NEW GRADUATE NURSE TRANSITION TO PRACTICE AND RETENTION IN RURAL SETTINGS: A MIXED METHODS STUDY

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Preface

Student and collaborators contributions.

Elements	Mixed methods study on the transition to practice of newly graduated nurses and the factors that influence their retention in hospitals in rural settings across Ontario.
Conceptualization of the research project	ER, ML, JC, SH
Data gathering	ER
Data analysis and interpretation	ER, ML
Content writing	ER
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Abstract

Given the global shortage of nurses, New Graduate Nurses (NGN) play an integral role in ensuring a strong nursing workforce. However, retention of these nurses is problematic, especially in rural settings where there remains a gap in our understanding of this concept. The purpose of this master's study is to explore the transition to practice of NGNs and the factors that influence their retention in rural settings across Ontario using a mixed methods design. Utilizing the models of Job Embeddedness (Mitchell & Lee, 2001) and Transition Stages (Boychuk Duchscher, 2008), the results show the unique challenges that influence NGNs transition to practice in these settings such as the presence of higher role expectations and responsibilities, a lack of support during orientation and the difficulties associated with working amongst casual agency nurses. By contrast, a strong sense of belonging was identified as being an important facilitator.

Résumé

Les infirmières nouvellement diplômées (IND) jouent un rôle essentiel. Cependant, la rétention de ces infirmières est problématique, surtout en milieu rural où il reste des lacunes dans notre compréhension de la transition de celles-ci. Le but de cette étude de maîtrise est d'explorer la transition vers la pratique des IND et les facteurs qui influencent la rétention de celles-ci dans les milieux ruraux en Ontario à l’aide d’un devis de méthodes mixtes. En utilisant les modèles d'intégration de l'emploi (Mitchell et Lee, 2001) et d'étapes de transition (Boychuk Duchscher, 2008), les résultats décrivent les défis uniques qui agissent comme barrières à la transition des IND dans ces milieux, tels que des attentes et des responsabilités plus élevées de la part des IND, le manque de soutien lors de l'orientation initiale et les difficultés associées au travail avec les

infirmières d'agence occasionnelles. Des facilitateurs de transition ont également été identifiés, telle qu’un fort sentiment d’appartenance.

Acknowledgments

I would first like to thank the nurses who took part in the study and shared their experiences with me. Being a New Graduate Nurse (NGN) is not easy, especially during a global pandemic. Your vulnerability and willingness to participate did not go unnoticed and will help guide future NGNs during their transition.

I would also like to take the time to thank my thesis supervisor, Michelle Lalonde for your guidance throughout these past 4 years and your valued mentorship in not only my academic career, but professionally as well. Michelle, your genuine persona, kindness, empathy, patience and honesty have brought me to this point, and I couldn't imagine having accomplished this milestone without your support along the way. I would equally like to thank the members of my thesis committee, Julie Chartrand and Sandra Harrisson for your collaboration over the past two years. Together, you have formed the most supportive committee to guide me in this process and have provided me with valuable knowledge, insight and recommendations to enhance this study. Julie, your knowledge of qualitative research and analysis has allowed me to fully immerse myself in this portion of the study. Sandra, I appreciated your understanding of methodology and frameworks which allowed me to dig deeper into the analysis and links between these items and my results. However, I appreciated most the committee's empathy, reassurance and guidance along the way. With that, Michelle was able to connect me with one of her PhD candidates, Julie Gagnon, who has taught me many valuable research skills throughout the years, has given me the opportunity to contribute to her studies and has served as an important mentor for me throughout my thesis. Thank you, Julie, for your guidance and support throughout these past few years.

I would like to dedicate this work to all of the NGNs beginning their careers and to the many mentors I have had along the way who have helped pave the way into this unique but fulfilling profession.

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Acronyms

CA:	Census agglomeration
CASN:	Canadian Association of Schools of Nursing
CMA:	Census metropolitan area
CNO:	College of Nurses of Ontario
EANO:	Emergency Nurses Association of Ontario
NGG:	Nursing Graduate Guarantee Initiative
NGN:	New Graduate Nurse
RN:	Registered Nurse
RNAO:	Registered Nurses Association of Ontario
RPN:	Registered Practical Nurse
TSPN:	Tuition Support Program for Nurses (TSPN)

Chapter 1 – Introduction

It is common for new graduate nurses (NGNs) to experience difficulties throughout their transition to practice as an independent nurse (Joseph et al., 2022). In fact, reported turnover rates for NGNs in the first two years of practice in the US is 26.2% (Kovner & Djukic, 2009). Comparatively, the overall turnover rate for registered nurses (RNs) in Canadian hospitals is 19.9% (O'Brien-Pallas et al., 2010). A Canadian study identified that nurses leave due to a lack of support from managers, physicians, colleagues as well as a lack of support from the organization with inadequate pay, professional development and continuing education opportunities (O 'Brien-Pallas et al., 2010). These high turnover rates contribute to the operational costs of hospitals (Wolfort et al., 2019) and to the lack of continuity of care for patients (Wakaerman et al., 2019). In addition, new nurses experiencing this transition in rural settings may have added challenges compared to NGNs in metropolitan hospitals. Rural centers are not immune to the effects of the global nursing shortage; difficulties with NGNs transition and retention add to the challenges already faced by these areas. Although there is a plethora of literature on NGN transition to practice (Boychuk Duchscher, 2008, Boychuk Duchscher, 2009, Boychuk Duchscher, 2018; Lalonde et al., 2021; Murray et al., 2019; Vanderspank-Wright et al., 2019), little has focused on NGNs working in rural settings. As such, nurse leaders in rural settings have limited evidence to guide the development and implementation of interventions to better support and retain NGNs in these settings. Therefore, the purpose of this study is to explore the transition to practice of NGNs and the factors that influence their retention in rural settings across Ontario. This will be done while taking into consideration their sense of

belonging in the community and workplace, and how these concepts affect their transition and retention.

Prior to 2020, it was estimated that there was a world-wide shortage of 9 million nurses and midwives (Drennan & Ross, 2019). However, the International Council of Nurses (2022) reported that the COVID-19 pandemic worsened the nursing shortage, suggesting that up to 13 million nurses will be needed over the next decade. While highlighting the shortage of nurses, the COVID-19 pandemic has also accentuated the increasing rates of absenteeism, burnout and job dissatisfaction in addition to growing demands for services (Poortaghi et al., 2021; Wolters Kluwer, 2020). The Registered Nurses Association of Ontario (RNAO) surveyed and collaborated on surveys geared towards the nursing profession three times over the course of the pandemic (RNAO, 2021). The first survey, RNAO's Work and Wellbeing Survey (2021), focused primarily on the nursing workforce in Ontario. The survey results demonstrated that early-career RNs reported the greatest challenges with coping and that Ontario is at risk of losing more than 20% of early career RNs and Nurse Practitioners (NP) (RNAO, 2021). The second survey, the Canadian COVID-19 workforce survey in partnership with Rosemary Bryant AO Research Centre at the University of South Australia and Nursing Now International, focused on nurses across Canada. According to the results of this survey, 67% of participating nurses reported having symptoms of burnout, and 68.5% plan to leave their current position within the next 5 years, with 12.6% of these nurses planning to leave the profession altogether (RNAO, 2021). Finally, the third survey, the Healthy Professional Worker Partnership, was led by Dr. Ivy Bourgeault from the University of Ottawa. This survey focused on seven case study professions (including nursing) and compared the effects of the pandemic between the professions. The results from the third survey have not yet been published. In addition, The Ontario Science

Advisory Table compared burnout rates amongst Canadian health-care workers, affecting 30-40% in spring of 2020 compared to 60% in spring of 2021. It was found that nurses working in higher acute settings such as the emergency department and intensive care, recent graduates and nursing students were all at greater risk of developing and being affected by burnout.

It is important to consider that three cohorts of NGNs started their career during the pandemic, which may have amplified challenges within our health care system (Poortaghi et al., 2021). The transition from student to independent nurse is difficult; they experience role conflict, stress, and role ambiguity often in a negative workplace culture (Boychuk Duchscher, 2008; Lalonde & McGillis Hall, 2016; Ostini & Bonner, 2012). NGNs transitioning throughout the pandemic presented additional difficulties with the pressure that came with being labelled as "heroes" by numerous politicians, mass media coverage and the public (Scaini, 2021). Throughout the pandemic, nurses had to not only adapt to the new level of regular risk of personal safety, but they also had to accept the harsh reality that appreciation and recognition would only be received if they put themselves in dangerous positions, ultimately risking their personal health and wellbeing (McMillan et al., 2023; Mohammed et al., 2021).

Although there are many factors highlighted in the literature that can affect NGNs transition and retention in the workforce, there is little focus on factors that may be unique in rural settings. According to the Rural Ontario Institute (2022), a rural area is defined as an area located outside the census metropolitan areas (CMA). Statistics Canada (2016) defines CMA's and CA's as being one or more adjacent municipalities located around a population center. A CMA must have a total population of at least 100,000, and at least 50,000 must live in the core. As for the CA, its core must have a population of at least 10,000. To be included in a CMA or CA, the other adjacent municipalities must have a high degree of integration with the core, which

is determined by the percentage of commuters based on data from the previous census in the workplace (Statistics Canada, 2016). For the purpose of this study, the following definition will be used when referring to a rural setting: an area outside of a CMA or CA (Statistics Canada, 2016).

1.1 Personal impetus for this thesis

I became interested in this subject following my personal experience as an NGN in a rural critical care setting. I found that my transition to practice seemed more difficult compared to my classmates who were working in an urban setting as they had formal orientation programs and ongoing training in addition to support from their colleagues going through similar work experiences. The transition of NGNs is an important factor to consider when exploring the retention among nurses given that it is a period fraught with a high level of stress, adjustment to the nursing role and reality shock (Casey et al., 2021).

