only be aware of the positive consequences of high-stakes testing such as, sound identification of current knowledge level and testing ability, but also the negative consequences that occur such as, exam biases, an inaccurate assessment of knowledge base, and the risk of TTTT rather than curriculum content.

Although the American literature reports a positive correlation between TTTT and exam success, this mentality can be problematic. First, the lack of Canadian content reflected in the NCLEX-RN would cause TTTT to deter from Canadian based content to American-focused content. The participants also felt that their knowledge level was not accurately assessed with a resultant decrease in confidence about the ability of the NCLEX-RN to be a valid measure of

competence. Secondly, due to the dissimilar pedagogical approach of TTTT compared to experiential, active learning, ineffective integration of TTTT with current pedagogical methods could negatively impact students. Nurse educators are responsible to create proficient test-takers and long-term competent RNs, which often results in an ethical dilemma due to the pedagogical differences. Educators can address this issue by acknowledging the reality of standardized testing in education and then assuming an ironic stance to separate the 'NCLEX-RN world' from the 'real world'.

Third, TTTT does not necessarily improve overall learning primarily related to the faculty stress and ethical dilemma, leading to poor instructional quality or instruction overly focused on TTTT. Tantamount to the future test-takers, nurse educators must assume a pragmatic approach to the exam, which can be difficult if a purist stance is held, to ensure that TTTT does not impede high-quality instructional methods and overall student learning.

For stakeholders. The pertinent message that stakeholders should gain from these findings involves the impact of NCLEX-RN use in Canada and considerations related to the exam content and format. Educational impact – a concern originally voiced by MacMillan and colleagues (2017), is evident in these findings. This impact is observed through the integration of NCLEX-RN style testing into Canadian curriculum in combination with participant expectations of a greater focus on acute-care hospital nursing and preparation for the NCLEX-RN throughout their baccalaureate degrees.

These findings affirm that the NCLEX-RN still lacks content reflective of the Canadian healthcare system, nursing roles within this system, and nursing education. Although participants acknowledged this disparity between exam and curriculum content, the participants focused on the need to alter the curriculum to match the NCLEX-RN. The participants felt that

their baccalaureate degree should prepare them to write the nursing licensure exam, the NCLEX-RN. This expectation was, however, not met by most institutions because of the difference in curriculum and exam focus, and insufficient preparation for NCLEX-RN style testing. The question to consider here – should the baccalaureate curriculum be shifting to match the content and format of external evaluation, the NCLEX-RN, vice versa, or a combination of both?

Another point for re-consideration is the actual exam type – standardized, high-stakes testing. The participants felt that the NCLEX-RN did not assess their knowledge level or was not reflective of the amount of knowledge possessed. High-stakes testing is shown to be useful in the literature to determine current level of knowledge but there is a paucity in research to confirm reliability and validity of this testing method. A recent literature review of high stakes testing use in nursing education revealed important positive and negative consequences of their use to consider. Positive consequences include increased motivation, confidence, knowledge, and critical thinking according to the literature. The participants in this study felt that the NCLEX-RN assessed their ability to critically think, problem solve, and assess. These skills are also important for test taking. Did the NCLEX-RN assess the students' ability to take a test with their current level of knowledge or, did the exam assess competence developed over their four-year baccalaureate degree? The participants also reported that the exam enhanced their critical thinking ability and level of knowledge. Again, did the exam assess and enhance critical thinking in respect to test taking ability? Could the increased level of knowledge be related to information overload when preparing for any high stakes test or, possibly, the fact that all participants utilized American-based preparatory resources and were introduced to new knowledge that was required for the exam? Are these observed positive effects sustained or temporary due to these considerations?

The negative impacts of high stakes testing in nursing education that are of utmost importance to consider at the policy-level include evidence reporting that these exams hold bias against minorities, English as a second language students, gender, and poor test-takers; and that a focus on TTTT opposed to curricular content can occur. The study participants also recommended inclusion of a clinical component to the exam while empathizing with the fiscal constraints. Perhaps the costs associated with American preparatory materials could be reduced and redirected to the inclusion of a Canadian clinical exam component. The attribution of clinical competence and readiness to practice to experiential education by the participants supports the importance of this suggestion. The need to assume the test-taker perspective to succeed in the 'NCLEX-RN world' leads to the contemplation that not only does the NCLEX-RN not evaluate experiential knowledge, the exam encourages removal of this knowledge. A final participant posed suggestion is to reconsider the impact that unlimited exam attempts without remediation may have on the public. Devise other options to deal with initial failure due to test anxiety, a bad day, whatever the limiting factor may be. All encompassing, is it safe to maintain that high stakes testing is the best measure of competence for nursing licensure? Perhaps, perhaps not.