During the winter 2022 academic session, I was enrolled in the advanced practice nursing course as part of my master's. I completed a 117-hour clinical placement at Temiskaming Hospital in Northern Ontario. I was able to explore the issue of retention among NGNs in rural areas in their first three years of practice. Through a survey and interviews with new graduate nurses and managers, I discovered a number of factors that can contribute to low retention of nurses in this setting, such as an overload of patients and their high level of acuity, an inability to accommodate patients' needs, a lack of material resources to implement training (e.g.: mannequins, simulation products), a lack of sense of belonging, low vacation request approval and negative workplace morale. Although the challenges related to the retention of NGNs has been raised in the literature, limited studies have been found on the perspective of NGNs working in rural areas. However, they are among the first to feel the impact of RN shortages

associated with low retention (Molinari & Monserud, 2008). As such, following this clinical placement experience, I transferred to the thesis stream to further explore this topic and fill a gap in the literature.

1.2 Goal and research questions

The goal of this study is to explore the transition to practice of NGNs and the factors that influence their retention in rural settings across Ontario. The research questions this study will answer are: 1) What are NGNs experiences transitioning into rural settings? And 2) How do retention efforts incentivise their intent to stay?

This monograph-based thesis is presented as follows. Chapter 1 presented the introduction and purpose of the study. The second chapter will explain the theoretical framework used for this study: the Transition Stages model (Boychuk, 2008) and the Job Embeddedness model (Mitchel & Lee, 2001). The third chapter will include a literature review and will highlight the importance of this study. Chapter 4 will cover the methodology used within the context of this study. Then, Chapter 5 will present the results. Finally, the thesis will end with Chapter 6, which will include a discussion and conclusion, covering implications and recommendations for the profession.

Chapter 2 – Theoretical Foundations

This next chapter will touch on the theoretical foundations of this study. It will begin by exploring the pragmatic stance of the student and will then discuss the framework used in this study: the combination of the Transition Stages Model and the Job Embeddedness Model.

2.1 Pragmatism

I position myself and this study through the worldview of pragmatism. My knowledge and experiences as an NGN in a rural area help to further the understanding of the transition and retention of NGNs who are going through similar experiences in these settings (Gillberg & Vo, 2011). The pragmatic stance helps shape the study to reach the goal of answering the research question. Pragmatism was developed in 1870 by Charles Sanders Peirce, William James, Chauncey Wright, Oliver Wendell Holmes Jr., and Nicholas St. Johns Green (Kaushik & Walsh, 2019). In the last century, the paradigm was taken up by John Dewey, George Herbert Mead and Arthur F. Bentley (Kaushik & Walsh, 2019). According to pragmatism, there are several realities, and they must be experienced by the participants; there are consequences that follow actions, and these experiences can be pluralistic (Mackenzie & Knip, 2006). As such, this is a particularly useful lens through which to explore the topic of this study since the transition and retention of nurses can differ from one NGN to another and from one environment to another (Feilzer, 2010; Mackenzie & Knip, 2006). Since rural areas are unique compared to metropolitan areas, this paradigm allows to take a particular look at the factors that influence the retention and transition of NGNs in such areas. This paradigm offers an approach that is socially useful and that promotes the answer to the problem using experiences gained from NGNs (Feilzer, 2010; Kaushik & Walsh, 2019). This paradigm places the research problem in the center to apply a

variety of approaches which help understand the research problem, which can allow for a mixed method design to be used (Mackenzie & Knip, 2006).

2.2 Framework

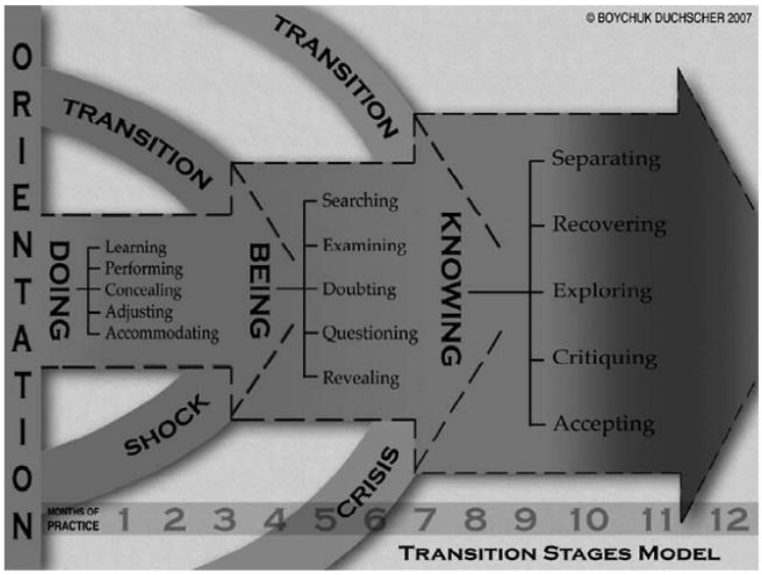
This study is based on a framework composed of a combination of two models: Boychuk Duchscher's Transition Stages Model (2008) and Mitchell and Lee's Job Embeddedness Model (2001). The following section will describe these models, as well as explain how they are integrated to better understand the factors that influence NGNs transition to practice and retention in rural settings across Ontario.

2.2.1 Transition Stages Model

Judy Boychuk Duchscher, a registered nurse and professor, plays an important role in the nursing field as an active researcher and consultant in new graduate nurse professional role transition. This role has allowed her to develop the Transition Stages Model (2008), which is based on a program of research she developed over 10 years focused on NGN transition and experiences. According to Boychuk's (2008) Transition Stages Model (Figure 1), the period of transition to professional practice is a 12-month long stage during which the NGN experiences the process of *Becoming* (Boychuk Duchscher, 2008). The process of *Becoming* encompasses processes that include anticipating, learning, performing, concealing, adjusting, questioning, revealing, separating, rediscovering, exploring, and engaging (Boychuk Duchscher, 2008). As part of the *Becoming* process, NGNs evolve through three phases: 1) Doing, 2) Being, and 3) Knowing (Boychuk Duchscher, 2008).

Figure 1

Transition Stages Model, Boychuk Duchscher, 2008. Reprinted with permission (Appendix A)



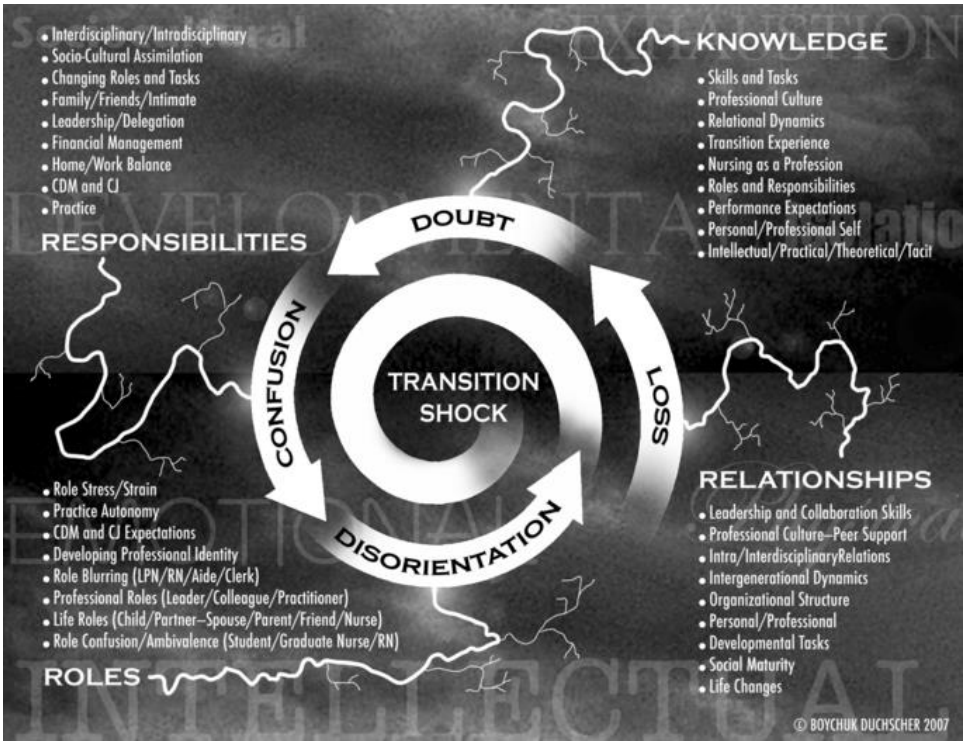
The *Doing* phase takes place during the first 3-4 months of work post-orientation and it is related to NGN learning, performance, concealment, adjustment, and accommodation (Boychuk Duchscher, 2008). The learning curve in this phase is steeper due to the many new features, including caring for unstable patients, having multiple responsibilities (e.g., administration, direct patient care and interdisciplinary work), caring for critical and dying patients, and communicating with families (Boychuk Duchscher, 2008). The second phase, *Being*, lasts approximately 4 to 5 months post-orientation (Boychuk Duchscher, 2008). The first half of this phase corresponds to when the NGNs become more comfortable with their professional roles and responsibilities. This comfort allows them to begin examining the profession, the medical interventions and critique the effectiveness of the healthcare system (Boychuk Duchscher, 2008). This phase consists of a constant and rapid progression of their thinking, level of knowledge and skills, which can lead to anxieties and insecurities in their level of abilities (Boychuk Duchscher, 2008). However, during the second half of the *Becoming* phase, their anxieties subside allowing them to reacquaint themselves with their personal goals that may have been dismissed during

their focus on their professional growth (Boychuk Duchscher, 2008). The third phase, *Knowing*, is the last evolutionary phase of the NGN (Boychuk Duchscher, 2008). During this phase, the nurse distinguishes themselves with their knowledge and their confidence, they begin to explore, criticize, and accept their practice (Boychuk Duchscher, 2008). NGNs begin to engage with experienced nurses and feel included in the profession (Boychuk Duchscher, 2008). During this phase, the NGN may begin to show job dissatisfaction, criticize their working conditions and environment, and experience impatience with feelings of powerlessness to implement change in their practice environment (Boychuk Duchscher, 2008).

Boychuk Duchscher and her colleague have added to the Transition Stages Model by developing the Transition Shock Model (2009) which is based on the relationships, roles, responsibilities, and knowledge that motivate and alter the NGN transition experience (Boychuk Duchscher & Windey, 2018). Transition shock highlights the physical, intellectual, emotional, developmental, and sociocultural changes within the experience of transition. This model highlights the factors that motivate and mediate the transition intensity and duration: knowledge, responsibilities, roles, and relationships. The intensity of the transition shock experienced by NGNs is observed most in the initial few months of orientation. In the first two months following orientation, the exhaustion and isolation that are felt from the disorienting, confusing, doubtful, and chaotic transition shock period can lead to a withdrawal from the intensity of the shock experience (Boychuk Duchscher & Windey, 2018). This transition period is difficult and is facilitated by incentives in other aspects of the NGN's life, which ultimately encourage the NGN to persevere through these 12 months of insecurity and uncertainty. These facilitators will be reviewed under the Job Embeddedness Model.

Figure 2

Transition Shock Model, Boychuk Duchscher, 2009. Reprinted with permission (Appendix B)



2.2.2 Job Embeddedness Model

Terence Mitchell and Thomas Lee, two professors from the University of Washington's School of Business (Mchenry, n.d.), studied the relationship between turnover and retention rates to better understand the concept of employee retention, which then led them to invent the Job Embeddedness (JE) Model (2001). JE englobes the reasons why people stay at a job and helps predict the intention to leave and actual turnover (Mitchell & Lee, 2001). In general, JE represents the accumulated reasons why a nurse will be retained in a rural hospital (Strong, 2010). The model is divided into three main categories: Links, Fit and Sacrifice. 1) Links is the extent to which a person has close ties with people or groups at work and in their community; 2) Fit includes how well the person fits their job and community; and 3) Sacrifice is defined as the

extent to which they would have to give up or sacrifice things if they were leaving their job. The JE Model has six dimensions; 1) Fit: Community, 2) Fit: Organization, 3) Links: Community, 4) Links: Organization, 5) Sacrifice: Community, and 6) Sacrifice: Organization (Mitchell and Lee, 2001). The category of Links describes a person's attachment to friends, family, colleagues, and community (Mitchell and Lee, 2001). The community dimension is what makes this model relevant for this study. The community can be interpreted as the work environment and its sense of belonging. This attachment can help retain someone in a workplace (Mitchell and Lee, 2001). Studies have identified that JE can influence whether a person initiates and completes the process of quitting and what journey they will take to do so (Mitchell & Lee, 2001). The living environment has an impact in the Job Embeddedness Model, especially in nursing, and includes the cultural influences, forces and values that influence the life and work of an individual in the community (Gibbs, 2021; Kramer et al., 2011). The development and performance of nursing roles are influenced by physical, social, and interactive systems that constitute the environment, the values, and actions of people in the environment, and the organizational structures within which role performance occurs (Kramer et al., 2011). When a person demonstrates JE, they have a strong attachment to their workplace, their work and non-work friends, their groups, their physical environment, and their community (Stroth, 2010). The JE Model focuses primarily on attachment to the clinical and community settings (Mitchell and Lee, 2001). The JE Model has had previous use with rural communities to assess the connections that encourage RNs to stay in communities (Gibbs, 2021). In this study, JE will be used to better understand the importance of the sense of belonging of NGNs in terms of their retention in rural areas. It is thought that if a NGN does not have a positive relationship with their environment, their connection to the environment will be inhibited.

2.2.3 Integration of models

By using Boychuk Duchscher's Transition Stages Model (2008) and Mitchell and Lee's Job Embeddedness Model (2001), we can understand the impacts of NGNs' roles, responsibilities, relationships, and knowledge on the experience of transition and the retention of NGNs in rural areas. These models also allow us to better understand the values and goals related to the work of NGNs and how these affect the reality of their transition to practice. The NGN transition period includes important socialization that is often overlooked due to a rushed orientation to help ease the shortage of nurses in the organization (Lalonde & McGillis Hall, 2016). However, this socialization is essential for NGNs to establish a good bond and rapport with the staff in their workplace (Boychuk Duchscher, 2009). Hence, it is important to explore the transition to practice in rural settings and the factors that contribute to the retention of NGNs working in these settings.

Chapter 3 – Literature review

This next chapter will present a literature review on rurality, NGNs experiences of transition, NGNs experiences in rural settings, and solutions suggested or evaluated to ease NGN transition to practice. The student researcher developed a search strategy using the PICO framework (population: New Graduate Nurses (NGNs), intervention: transition programmes and retention facilitators, comparison: rural vs urban settings and outcomes: transition to practice and retention) with the assistance from a University of Ottawa librarian, Victoria Cole. The search was conducted on the CINAHL database using the following key words: new graduate nurse, novice nurse, new nurse, retention, turnover, attrition, rural, remote, isolated, rural health nursing, rural health centers, rural health services, in April and May of 2023. The literature review is divided in the following four sections based on the main concepts of this study: 1) Rurality, 2) NGN experience of transition, 3) NGN experiences in rural settings and 4) Solutions suggested or evaluated to ease NGN transition to practice.

3.1 Rurality

This next section will focus on the unique aspects of rural settings and review the distribution of rural hospitals across Ontario.

3.1.1 Facilitators and barriers

Rural settings are unique in terms of their geographical placement and lifestyle. Nurses who choose to work in rural settings often have predetermined reasons to do so (Molanari, 2011; Smith & Vandall-Walker, 2017). Some nurses opt for a rural environment because it is their place of origin, location of their partner's job, the place where they acquired their clinical experience or the place where they feel attached (Molanari, 2011; Smith & Vandall-Walker, 2017). While others choose to work in rural areas because there is a lack of urban work and they

want to experience the uniqueness of living in a rural setting (Molanari, 2011; Smith & Vandall-Walker, 2017). Molanari and colleagues (2011) investigated the relationships between lifestyle preferences, perceptions of academic readiness for the general rural RN role, and intention to move to an urban setting. It was found that 11% of participants (n=106) intended to move to an urban area ($z= -10.247$, $p <0.000$), all having had worked in the rural setting for less than 12 months.

Molanari and colleagues (2011) also reported a preference for rural lifestyle and choice of community as factors that influenced RNs choice. A quantitative study conducted by Gillespie & Redivo (2012), aiming to investigate the satisfaction in lifestyle, practice, preparation for practice and fit of organizational standards amongst Canadian child and youth mental health clinicians (n=44), found that the workers who were the least satisfied with their jobs were those who had been recruited externally. The majority (75%) of workers who were recruited from within the community agreed or strongly agreed that they were "very satisfied with their rural lifestyle", compared to 55% amongst those recruited from outside the community (Gillespie & Redivo, 2012). Cosgrave and colleagues (2018) conducted a qualitative study examining retention factors in early-career nurses and allied health professionals (social workers, psychologists, occupational therapists, aboriginal mental health worker and others) working in community mental health services situated in rural New South Wales (N=26). It was noted in this study that non-locals experienced a more difficult and longer transition period (Cosgrave et al., 2018). A person's fit with the community is an important aspect in rural settings, however there are additional challenges that arise when living in a rural area. Based on the student's previous experience in rural healthcare, she believes that the community context that nurses work in is unique in rural settings. With the strong literature evidence reinforcing this idea (Cosgrave et al.,

2018; Gillespie & Redivo, 2012; Molanari et al., 2011), she decided to incorporate this concept into her thesis study.

Moreso, Mbemba et al. (2013) conducted an umbrella review (n= 5) to determine the effectiveness of interventions to promote nurse retention in rural or remote areas across the US, Canada, and Australia. The authors reported findings that are similar to those identified in this literature review. It was noted that supportive relationships in nursing, technology support and financial-incentive programs influenced nurse retention in these areas (Mbemba et al., 2013). Supportive relationships included mentoring, clinical supervision and preceptorship which ultimately helped build opportunities for continued education and the nurse's confidence in practice (Mbemba et al., 2013). Technology support was found to help reduce professional isolation by aiding in networking and decision-making support (Mbemba et al., 2013).

3.1.2 Rural settings in Ontario, Canada.

There are 212 rural communities which are identified in the Communities by Rurality Index for Ontario (RIO). The student's experiences as a nurse working in a rural setting led her to conduct a review of rural websites in Ontario. An environmental scan was conducted across these communities and an internet search with the community's name followed by the key words "Ontario" and "Hospital" to determine if the community had a respective hospital. It was found that there are 56 hospitals in rural settings across the province. A review of each of these hospital websites was conducted to explore and describe the type of incentives that were advertised for recruitment purposes (Table 1). The information presented in the table illustrates how the hospitals use the benefits of a small community in their recruitment process. For example, they often used community incentives, such as advertising the outdoor lifestyle and activities (i.e., fishing, hiking, ATVing, snowmobiling, and access to lakes and trails) as well as financial

incentives (i.e., relocation allowance, sign-on bonuses, and Tuition Support Program for Nurses). Of the 56 hospitals, 34 described financial incentives, 14 described community incentives, 11 included both financial and community incentives, and 19 did not mention any incentives.

Although the RIO list was used to identify rural settings in this study, it was found that the RIO list has many limitations. First, the RIO requires frequent updates and does not have readily available data sources (Health Quality Ontario, 2019). In addition, the list that has inconsistencies, sometimes presenting districts, sometimes municipalities, and sometimes communities which lead to inconsistencies in recruitment (Health Quality Ontario, 2019).