Limitations

The value-laden nature of qualitative research and the subjectivity of data interpretation imparts the potential for researcher bias. This risk has been considered since inception of this research study and measures have been taken to reduce this risk including PSI acknowledgment of this risk, identification of her position in the research and reflexive journaling throughout the research process. This risk for researcher bias was also mitigated through member checking, and investigator and data triangulation to reduce the likelihood of biased data interpretation by the PSI or faculty supervisor. Notably, only half of the participants participated in member

checking. The use of a qualitative, case study approach may also prove difficult to replicate in part due to the impact of contextual variables. The audit trail is detailed and in-depth and the impact of contextual variables on participant responses' and findings has been discussed to enhance reproducibility. These findings are not generalizable to large populations because determination of statistical significance of findings was not the focus of this research approach. Additional limiting factors include that data was only collected from RNs in the clinical domain, recall bias was present among RNs who had written the NCLEX-RN two or three years prior, and the inability to effectively explore ETP competencies and the NCLEX-RN was likely restricted by insufficient pre-testing of the interview guide.

Recommendations for Future Research

This study contributes to the current body of Canadian literature about the NCLEX-RN use in Canada but also advocates for further research to be conducted in this area grounded in these findings. Qualitative and quantitative methods can be used to explore the following recommendations. Naturally, a larger scale study would be beneficial to examine for statistical significance. Firstly, due to the absence of RNs outside of the clinical domain and in leadership positions, this could be an area to explore later to account for experience required to transition to other domains and leadership roles. The perspectives of test-takers about the assessment of Canadian ETP competencies in the NCLEX-RN is warranted based on this data and the current literature. The use of RNs who recently completed the exam would help eliminate recall bias concerns. Pragmatically, the exploration of factors that increase or hinder success on the NCLEX-RN in Canada would be beneficial to provide guidance for future-test takers and nurse educators. For example, success rates of collaborative versus baccalaureate program graduates; success rates of graduates who solely used Canadian versus American-based preparatory

materials, graduates from programs heavy on experiential education and light on traditional TTTT and vice versa; graduates aware of and used preparatory materials based on their personal learning style; graduates who were group prepared versus those who independently prepared; and first-attempt success rates of graduates given an unlimited amount of time to write.

The exploration or examination of high stakes examination use as the nursing licensure exam in Canada would prove valuable based on the findings of this study and in consideration of current research evidence. Fundamentally, the recognition of what the NCLEX-RN is testing is of utmost importance. For example, is this high-stakes examination primarily testing current knowledge and test-taking ability, the knowledge basis and competence level of which practice decisions will be formed, or both? Prospectively, studies that explore this question might involve assessment of NCLEX-RN pass ability of RNs who have written the exam, been in practice for a year in a 'generalist' area, and attempt the exam again, based only on their current level of knowledge and competence. Alternatively, pre-NCLEX-RN practicing RNs in a 'generalist' area could complete the exam to determine pass ability; one group attempting based only on current level of knowledge and competence, and a second group provided with recommended NCLEX-RN study materials. The incorporation of practicing RNs from acute and non-acute care areas may also be interesting based on the recognized acute focus of the exam. Ultimately, what if a pre-NCLEX-RN RN holding 10 years of experience and outstanding references from her interdisciplinary colleagues were to attempt, and fail the NCLEX-RN? Would this RN no longer be recognized by the CNO (2017e, para. 25) as "safe" for practice?

Conclusion

The CNO (2018) states that the NCLEX-RN is a valid measure that "tests the competencies nurses need at the beginning of their careers … [to] … ensure that it grants

registration only to those who demonstrate the nursing knowledge to provide safe care" (para. 1). The purpose of this collective case study was to better understand the nursing licensure examination, the NCLEX-RN, as experienced by Canadian RNs from both acute and non-acute care environments in Ontario, Canada. This exploration was validated by a paucity of research about the NCLEX-RN in Canada since the exam's adoption from the USA in January of 2015.