Table 1

Hospital financial and community incentives per community

Community	Hospital	Financial incentives	Community incentives
Addington Highlands	Lennox & Addington County General Hospital	-	-
Adelaide Metcalfe	Strathroy Middlesex General Hospital	√	-
Admaston/Bromley	Renfrew Victoria Hospital	√	-
Alnwick/Haldimand	Northumberland Hills Hospital	√	-
Arran-Elderslie	South Grey Bruce Health Center	√	-
Asphodel-Norwood	Cambellford Memorial Hospital	√	√
Atikokan	Atikokan General Hospital	-	-
Bancroft	QHC North Hastings Hospital	√	-
Black River-Matheson	Bingham Memorial Hospital	-	-
Blind River	North Shore Health Network	√	
Blue Mountains	Collingwood General and Marine Hospital	√	√
Bluewater	Bluewater Health	√	-
Bracebridge	South Muskoka Memorial Hospital	√	√
Central Huron	Huron Perth Healthcare Alliance	√	√
Central Manitoulin	Manitoulin Health Centre	√	-
Chapleau	Chapleau General Hospital	√	-

Community	Hospital	Financial incentives	Community incentives
Cochrane	Lady Minto Hospital	-	-
Deep River	Deep River & District Hospital	-	-
Dryden	Dryden Regional Health Center	√	-
East Hawkesbury	Hawkesbury and District General Hospital	√	√
Elliot Lake	St Joseph's General Hospital Elliot Lake	√	-
Englehart	Blanche River Health	√	-
Espanola	Espanola Regional Hospital and Health Centre	√	-
Fort Frances	Riverside Healthcare	-	-
Georgian Bay	Georgian Bay General Hospital	√	√
Goderich	Alexandra Marine and General Hospital	-	-
Greenstone	Geraldton District Hospital	-	-
Hanover	Hanover & District Hospital	√	√
Hawkesbury	Hawkesbury and District General Hospital	√	√
Hearst	Hôpital Notre-Dame	-	-
Highlands East	Haliburton Highlands Health Services	-	√
Hornepayne	Hornepayne Community Hospital	-	-
Huntsville	Muskoka Algonquin Healthcare	√	√
Iroquois Falls	Anson General Hospital	-	-
Kapuskasing	Sensebrenner Hospital	-	-
Kenora	Lake of the Woods District Hospital	√	-
Kincardine	South Grey Bruce Health Center	√	-
Kirkland Lake	Blanche River Health	√	-
Manitouwadge	Manitouwadge General Hospital	-	-
Marathon	Wilson Memorial General Hospital	-	-
Mattawa	Mattawa Hospital	-	-
Meaford	Grey Health Services	-	-
Minden Hills	Haliburton Highlands Health Services Minden Site	-	√
Muskoka Lakes	Muskoka Algonquin Healthcare	√	√
Nipigon	Nipigon District Memorial Hospital	-	-

Community	Hospital	Financial incentives	Community incentives
Northeastern Manitoulin and the Islands	Manitoulin Health Centre	√	-
Parry Sound	West Parry Sound Health Centre	√	√
Pembroke	Pembroke Regional Hospital	√	-
Rainy River	Riverside Healthcare	-	-
Red Lake	Red Lake Margaret Cochenour Memorial Hospital	√	-
Sioux Lookout	Sioux Lookout Meno Ya Win Health Centre	√	-
Smooth Rock Falls	Smooth Rock Falls Hospital	-	-
Temiskaming Shores	Temiskaming Hospital	√	-
Terrace Bay	North of Superior Healthcare Group	-	√
Thessalon	North Shore Health Network	√	-
Wellington North	North Wellington Health Care	√	-

3.2 NGN experiences of transition

Transitioning from a student to an NGN is a non-linear process that includes personal, professional, intellectual, emotional, and relational changes (Boychuk Duchscher, 2008). According to Boychuk Duchscher's Transition Stages Model (2008), within the first 12 months of practice, NGNs experience an emotional, intellectual, physical, socio-cultural, and developmental shift that will fuel their desire for professional growth and development. Furthermore, Boychuk Duchscher's Transition Shock Model (2009), which originated from the Transition Stages Model (2008), highlights the contrast between the relationships, roles, responsibilities, knowledge, and performance expectations in the academic environment compared to the professional practice setting (Boychuk Duchscher & Windey, 2018). Transition Shock is the process of moving from the known role of a student to the less familiar role of a

professionally practicing nurse (Boychuk Duchscher & Windey, 2018). The Transition Shock leaves the NGNs with feelings of loss, disorientation, doubt, and confusion as they try to navigate their new career (Boychuk Duchscher, 2018).

Vanderspank-Wright et al. (2019) and Lalonde et al. (2021) conducted a two-part longitudinal mixed-methods convergent study where NGNs were surveyed and interviewed to explore the transition experience of two-thirds of a cohort of NGNs in a Canadian Intensive Care setting over a 2-year period (exact number of participants was not published to maintain the anonymity and confidentiality of participants). There were five themes identified from the qualitative portion of the study: an emotional transition, a social transition, a transitioning mindset, transitioning through "firsts" and transitioning with confidence. The findings of the study clearly outlined the experience of transition amongst the NGNs, in addition to the experienced phases of doing, knowing and being as highlighted by Boychuk Duchscher. Social integration was an important aspect of transition in this study as the NGNs discovered that socializing with staff was helpful to adopt into the unit culture and to develop a sense of belonging (Vanderspank-Wight et al., 2019). The transition period was also associated with gaining confidence and comfort with skills and practice (Vanderspank-Wight et al., 2019). In the quantitative portion of the study, NGNs were surveyed four times between their hire/beginning of their ICU orientation and 2 years post-hire (Lalonde et al., 2021). For the transition portion of the questionnaire, participants identified a lack of confidence as being the most difficult during their transition from the "student" to "RN" role between 1 month post orientation (Time 1) and 1-year post-hire (Time 2) (Lalonde et al., 2021). It was found that participants identified this lack of confidence as a barrier to the transition from student to RN role, with more than half (60%) of participants selecting this as a difficulty at Time 2 of the study (Lalonde et al., 2021). Most

participants recommended an improved orientation (e.g., preceptor support and consistency, orientation extension, unit specific skills practice) and work environment (e.g., gradual ratio changes, more assistance from unlicensed personnel, involvement in schedule and committee work) to help ease their transition and have a greater readiness to practice (Lalonde et al., 2021). A gradual and successful NGN transition to practice can lead to the retention of these nurses (Murray et al., 2019).

There is a lack of recent data on Canadian RN turnover. The last study conducted by Linda O'Brien Pallas and colleagues (2010) found that RNs had a turnover rate of 19.9% (SD=14.04). In a more recent study, Boamah & Laschinger's (2015) conducted a secondary analysis of data collected in a cross-sectional survey among NGN (n=215) who worked in Ontario acute hospitals (the authors do not provide locations of hospitals, it is unknown if rural settings are included in the sample). They examined the relationships among the overall person-job match in the six areas of work life (manageable workload, control over work, rewards for contribution, fair treatment, a sense of community and congruence between personal and organisational values), work-life interference, new nurses' experiences of burnout, as well as intentions to leave their jobs. The authors reported that 45% (n=97) of nurses intended to stay in their current position within 3-10 years, compared to 45% (n=97) who intended to stay in their position for less than 3 years. It was found that nurses' perception of a sense of community had the best fit with their experience (Boamah et al., 2015). Furthermore, Boamah & Laschinger (2015) noted that an imbalance between work and personal life leads to a high degree of stress, which affects the quality of life and eventually the work effectiveness of NGNs. These increasing turnover rates come with costs (Bae, 2022). O'Brien-Pallas & al.'s (2006) reports an average turnover cost of $21 514 CAD per nurse. There has been a reported increase in the use

of agency nurses since the pandemic as hospitals seek solutions for their short staffing and high turnover rates (Laucius, 2022). In a report from CTV News (2023), it was mentioned that hospitals are required to pay agency nurses double to triple the rates of core nursing staff to meet their staffing needs. In 2020-2021, Chair William Kaplan reports that hospitals spent $38,350,956 on agency nurses and that this is expected to increase to $173,669,808 in 2022-2023 (CTV News, 2023). Not only is turnover costly, but it can also inherently affect nursing shortages and patient safety (Murray et al., 2019).

3.3 NGN experiences in rural settings

Rural settings are remote from metropolitan areas, and these geographic placements pose challenges to RN retention for several reasons (Calleja et al., 2019; Lea et al., 2005). For example, there is often a lack of access to professional development in these regions, infrastructure is outdated, resources in the area are limited and there is emphasized importance on social connection (Calleja et al., 2019; Cosgrave et al., 2018; Fowler et al., 2018; Graf et al., 2021; Lea et al., 2005). Through the students' own experiences, she saw the consistent links between rural settings and a lack of resources and support, a high level of autonomy required, the lack of social relationships and the difference exhibited between retention amongst people who originate from rural settings vs metropolitan. To the student researchers knowledge, there is no current literature specific to NGN retention in rural settings.

3.3.1 Rural challenges for NGNs

Bennett and colleagues (2012) conducted a literature review to explore the needs of NGNs in rural and remote settings within Australia. One of the challenges highlighted by RNs working in rural settings is their managers' high expectations (Bennet et al., 2010). It was found that managers often have high expectations of novice nurses in terms of skill development and

conflict resolution; skills that cannot be acquired comfortably during nursing school (Bennet et al., 2010). Similarly, these managers exert pressure on new nurses to take on more responsibility, but with limited supervision and guidance (Lea & Cruickshank, 2007). Lea and Cruickshank (2016) conducted a qualitative case study, interviewing NGNs at 3, 6 and 9 months during a 12-month transition to rural practice in addition to interviews with experienced rural nurses who were employed in the same rural health agencies as the NGNs. It was found that NGNs expect and rely on nurse unit managers and nurse managers for support and encouragement during their transition to rural practice. This expectation was largely unmet during the 3 points of transition, leaving the NGNs feeling unsupported and unacknowledged (Lea & Cruickshank, 2017). It was also noted that the support provided in select graduate programs was inadequate and lacked structure, leaving both NGNs and senior staff feeling unsupported in their roles of mentee and mentor. In addition, rural areas have difficulty staffing appropriate mentors for NGN transition programs and many staff are unfamiliar with ways to provide support to NGNs, whether they act as the primary mentor or a fellow colleague (Calleja et al., 2019). Furthermore, some rural settings lack accessible support for NGNs due to the non-existence of formal transition programs and staffing to support these programs (Calleja et al., 2019). A number of authors have reported that transitioning as a NGN in a rural setting poses additional challenges that can leave nurses feeling unsafe and unsupported in their practice, working beyond their scope as a NGN (Calleja et al., 2019; Lea & Cruickshank, 2005; Smith & Vandall-Walker, 2017).

Furthermore, Fowler et al. (2018) conducted an integrative review (n= 8 studies) to examine support processes and NGN experiences during their transition to practice in rural and remote areas. As nurses' roles in rural settings are variable, they are often referred to as "generalists", although this label is known to take years to acquire (Fowler et al., 2018). In a

Canadian study conducted by Smith and Vandall-Walker (2017), interviews were conducted with NGNs (N=17) to better understand their transition experiences and challenges while working in a hospital using the Hospital Generalist Model. The principle of this model is dividing the hospital into two or three core units rather than dividing it by individual department (ex: the first unit being emergency department, operating room, intensive care; and the second unit being medical-surgical, palliative, and obstetrical patients). The Generalist Model has been adapted by many rural hospitals due to their small size, requiring nurses to be cross-trained across different specialties that fall within their unit (Smith & Vandall-Walker, 2017). Some nurses describe the transition from student to the Generalist Model as exhilarating, though overwhelming and frightening due to the additional knowledge required to work in 2 or 3 departments (Smith & Vandall-Walker, 2017). In addition to working in a few specialties, RNs working in rural settings are often forced into leadership positions and must adapt quickly to a more independent practice due to a lack of human resources and access to interdisciplinary teams (Bratt et al., 2012; Lea, 2017).