The implications derived from the findings and in consideration of relevant literature occur at the pragmatic, theoretical and political level for future test-takers, nurse educators, and political stakeholders, respectively. The study participants perceived the exam to not be reflective of their knowledge level but to assess and enhance their ability to critically think and problem solve. Was critical thinking or test-taking ability assessed and enhanced? Could the perceived increase in critical thinking and problem solving relate to the high volume of information review required for any high stake's exam or to the introduction of new knowledge from the American preparatory resources? Did the NCLEX-RN assess the students' ability to take a test well with their current level of knowledge, or did the exam assess competence developed over their four-year baccalaureate degree? Pragmatically, despite these concerns, future test-takers should focus on understanding and learning how to successfully approach the exam based on current evidence. Educators should be knowledgeable about the association between high stakes testing and TTTT to help students identify, understand and separate the 'NCLEX-RN world' from the 'real world' of baccalaureate nursing practice in Canada.

Political stakeholders should question the use of the NCLEX-RN in Canada not only because of the lack of content reflective of Canadian healthcare values and nursing roles but also based on baccalaureate curriculum adaptation to the content and format of this high stakes exam in combination with the petition by nursing students to further adapt and adopt a TTTT approach

to learning. Albeit useful to assess current level of knowledge, the negative consequences identified in the literature such as, biased results for certain groups, a TTTT instead of curriculum content focus and the lack of evidence for reliability and validity of this testing, must be considered. Curiously, should the Canadian baccalaureate curriculum be adapting to an American-derived exam? Are the expectations and TTTT mentality the best means to prepare Canada's future nurses?

The impact of unlimited exam attempts without remediation on the public and the reactionary nature of this decision was also discussed. The need for research to explore this potential impact is transparent. Further research should also be conducted to identify contributors to exam success and to exam failure among the Canadian testing population, to explore and examine perspectives about the NCLEX-RN from Canadian RNs in non-clinical domains and who inhabit leadership roles, and perspectives of test-takers about the presence or absence of ETP competencies in the NCLEX-RN. Comprehensively, deeper investigation into what attributes are assessed and are not assessed through high stakes examination should also be implemented. Naturally, the conduction of a larger scale, quantitative study to validate current findings in this research area would also prove to be a beneficial contribution to the current body of knowledge. Nevertheless, the question remains – is the NCLEX-RN judging test-taking ability, measuring competence of new graduates for licensure, or a combination of both?

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Appendices

Appendix A

Initial Message to Colleagues and Professional Contacts

Hello [name],

I am currently seeking participants for a research study that I am conducting as part of my Master of Applied Health Sciences (Nursing) at Brock University. The purpose of this study is to better understand the experiences and perceptions of Canadian Registered Nurses with the NCLEX-RN.

I am seeking RNs who work in any of the five primary areas of practice - clinical, education, administration, research, or policy, and in any setting. The RN must have written and passed the NCLEX-RN (regardless of number of attempts), have graduated from an accredited nursing program in Canada, and be currently in good standing with the College of Nurses of Ontario.

Time commitment is approximately: 30 minutes and involves either a face-to-face interview at Brock University, or telephone interview. Plus, approximately 5 minutes to review the brief summary of your transcript post-interview.

As a token of appreciation for participating, each RN can enter a draw for one $150 VISA gift card, out of a potential sample size of 4-5 participants.

Please contact me if you are interested in participating in this study.

If you know of another RN who might also be interested, could you please pass along my contact information, or alternatively (with permission), pass the RN's contact information on to me?

Thank you in advance for your assistance!

Kerri Podwinski
E. kp11rl@brocku.ca

Appendix B

Letter of Invitation

May 15, 2018

You are being invited to participate in a research study entitled, *Canadian Registered Nurse Experiences with the NCLEX-RN: A Collective Case Study*.