3.3.2 Importance of social relationships

Although the literature highlights that rural settings are a unique area to work in (Calleja et al., 2019; Lea et al., 2005; Bennet et al., 2012), it is also reported that new nurses may experience challenges with the tight-knit community (Graf et al., 2021). For example, caring for familiar community members may be difficult for NGNs when establishing professional boundaries and social relationships with both coworkers and patients (Fowler et al., 2018); Graf et al., 2021). With the nature of the small town that rural settings are in, the dense community often leads to rural nurses experiencing challenges maintaining confidentiality. This also leads to difficulties when treating familiar faces from the community such as friends and family

members, which can prompt their need for additional emotional support (Hoppe & Clukey, 2021). Graf et al. (2021) studied the effects of rural graduate programs in Western Australia on NGNs (n= 40) who are transitioning into practice using a mixed methods parallel design, informed by Boychuk Duchscher's Transition Stages Model. One of the themes that emerged from this study was a "sense of belonging". A sense of belonging is defined by Fowler et al. (2018) as being "the process of becoming enculturated within a new environment", whether if it is on a hospital ward or within the community (Graf et al., 2021). It was found that NGNs in these settings relied heavily on other staff to help them develop their sense of belonging in the unit and translate those relationships to their social circles in the community (Graf et al., 2021). Furthermore, due to their status of "new grad" in the community, NGNs in rural settings can find it difficult to be accepted and trusted by the community (Smith & Vandall-Walker., 2017). Their abilities are quickly judged by clients in society from word of mouth from others (Smith &Vandall-Walker, 2017).

Although working as a NGN in a rural area can be challenging, living and working in nurses' hometowns can bring NGNs a strong sense of belonging to the community (Lea et al., 2005). However, for non-local NGNs, this transition can be difficult due to feelings of alienation and social disconnection, which can lead to feelings of social isolation (Cosgrave et al., 2018). It was found that social isolation was more intense among the non-locals who were also in the early stages of their career or beginners (Cosgrave & al., 2018). NGNs in rural areas often socialise with coworkers due to a limited number of other young adults in the area, nurses rely on these work relationships to build proper social connections outside of work; this can be difficult for some who have negative work environments (Graf et al., 2021; Fowler et al., 2018). According to Fowler et al. (2018), it is the managers' role to ensure that NGNs in rural areas are exposed to

socialisation opportunities in the clinical and community settings to ensure a positive transition experience. Fowler's study also highlighted the importance of a sense of belonging when being welcomed within a new environment, and the socialisation needs of NGNs in rural settings.

3.4 Potential Strategies suggested to ease NGNs transition to practice

Through this review of the literature, a number of potential strategies were highlighted. Mentorship is reported as a key strategy to a successful NGN transition to practice (Smith & Vandall-Walker, 2017). Smith & Vandall-Walker (2017) conducted a qualitative study, comprising of 12 interviews with NGNs, to better understand new RN's transition experiences into Alberta rural acute care environments. NGN residency, mentorship and transition to practice programs have been piloted across rural and urban centers in certain countries, such as the United States, Australia, and Canada (Smith & Vandall-Walker, 2017). It has been found that these programs reduce turnover rates by increasing NGNs confidence and competency levels (Smith & Vandall-Walker, 2017). Many NGNs have limited, if any, clinical experience in rural settings before beginning NGN programs. This places NGNs at a disadvantage, beginning their career as novices given the unfamiliarity with and uniqueness of rural nursing (Grad et al., 2021). British Columbia has since developed a rural-focused nursing certificate program (Smith &Vandall-Walker., 2017). A review of this program was completed in 2013 by Rush and colleagues, by conducting an online survey amongst n=245 NGNs working in acute care settings which recommended that NGN orientation should be a minimum 4 weeks in length and that NGNs should work at least 49 hours in a two-week period. The review also indicated that rural NGNs competence, confidence and job satisfaction increased with the program (Smith & Vandall-Walker., 2017). Ontario understandably followed this example in 2017 (Smith & Vandall-Walker., 2017). The main theme that arises from formal NGN transition programs is

NGNs feeling supported (Rush et al., 2014). Senior nurses act as mentors to NGNs and help build their confidence as they begin their career (Smith & Vandall-Walker., 2017).

The transition to practice is an important factor to consider for successful NGN retention in rural settings as it is linked to the stress experienced by NGN and their job satisfaction (Bratt et al., 2012). Bratt and colleagues (2012) conducted a longitudinal study with 382 urban and 86 rural newly licensed hospital nurses working in the USA during a 12-month nurse residency program at 6 months and the end of their residency program. The program consists of 12 monthly 8-hour educational sessions, with ongoing mentoring (Bratt et al., 2012). The official program begins 3 months after the NGNs hire. The goal of the program is for the NGNs to learn from practice-based nursing staff educators (Bratt et al., 2012). The nurse residency program was deemed as a critical source for social support and networking for the NGN's (Bratt et al., 2012). Conversely to other literature, this study identified that by the end of the nurse residency program, the rural nurses had a significantly higher job satisfaction and lower job stress compared to urban nurses (Bratt et al., 2012). It was also found that the rural nurses had lower levels of stress related to staffing compared with the urban nurses (Bratt et al., 2012) A lack of satisfaction leads to a stressful work environment and influences the retention of these nurses (Bratt et al., 2012). The transition of NGNs and programs that support this period, whether in urban or rural settings, are important to consider in this study, as a positive transition is often followed by improved retention.

Chapter 4 – Methodology

4.1 Introduction

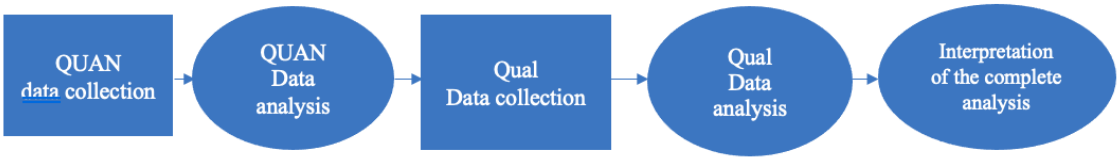
This next chapter presents the methodology used in this study. It includes the description of the design, setting and sample of the study, the participant recruitment, data collection and analysis methods, as well as the ethical considerations.

4.2 Design

Given the unique nature of rurality, the pragmatic stance allowed the student researcher to explore the factors that are distinct to NGN transition and retention in rural settings. The pragmatic paradigm makes it possible to use a mixed method QUAN- qual design in the context of this study, where an initial analysis of the quantitative data will then influence the development of the focus group semi-structured interview guide used in the second phase of the study (see Figure 2) (Feilzer, 2010). The explanatory sequential method allows for quantitative data collection and analysis in the first phase of the study, followed by qualitative data in the second phase (Creswell & Plano Clark, 2018; Fortin & Gagnon, 2016).

Figure 2

The explanatory sequential method (Creswell & Plano Clark, 2018; Fortin & Gagnon, 2016).



4.3 Setting and sample

Initially, selected hospitals were those with rurality scores of 70 or higher according to the Rurality Index for Ontario (RIO) (Ontario Ministry of Health, 2013). This score ensures that government funding is distributed to rural communities across Northern Ontario (Ontario

Ministry of Health, 2013). The scoring is determined by a compilation based on three factors: population, travel time to a specialized clinical setting, and travel time to a clinical setting that provides advanced care (Ontario Ministry of Health, 2013).

According to the Ontario Ministry of Health (2013), there are 64 rural hospitals with scores of 70 or higher. Thus, by using estimates from the clinical project carried out in the winter of 2022 where there was only one NGN who started practicing within the last 12 months in a rural community, we estimated that there would be approximately one NGN in each of these settings, for a total of 64 NGNs eligible for the study. Estimating a response rate of 32% (Brown, 2007), the estimated sample size was 20 participants in Phase I (questionnaire). Using the same approach, the sample size for the focus groups was estimated to be approximately 3-4 participants (Kite & Phongsavan, 2017). Recruitment was planned to cease once there were no more voluntary participants and two focus groups were held (Vaseleiou et al., 2018).

However, it was discovered that out of the 212 municipalities in Ontario that qualify as underserved rural communities and qualify for the Tuition Support Program for Nurses (TSPN), only 56 of these municipalities have a hospital in their community (Ministry of Health & Long-Term Care, 2013), eliminating 156 communities from the potential sample population and making for an insufficient sample population. The TSPN is part of the provincial effort to provide families with access to primary health care in rural areas by supporting the recruitment and retention of NGNs in these areas (Ministry of Health & Long-Term Care, 2013). To qualify for this tuition reimbursement program, NGNs must: 1) originally be from a rural or remote community, 2) have a new registration with the College of Nurses of Ontario and have graduated in the last 12 months, and 3) choose to do a return-of-service in an eligible underserviced

community (Ministry of Health & Long-Term Care, 2013). Once the municipalities were established, inclusion and exclusion criteria were determined. Due to the recruitment challenges that this presented, all communities on the RIO Score (Ontario Ministry of Health, 2013) were included; the minimum score to be considered on this list is 40.

Inclusion criteria for the study were: 1) NGNs with less than 12 months of experience as an RN, 2) speak, read and write English, and 3) work in a rural setting in Ontario with a rurality score of 40 or higher at the time of recruitment (all communities at the following link apply: https://www.health.gov.on.ca/en/pro/programs/northernhealth/rio_score.aspx). The exclusion criteria were: 1) not being an RN, 2) having more than 12 months of work experience, and 3) not working in a rural area with a score of 40 or more. According to the Nursing Graduate Guarantee Initiative (NGG), a NGN is defined as a nurse who has 12 months or less of experience since their registration with the College of Nurses of Ontario (CNO) (Ministry of Ontario Health, 2021). In addition, according to Boychuk's (2008) Transition Stages Model, the transition to practice period includes the first 12 months of practice.