The purpose of this single-site study is to better understand the experiences and perceptions of Canadian Registered Nurses with the NCLEX-RN. Should you choose to participate, you will be asked to complete a one-on-one interview with myself in a private meeting room at Brock University about your experiences with, and perceptions about, the NCLEX-RN in Canada. Shortly after the interview, I will send you a brief summary of your transcript to give you an opportunity to confirm the accuracy of our conversation and to add or clarify any points that you wish. The expected duration of the interview is approximately 30 minutes. The expected time needed to review the brief summary of your transcript is 10 minutes.

This research will benefit the nursing profession by aiming to better understand the experiences with the NCLEX-RN in Canada, from a registered nurse's perspective. Participation in this research may benefit you by providing a confidential avenue to share your experiences with the NCLEX-RN, creating validation of your experiences and feelings towards the exam, and providing a sense of empowerment by being able to contribute to nursing in Canada through sharing your experiences and perceptions.

Participation is completely voluntary, and you can withdraw from the study at any time. Your job position will not be impacted in anyway if you choose to participate or to forgo participation in this study. As a token of our appreciation for participating, you will have the opportunity to enter a draw for one $150 VISA gift card, out of a potential sample size of 4-5 participants.

If you have any pertinent questions about your rights as a research participant, please contact the Brock University Ethics Officer at (905) 688-5550 ext. 3035 or at reb@brocku.ca.

If you have any questions or require further information about the study, please feel free to contact myself or my supervisor listed below.

Many thanks for your consideration,

Kerri Podwinski, RN BScN
Master of Applied Health Sciences (Nursing) Candidate,
Brock University
kp11rl@brocku.ca

Dr. Jenn Salfi
Associate Professor,
Brock University
jsalfi@brocku.ca

This study has been reviewed and received ethics clearance through Brock University's Research Ethics Board (file #17-416).

Appendix C

Interview Script and Guide: Face-to-Face or Telephone

Time of interview: Date: Place:
Interview Letter:
Interviewer: Kerri Podwinski

First, thank you for joining me today to participate in an interview. Again, my name is Kerri and I am completing my Master of Applied Health Sciences (Nursing) degree at Brock University. The purpose of this research study is to better understand the experiences and perceptions of Canadian registered nurses with the NCLEX-RN. Please remember that your participation is completely voluntary with no repercussions. You can refuse to answer any and all questions during the interview and withdraw your consent to participate at any time.

Before we begin, have you had time to review the Participant Information-Consent Letter?

- Yes – Do you have any questions before we proceed?
    - Address if any questions, then sign consent form / retrieve verbal consent
- No – OK, no problem. I will provide you with a copy that you can review privately, then ask any questions you may have before we begin.

**If participant declines consent:*
Thank you for your time and willingness to assist in this project. Please know that you do not need to provide a reason for your withdrawal. If any further questions arise, you can either contact myself or the Brock University Research Ethics Board.

I am going to start by asking you some questions about yourself including about your educational background, NCLEX-RN experience, and past and current nursing positions.

Questions

Demographic

1. What is your gender?
2. How old are you?
3. What is your educational background (i.e. degrees complete)?
4. When did you graduate from your baccalaureate degree?
5. When did you write the NCLEX-RN?
6. How many times did you write the NCLEX-RN?
7. Do you recall how long/how many questions you had to answer to pass?
8. Did you use specific resources to help you study for the exam?
    a. If so, how many, and what types of resources did you use to prepare for the exam?
    b. What made you select these resources?
    c. Did you use any resources from your baccalaureate degree? Please explain.
9. What was your first job title and care environment post-graduation? How long were you in that position?
10. What is your current job title and care environment? For how long?

*What factors led you to change position/or not change position from previous/post-grad?

Main

1. Tell me about your current nursing position.
    a. What are your main roles and responsibilities?
    b. What specific knowledge and skills are required for this role?
    c. Are you familiar with the CNO ETP doc?
        i. Can you identify any competencies stated within this document that are critical to your current nursing position? (look at pp. 5 – 10)
    d. What population(s) do you care for/work with?

2. Tell me about your experience completing your baccalaureate nursing degree.
    a. What types of courses did you take?
        i. How do you feel about the courses you took?
    b. What types of clinical placements did you complete?
        i. How do you feel about the placements you completed?
    c. Did your education help you develop the knowledge and skills (or these ETP competencies) required for your current professional practice? Please explain with examples.