4.4 Recruitment

Participants were recruited using convenience sampling via social media networks. A recruitment poster (Appendix C) was shared on the social media of the student researcher and those of the thesis committee who also have access to the target population. The poster was originally shared on the student researcher's personal Facebook page, then followed with Twitter and Instagram posts as well with frequent shares in various nursing Facebook groups, such as: Bscn", "UOttawa's Graduate Nurses' Association", "Laurentian Nursing 2021", UOttawa Nursing-Class of 2020", University of Toronto-Graduate Nursing Students Fall 2020", "Nurses

Of Ontario", "Support Your OntarioNurses", "Nursing StudentsuOttawa/Collaborative Program(s)", "New Grad RNs", "Cambrian College Nursing Students", "Laurentian University Nursing", "Nursing Students Association of York". The post was also sent to limited nurse educators in Northern Ontario who the student researcher was familiar with and shared via word of mouth with fellow nursing colleagues. This recruitment poster included the purpose of the study, the activities required for participation in the project, a hyperlink, and a QR code that took participants directly to the questionnaire via SurveyMonkey©. At the end of the questionnaire, participants were invited to participate in a focus group via Zoom or Teams which included their email address (Appendix D). NGNs who expressed interest in the focus groups were contacted and informed of the necessary details. Additionally, a snowball recruitment strategy was used with focus group participants, requesting them to notify their peers about the study.

After 4 weeks of recruitment, the student expanded the eligibility criteria to all NGNs working in a rural setting that was on the Ministry of Health Community RIO score list. The questionnaire was available for a total of 14 weeks (January 29th to May 8th, 2023).

4.5 Data collection

Data was collected using two methods: 1) a questionnaire via SurveyMonkey© with 46 questions (Appendix E), and 2) a focus group conducted by videoconference (Microsoft Teams©). The following sections will describe the data collection tools that were used.

4.5.1 Quantitative data: Questionnaire

4.5.1.1 Sociodemographic questions. The sociodemographic questions from section one of the Casey-Fink questionnaire (2006) were used (Appendix F). These questions were related to the participants' age, gender, specialty settings, date of hire, previous experiences, roles

completed (RN leader, preceptor), and length of orientation. The type of questions varied from closed ended (n= 6), to multiple choice (n= 33), and select all that apply (n=8).

4.5.1.2 Job Embeddedness (JE). The JE questionnaire included 34 items; 24 items were evaluated using a five-point Likert scale (1 to 5, where 1 = strongly disagree, and 5 = strongly agree) and 10 items with closed-ended questions (Appendix G). Nurses who choose to work in rural settings are often attracted to these settings due to it being their place of origin, the location of their partner's job, the place where they acquired their clinical experience or the place where they feel attached with links to family and friends (Molanari, 2011; Smith & Vandall-Walker, 2017). Given that the *community* context of the study, the following four dimensions of JE were retained: 1) Fit: Community, 2) Sacrifice: Community, 3) Links: Organization and 4) Links: Community out of a total of six dimensions. The use of the instrument in this study allows us to further explore if these community factors were influential in the NGNs transition and intention to stay.

Mitchell and Lee (2001) completed a study to better understand voluntary employee turnover and retention which reported the validity of this instrument. In the study, there were two groups formed in the United States to assess employee characteristics, job satisfaction, organizational fit, JE, job search, and intention to leave (Mitchell et al., 2001). In the first group, there were n=177 supermarket employees (α=0.85) and in the second group, there were n=208 hospital employees (α=0.87) (Mitchell et al., 2001). The scores obtained allowed to predict the intention to leave and the actual turnover rate in the study population (Mitchell et al., 2001). Table 2 demonstrates the reported reliability for aggregated and scaled scores for the supermarket and hospital sample of the 34 JE items in the study by Mitchell et al. (2001).

Table 2

Reliability for aggregated and scaled scores for the supermarket and hospital sample (Mitchell et Lee., 2001)

Items	Reliability of the supermarket employee study (*α*)	Reliability of the study of hospital employees (*α*)
Fit: Community	0,78	0,79
Links: Community	0,77	0,50
Links: Organization	0,65	0,62
Sacrifice: Leaving the community	0,61	0,59

4.5.1.3 Transition to practice. The Casey-Fink Graduate Nurse Experience Survey (Appendix H) was developed in 1999 by Kathy Casey and Regina Fink with the aim of collecting valid measures related to the perception of transition of NGNs (Casey et al., 2021). The Casey-Fink Graduate Nurse Experience Survey reports a reliability of $\alpha = 0.83$ (Casey & Fink, 2015). It is divided into four constructs: 1) skills and procedures that are outside the NGN comfort spectrum, 2) job satisfaction, 3) transition to practice, and 4) sociodemographic (Appendix H) (Casey et al., 2021). In the quantitative phase of the study, job satisfaction, transition to practice, and sociodemographic were included.

The job satisfaction portion of the Casey-Fink Graduate Nurse Experience Survey includes 9 items related to the NGN satisfaction, evaluated using a five-point (1 to 5) Likert scale (e.g., 1= very dissatisfied to 5=very satisfied) (Appendix H). These items include salary, vacation time, opportunities for advancement and schedule flexibility (Appendix H). These also include five questions related to the difficulties experienced, the support of the community, the

work environment, and the concerns of orientation during the transition to practice (Appendix H). The Casey-Fink tool also assesses job satisfaction using 2 multiple choice questions in the questionnaire that ask the participant to select the most and least satisfying aspects of their job. The answer options vary between different aspects such as peer support, patients and families, ongoing learning, professional nursing role, work environment, the system, relationships with peers and orientation (Casey & Fink, 2015).

4.5.1.4 Job satisfaction. Job satisfaction is an important predictor of job performance, absenteeism, and turnover (Bowling & Hammond, 2008). The Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale (MOAQ-JSS) (Appendix H) was used to assess the level of job satisfaction of NGNs (Cammann et al., 1983). It is made up of three questions using a six-point Likert scale (e.g., 1=totally disagree to 6=very much agree) (Cammann et al., 1983). The overall score is calculated using the average of the answers to the three questions. In this study, only one of the following questions was used to assess the level of satisfaction of NGNs with their job: "All in all I am satisfied with my job". The MOAQ-JSS was used as one of the data collection tools in a cross-sectional Ontarian study conducted by Lalonde & Hall (2016) which examined the relationships between preceptors and NGNs. Lalonde & Hall (2016) evaluated job satisfaction amongst the NGNs (n= 44) during which its reliability was α=0.85. The findings revealed that although there were reported high levels of job satisfaction, there remained a presence of NGN job dissatisfaction which had a positive correlation with the preceptor's openness. Peterson et al., (2011) also used this tool to explore job satisfaction and turnover of Canadian NGNs and reported a reliability rate of 0.88. They found that social support from supervisors and coworkers were significantly related to NGN job satisfaction.

4.5.1.5 Turnover intent. Transition to practice and level of satisfaction are related to RN turnover intention (Bratt et al., 2012; Casey et al., 2004). In this study, Mobley et al. (1978) Turnover Intent questionnaire was used to measure the NGNs' turnover intention. It includes three topics: 1) thinking about quitting (two questions), 2) intending to leave (two questions), and 3) looking for a new job (three questions) (Appendix I). Responses to these questions were represented using a 5-point Likert scale ranging from strongly agree (5) to strongly disagree (1). Higher scores represent higher turnover intention. An overall score is obtained by averaging the scores obtained for the seven questions. To minimize repetition, only one question was retained for this study "All things considered; I would like to find a comparable job in a different organization". In addition, a similar question highlighting satisfaction in the community was added to know the level of satisfaction of NGNs with the organization as well as in the community "All things considered; I would like to find a comparable job in a different city" (Appendix J). In an American quantitative study conducted by Castle and al. (2007), the Turnover Intent Questionnaire (Mobley et al., 1978) was used to measure the intention to quit and turnover among n=1779 nursing aides working in various nursing homes across Colorado, Florida, Michigan, New York, and Oregon. The reliability of this measurement tool was $\alpha = 0.78$ (Castle et al., 2007). It was found that overall high job satisfaction was associated with a lower intent of leaving, searching for a job and turnover.

4.5.2 Qualitative Data: Focus Group

A focus group took place on February 28th, 2023 to conduct the qualitative portion of the study. Focus groups are defined as a form of group interviews which capitalise on communication between the research participants to generate data (Kitzinger, 1995). This method was used given its unique opportunity to examine participants experiences through a

more casual experience, by talking amongst themselves, exchanging conversation and commenting on each other's experiences (Kitzinger, 1995). Focus groups have been used with NGN populations previously (Gagnon et al., 2022). Participants who completed the questionnaire via SurveyMonkey (Phase I of the study) were invited to participate in a focus group in the last question of the survey, either via Zoom or Microsoft Teams depending on the participant's preference. The use of such videoconferencing software allowed greater flexibility for participants and was an economical way for the student-researcher to conduct focus groups (Almujilli et al., 2022). A semi-structured interview guide (Appendix K) was used to collect qualitative data (Phase II of the study), and the focus group was recorded using Microsoft Teams©. An initial focus group guide (Appendix K) was developed by the student-researcher and reviewed by their supervisor and the University of Ottawa's Board of Ethics prior to the research taking place, touching topics of community involvement, decision of pursuing a rural nursing career, and positive and challenging aspects of working in rural nursing. Additional questions were added after the initial analysis of the quantitative data to incorporate common themes that weren't presented in the literature into the guide to further explore these among the NGNs. Themes that were added to the semi-structured interview guide included agency nurses and the NGNs partners' influence on choosing a rural setting as a place to live. We also further explored the NGNs experiences of transition to practice, given their link to agency nurses.

4.6 Data analysis

Creswell and Plano Clark (2007) state that differences between outcomes can be studied in conjunction in mixed design studies. To do this, they compare qualitative and quantitative data to obtain results that encompass the two methods (Creswell & Plano Clark, 2007). They believe that no study is purely quantitative or qualitative and that each method shares certain elements.

In this mixed method study, the explanatory sequential model was used to guide the analysis (Creswell & Plano Clark, 2007). The quantitative portion of this model allows for the development of qualitative questions and helps explain the quantitative results (Creswell & Plano Clark, 2007). According to this model, data analysis is done in three phases: 1) collection and analysis of quantitative data; 2) collection and analysis of qualitative data; 3) analysis to explore how qualitative data helps explain quantitative data to answer the mixed methods questions, which in this study were: 1) What are NGNs experiences transitioning into rural settings? and 2) How do retention efforts incentivise their intent to stay? (Creswell & Plano Clark, 2007). These phases include the following six steps: 1) analyze quantitative data and note statistical results that require further explanation; 2) determine the target sample (usually selected from those who participated in the quantitative phase) who can best provide explanations; 3) design qualitative data collection that identifies the types of questions the targeted sample must answer to complete the study; 4) collect and analyze qualitative data; 5) make a chart or graph that illustrates how qualitative results improve quantitative results; and 6) interpret the value added by qualitative explanations (Creswell & Plano Clark, 2007).

Quantitative data was exported from SurveyMonkey© into Microsoft Excel. Then, descriptive statistics (e.g., frequencies, means and standard deviations) were conducted within Microsoft Excel (Fortin & Gagnon, 2016). These analyses made it possible to describe the characteristics of the sample and answer the research questions.

Qualitative data collected during the focus group was recorded and transcribed verbatim was completed by downloading Microsoft Teams automatic transcription feature into Microsoft Word and then manually reviewing the recording and transcription for any errors. An inductive thematic analysis was completed according to the six steps recommended by Braun and Clarke

(2006) to find common themes in the qualitative data (Table 3). The inductive approach allowed the data to be coded without trying to fit it into a pre-existing coding framework (Byrne, 2022).

Table 3

Steps of a thematic analysis according to Braun and Clark (2006)

Steps	Implementation of the step
Step 1: Become familiar with the data	Explore the data preliminarily by reading the transcripts and writing memos.
Step 2: Generate initial codes	Code the interesting features of the data in a systematic way by gathering the relevant data for each code.
Step 3: Research themes	Gather codes into potential themes, gather all relevant data for each potential theme.
Step 4: Examine the themes	Check if the themes work against the coded extracts (level 1) and the data set (level 2), by generating a thematic "map" of the analysis.
Step 5: Define and name themes	Do ongoing analysis to refine the specifics of each theme and the overall story told by the analysis, generate clear definitions and names for each theme.
Step 6: Produce the report	Select vivid and compelling sample extracts, make the final analysis of the selected extracts, link the analysis to the research question and the literature, producing a scientific report of the analysis.

4.7 Ethical considerations

Approval was obtained from the University of Ottawa Office of Research Ethics and Integrity in January 2023 to conduct this mixed method study (Appendix L). Approval was obtained in March 2023 to change the eligibility criteria of this study to overcome recruitment challenges. Finally, another request to modify the research proposal was approved in May 2023, and allowed for an individual interview for the last single participant who was interested in participating in a focus group.

Participants provided their implicit consent prior to completing the questionnaire; there was a declaration of consent at the beginning of the survey via SurveyMonkey© (Appendix E). Participants were required to provide written consent (Appendix M) prior to participating in the focus group. This form was sent to participants by email 48 hours before the interview so that they had time to read the information letter and ask all their questions to the student-researcher by email before providing consent. Once signed by the student-researcher, the form was returned to the student researcher prior to the interview taking place for their files.

To respect the confidentiality of participants, the SurveyMonkey© questionnaire did not include any identifiable data, such as their name or contact information. As for the interviews, the recording was transcribed, leaving out identifiable data (e.g., name of person, city, hospital setting). The video recording is kept in a locked file on the student-researcher's personal computer for the duration of the research and will be deleted according to University of Ottawa procedure (uOttawa Office of Research Ethics and Integrity, 2019). The transcript is kept in a locked file on the student-researchers' personal computer and will be destroyed 10 years after the data collection. The student-researcher’s personal computer, the transcript document and the locked file are password protected. Therefore, three passwords are required to access the focus group transcript or the video recording. Participants' contacts (email and postal addresses) were deleted from the data sets once the postal codes were confirmed with the eligibility requirements of the study.

4.8 Rigour

According to Creswell & Plano Clark (2018), mixed method studies must respect the criteria of quantitative and qualitative methods, while maintaining priority on the dominant

method, which is the quantitative method in this study. To ensure qualitative rigour in this mixed methods study, we followed the rigour criteria outlined by Creswell & Plano Clark (2018) for sequential explanatory design, which recommend three validation strategies. The first strategy used was member checking; a summary of the qualitative data analysis process was reviewed and discussed with the thesis supervisor. This process was repeated after the identification of subthemes. Thesis advisory committee members not directly involved in the analysis were encouraged to ask critical questions about methods, decisions, and interpretation to facilitate reflection among the team members conducting the analysis. The second strategy used was triangulation with the help of the quantitative and qualitative data sets, methods and theories to address the research question. Finally, the third validation strategy was reporting disconfirming evidence, which will be presented in Section 5.4.

Chapter 5 –Results

The following chapter presents the results obtained from the data collection. This section will begin by presenting the sample characteristics, the quantitative data obtained via a questionnaire and the qualitative data from the focus groups. Finally, this chapter will conclude with an integration of the quantitative and qualitative data.

5.1 Sample

There were 23 people who consented, opened, and scrolled through the questionnaire; of those, eight questionnaires were fully completed included in the analysis. Most (n= 5) of those that were excluded did not meet inclusion criteria of working in a community that is on the list of Communities by Rurality Index for Ontario or completed less than 50% of the survey (n=10). Of the eight participants who completed the questionnaire, two also participated in the focus group. The inclusion criteria were confirmed in the consent form where participants had to check if they met each of the above criteria, and also confirmed the postal code of their workplace to ensure it met the rurality requirement of the study (Appendix C).

5.1.1 Sample characteristics

Characteristics of the participants included in the study sample are presented in Table 4. All participants gender were female (n=8, 100%) and their average age was 25 years (SD=5.88). Seven participants had completed their orientation at the time of the study, while one was still actively completing their orientation. The length of orientation for those who have completed it varied from less than 8 weeks (n=4), 9-12 weeks (n=2) and 13-16 weeks (n=1). Keeping in mind that NGNs often hold the title of “generalists”, are cross-trained and work in more than one department in rural settings, approximately 75% (n=6) of participants worked in medical-surgical

units, 37.5% (n=3) in OB/post-partum and 50% (n=4) in acute care (critical care or emergency medicine).

Table 4

Sample Characteristics

Characteristics	Average ± SD or n (%) N=8
Gender	
Female	8 (100)
Male	0 (0)
Age (years)	25 ± 5.88
Area of specialty	
Adult Medical-Surgical	6 (75)
Adult Critical Care	2 (25)
OB/Post-Partum	3 (37.5)
Emergency Medicine	2 (25)
Cardiovascular	1 (12.5)
Population specialty	
Adults/Seniors	5 (62.5)
Adults/Seniors/Pediatrics	3 (37.5)
Year of graduation	2022 ± 0
Previous health care work experience	
Nursing Assistant	1 (12.5)
Student Externship	2 (22.2)
Other (PSW, medical receptionist, nursing student)	5 (62.5)
Experience as a charge nurse	5 (62.5)
Experience as a preceptor	2 (25)

All participants graduated in 2022 and (n=8) reported having previous work experience in a health care setting. Within their first year of practice, 62.5% (n=5) reported being charge nurse and 25% (n=2) reported having experience as a preceptor. All participants who had reported being a preceptor (n=2) had also reported being a charge nurse. In the context of this study, the terms preceptor and mentor will be used interchangeably.

5.2 Quantitative data

5.2.1 Transition to practice

There are two constructs from the *Casey-Fink Graduate Nurse Experience Survey* (Casey et al., 2021) which were measured: 1) NGN satisfaction and 2) transition to practice. NGNs satisfaction on aspects of their job are presented in Table 5.

Table 5

Casey-Fink Graduate Nurse Experience Survey: NGN satisfaction with aspects of the job[1]

Casey-Fink satisfaction	Responses (N=8)	
	Median (min/max)	Average (SD)
Salary	2.5 (2-4)	2.9 (.99)
Vacation	2.5 (1-4)	2.5 (1.2)
Benefits package	3.5 (3-5)	3.6 (0.74)
Hours that you work	4 (2-4)	3.6 (0.74)
Weekends off per month	3 (1-4)	2.8 (1.28)
Your amount of responsibility	2 (1-5)	2.8 (1.39)
Opportunities for career advancement	3 (1-5)	3.1 (1.55)
Amount of encouragement and feedback	3.5 (2-4)	3.1 (.99)
Opportunity for choosing shifts worked	3.5 (1-5)	3.1 (1.36)

The second construct measured with the *Casey-Fink Graduate Nurse Experience Survey* (Casey et al., 2021), was transition to practice. Participants were asked a series of four select all that apply questions and one open ended question about their difficulties transitioning and how to feel more supported or integrated into their unit. The first question regarded difficulties felt during the transition from "student" to "RN" with four options: role expectations, lack of

[1] Measured on a 5-point Likert scale with 1 being very dissatisfied and 5 being very satisfied.

confidence, workload, fear, and orientation issues. The highest ranked difficulty amongst the participants during their transition was a lack of confidence (62.5%, n=5), followed by role expectations and fears (50%, n=4) (Figure 3). As for participants feeling more supported and integrated into their units, 87.5% (n=7) rated an improved work environment as one of the factors to enhance their work experience, and 12.5% (n=1) selected unit socialization as being important (Figure 4). Additionally, when the participants were asked about the least satisfying aspects of their work, the system itself (e.g., outdated facilities and equipment, small workspace, charting, and paperwork) (n=5) and the nursing work environment (e.g., unrealistic nursing ratios, tough schedule and futility of care) (n=4) were the least satisfying aspects of the participants work (Figure 5). Finally, 75% (n=6) of participants selected their patients and families as being the most satisfying aspects of their work, followed by peer support 50% (n=4), ongoing learning 37.5% (n=3), professional nursing role 37.5% (n=3) and positive work environment 37.5% (n=3) (Figure 6).

Figure 3

Difficulties during transition from "student" to "RN" role (Casey-Fink, 2006).