3. Tell me about your experience booking, preparing for and writing the NCLEX-RN.
    a. Booking: Was booking the exam a positive or negative experience for you? Please explain.
    b. Preparing: How did you prepare for the NCLEX-RN? (i.e. study strategy, resources)
    c. Writing: What are your thoughts on the exam format? Content? What factors do you feel contributed to success (or failure) on the exam?

4. How would you describe the relationship between your baccalaureate education and your experience with the NCLEX-RN?
    a. Course vs. exam content?
    b. Clinical placements vs, exam content?
    c. Content you feel should have been included or excluded on the NCLEX based on baccalaureate degree?

5. How does your experience with the NCLEX-RN relate to your current nursing position?
    a. Roles/experiences in your position vs. exam content?
    b. Content you feel should have been included or excluded on the NCLEX-RN based on your experience in your current position?
    c. Do you feel the NCLEX-RN prepared you to practice safely in your position? How so or how not?

6. Generally, what would you identify as important knowledge and skills (competencies) of a new graduate RN in today's Canadian healthcare system? Please elaborate on how you came to your answer(s).
        i. Different care environments and roles… acute vs non-acute… other roles such as researcher, manager, educator, administrator, clinician….

7. Do you believe that the NCLEX-RN is a valid measure of competencies (for example, those mentioned in the previous answer) for RN licensure and practice in Canada? Why or why not?

Thank you for sharing your experiences and perceptions with me. Is there anything further that you would like to add that we have not touched on before we close the interview? [Yes – Okay, please share your further thoughts with me.]

Again, thank you for your time today. Once I review your interview transcript, I would like to send you a brief summary of my interpretation of the findings for you to review, which you can add or clarify anything you wish. Can I send you this brief summary to review?

Lastly, are you interested in providing your email to enter the draw for one $150.00 VISA gift card as a token of appreciation for your time today? [Yes – Okay. I will write down your email. Once all interviews have been completed, the winner of the draw will be randomly selected and notified via email.; No – No problem. Thank you for your time today.)

Do you have any further questions or require clarification before we close this encounter?

Appendix D

Participant Information-Consent Letter

Date: May 15, 2018
Title: Canadian Registered Nurse Experiences with the NCLEX-RN: A Collective Case Study

Principal Student Investigator: Kerri Podwinski, Master of Applied Health Sciences (Nursing) Candidate
Department of Nursing, Brock University
kp11rl@brocku.ca

Faculty Supervisor: Dr. Jenn Salfi, Associate Professor
Department of Nursing, Brock University
jsalfi@brocku.ca

INVITATION
You are invited to participate in a study that involves research. The purpose of this study is to better understand the experiences and perceptions of Canadian Registered Nurses with the NCLEX-RN.

WHAT'S INVOLVED
As a participant, you will be asked to complete a one-on-one interview with myself in a private meeting room at Brock University or via telephone conversation about your experiences with, and perceptions about, the NCLEX-RN in Canada. The interview will be digitally recorded. The expected duration of the interview is approximately 30 minutes. Shortly after the interview, I will send you a brief summary of my interpretation of your responses to give you an opportunity to confirm the accuracy of our conversation and/or to add or clarify any points that you wish. The expected time commitment to review the brief summary of your transcript post-interview is approximately 5 minutes. Upon receipt of the summary, you will have one week to review the summary and provide feedback to the Principle Student Investigator. If you do not provide feedback by this time, the Principal Student Investigator will assume that you confirm accuracy of our conversation and that you do not wish to clarify or add any points.

POTENTIAL BENEFITS AND RISKS
Potential benefits of participation in this study include providing a confidential avenue to share your experiences with the NCLEX-RN, facilitating validation of your experiences and feelings towards the exam, and creating a sense of empowerment by contributing to nursing in Canada. As a token of our appreciation for participating, you will also have the opportunity to enter a draw for one $150 VISA gift card, out of a potential sample size of 4-5 participants. Please note that in the event of withdrawal from the study, you will not retain the ability to enter a ballot into the gift card draw.

The risk is minimal, but there is a possibility that participation in this study may evoke distress associated with discussion of the NCLEX-RN, dependent upon the participant's unique experience. To mitigate this potential risk, 24-hour crisis numbers that you can call include the

Good 2 Talk hotline at 1-866-925-5454 or the Niagara Distress Centre at 905-688-3711. The Canadian Mental Health Association (CMHA) in Niagara also offers free walk-in counselling for adults age 16 years or older on Tuesdays from 11:30am to 5:30pm at Branscombe Mental Health Centre (1338 Fourth Avenue, St Catharines), Wednesdays at CMHA Niagara Falls Resource Centre (6760 Morrison Street, Niagara Falls), and Thursdays at CMHA Fort Erie Office (20 Jarvis Street, Fort Erie).

CONFIDENTIALITY

The information you provide will be kept confidential. Your name will not appear in any thesis, presentation, or journal article resulting from this study. Anonymous quotation may be used in the dissemination of research findings. Please also note that a non-specific identification of position such as, manager, educator, researcher, clinician, or administrator, and of practice area, for example, hospital or community care, will be kept with the interview data as this is integral to the central research question.

Data collected during this study will be recorded digitally on my fingerprint protected iPhone, a digital recorder, and in writing on each interview guide. The interview recordings will be transcribed on my personal, password protected computer. Data will also be shared via password protected email with my faculty supervisor, Dr. Jenn Salfi. Recordings on my iPhone will remain on this device, where only my fingerprint is registered for access, until transcription of the interview after which the recording will be permanently deleted. The digital recordings on the digital recorder will also be permanently deleted after transcription of each interview. The transcripts and Microsoft Word documents used for data analysis will be stored on my personal, password protected computer with only myself holding the password. The digital recorder and hardcopy of the interview guides will be kept in a locked file cabinet in my home office, where I solely hold the key for access to this cabinet. The consent forms will be stored in a separate drawer of the filing cabinet system in my home office than the interview guides. The consent forms and interview guides will also be kept in separate sealed envelopes. Consent forms and transcript data will be kept for five years after which time any hardcopies of data will be shredded and any electronic copies permanently deleted.

VOLUNTARY PARTICIPATION

Participation in this study is completely voluntary. If you wish, you may decline to answer any or all questions of the interview. Further, you may decide to withdraw from this study at any time and may do so without any penalty or loss of benefits to which you are entitled. Your job position will not be impacted in anyway if you choose to participate or to forgo participation in this study.

If you decide to withdraw from the study at any point, simply inform either myself, Kerri, or my faculty supervisor, Dr. Jenn Salfi, via the contact information provided on this letter. You do not need to provide a reason for withdrawal. If you withdraw consent during or after the interview, I will ask if the data collected up until consent was withdrawn, can be kept and included in data analysis. With your consent, the data will be kept and included. If you do not consent, all hardcopy data collected from your interview will be shredded and all electronic data will be permanently deleted.

PUBLICATION OF RESULTS

Once the data has been analyzed and the study has been completed, the Principal Student Investigator and Faculty Supervisor will be compiling a manuscript revealing the findings of the research, as part of our dissemination plan (Summer 2019). Results of this study may be published in professional journals and presented at conferences. If you are interested in receiving the manuscript or a short summary of the findings, please contact the Principal Student Investigator, Kerri Podwinski (contact information found above).

CONTACT INFORMATION AND ETHICS CLEARANCE

If you have any questions about this study or require further information, please contact the Principal Student Investigator, Kerri Podwinski, or the Faculty Supervisor, Dr. Jenn Salfi using the contact information provided above.

There are no companies or agencies sponsoring this single-site project. This study has been reviewed and received ethics clearance through the Research Ethics Board at Brock University (file #17-416). If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Officer at (905) 688-5550 ext. 3035 or at reb@brocku.ca.

Thank you for your assistance in this project. Please keep a copy of this form for your records.

CONSENT FORM

Face-to-Face Interview

I agree to participate in this study as described above. I have made this decision based on the information I have read in the Participant Information Letter. I have had the opportunity to ask any questions and receive any additional details I wanted about the study. I also understand that I may ask questions in the future. Finally, I understand that I may withdraw this consent at any time.

Name: _____

Signature: _____ Date: _____

Telephone Interview

VERBAL CONSENT received? __ Yes __ No Participant name: _____

Researcher signature: _____

Date: _____