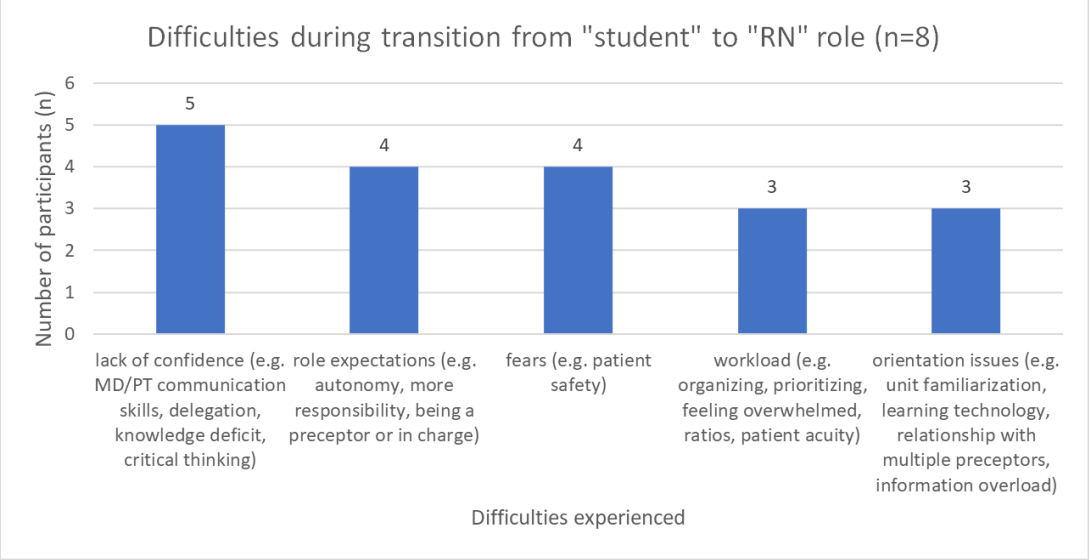


Figure 4

Factors that help NGNs feel more supported and integrated in the unit (Casey-Fink, 2006).

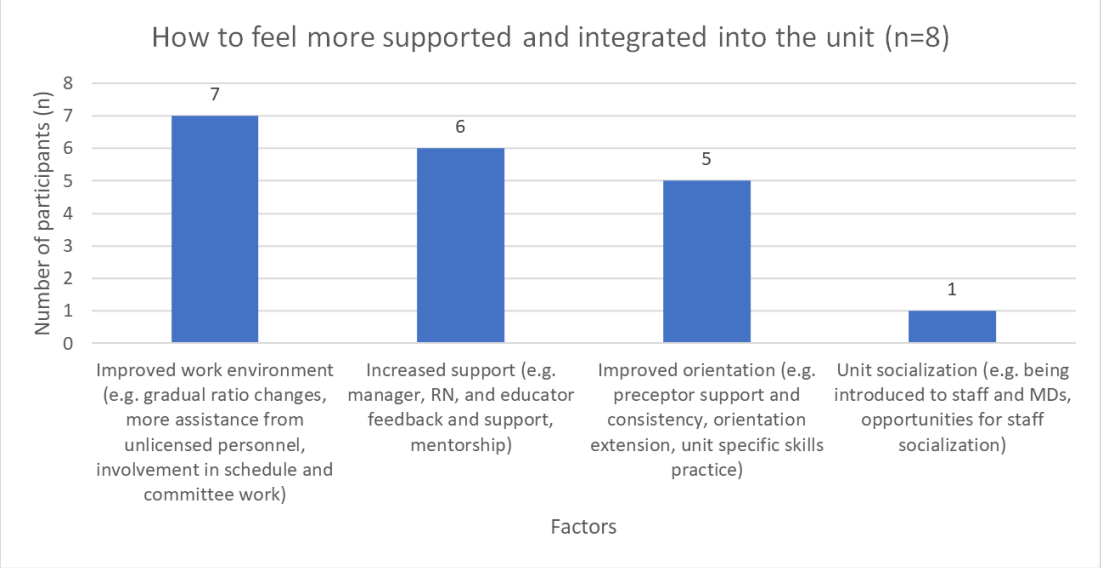


Figure 5

Least satisfying aspects of work (Casey-Fink, 2006).

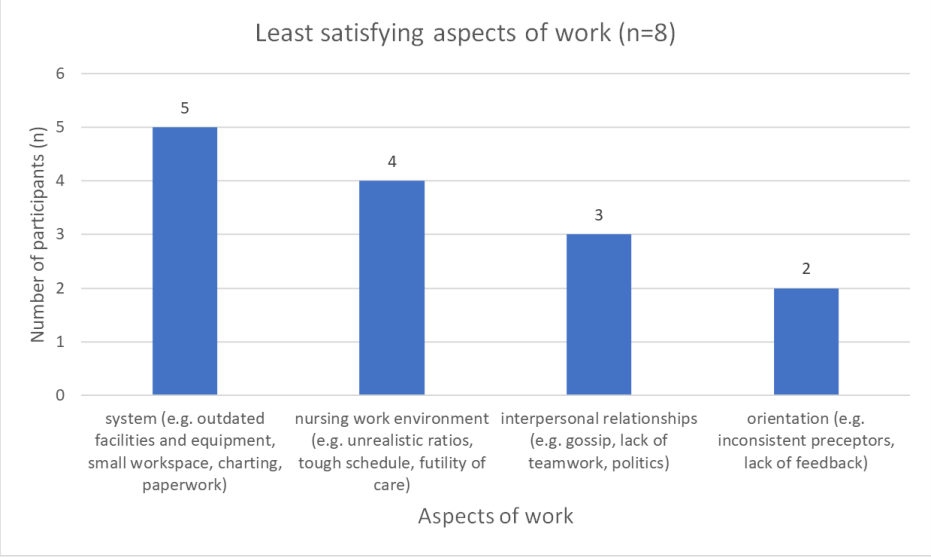
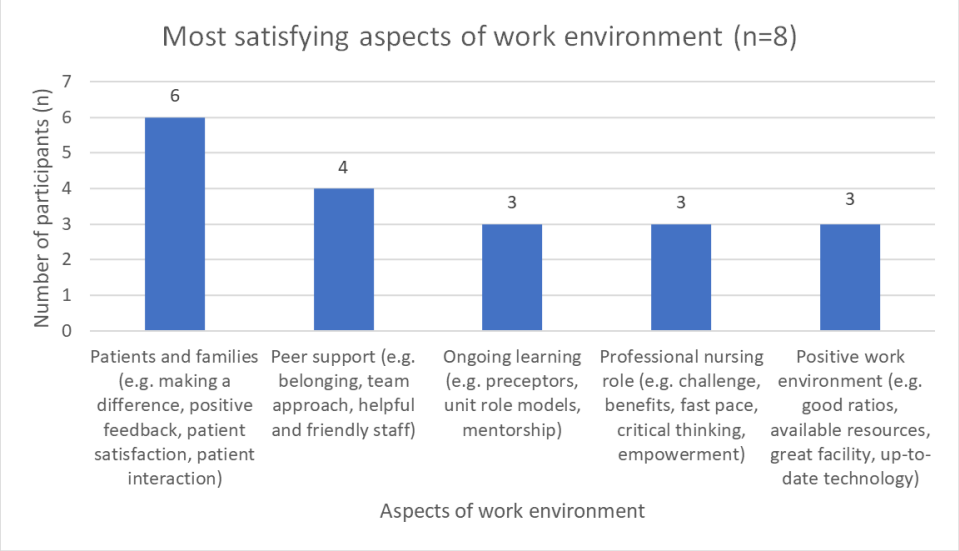


Figure 6

Most satisfying aspects of work (Casey-Fink, 2006).



5.2.2 Job Embeddedness

Participant scores for the surveyed dimensions of Job Embeddedness, such as *Fit-Community*, *Sacrifice-Community*, *Links-Community*, can be found in Table 6. For *Fit-Community*, participants rated their love for where they live as 4.25 (SD=0.89) and their community as their home as 4.4 (SD=1.06), which indicates that they are strongly satisfied with their community and the place where they live. For *Sacrifice-Community*, the participants rated their neighborhoods as safe with an average of 4.6 (SD=0.5) and reported feeling respected in their community as 3.4 (SD=0.7). These scores indicate that the participants are satisfied with these items and would need to sacrifice these if they left their community.

As for *Links-Community*, 87.5% (n=7) of participants have partners who work, and 62.5% (n=5) do not own the home they live in. Several participants (62.5%, n=5) had at least three family members who lived nearby, and 87.5% (n=7) had between one to more than 10 friends who lived nearby. Based on these scores, the participants in this study have a strong social link to their community.

For the *Links-Organization*, 62.5% (n=5) of participants reported interacting with 3-5 coworkers regularly at work, compared to 37.5% (n=3) who interact with between 6 to >10. It was also noted that 75% (n=6) of participants had 1-5 coworkers who were highly dependent on them. Half (n=4) of the participants were on work-related teams, and none were on work-related committees. These scores indicate that the participants had ties with their organizations through colleagues and teams.

Table 6

Job Embeddedness Scores [2]

	Median (min/max)	**Average (SD)**
Job Embeddedness: Fit-Community (n=8)		
I love the place where I live.	4.5 (3-5)	4.25 (0.89)
The weather where I live is suitable for me.	4 (2-5)	4 (1.07)
This community is a good match for me.	5 (2-5)	4.1 (1.2)
I think of the community where I live as home.	5 (2-5)	4.4 (1.06)
The area where I live offers the leisure activities that I like.	4.5 (2-5)	4.1 (1.1)
Job Embeddedness: Sacrifice-Community (n=8)		
Leaving this community would be very hard.	3.5 (2-5)	3.5 (1.5)
People respect me a lot in my community.	3.5 (2-4)	3.4 (0.7)
My neighborhood is safe.	5 (4-5)	4.6 (0.5)
Job Embeddedness: Links-Community (n-8)		
My family roots are in this community	4.5 (1-5)	3.5 (1.9)

[2] Measured on a 5-point Likert scale with 1 being very dissatisfied and 5 being very satisfied.

5.2.3 Job Satisfaction

Participants were invited to indicate their agreement with the following statement using a 6-point Likert scale from the MOAQ-JSS (Cammann et al., 1983): “All in all, I am satisfied with my job” (1=totally disagree and 6=very much agree). The average score was 4.1(SD=1.13) with a median score of 4.5.

5.2.4 Turnover Intent

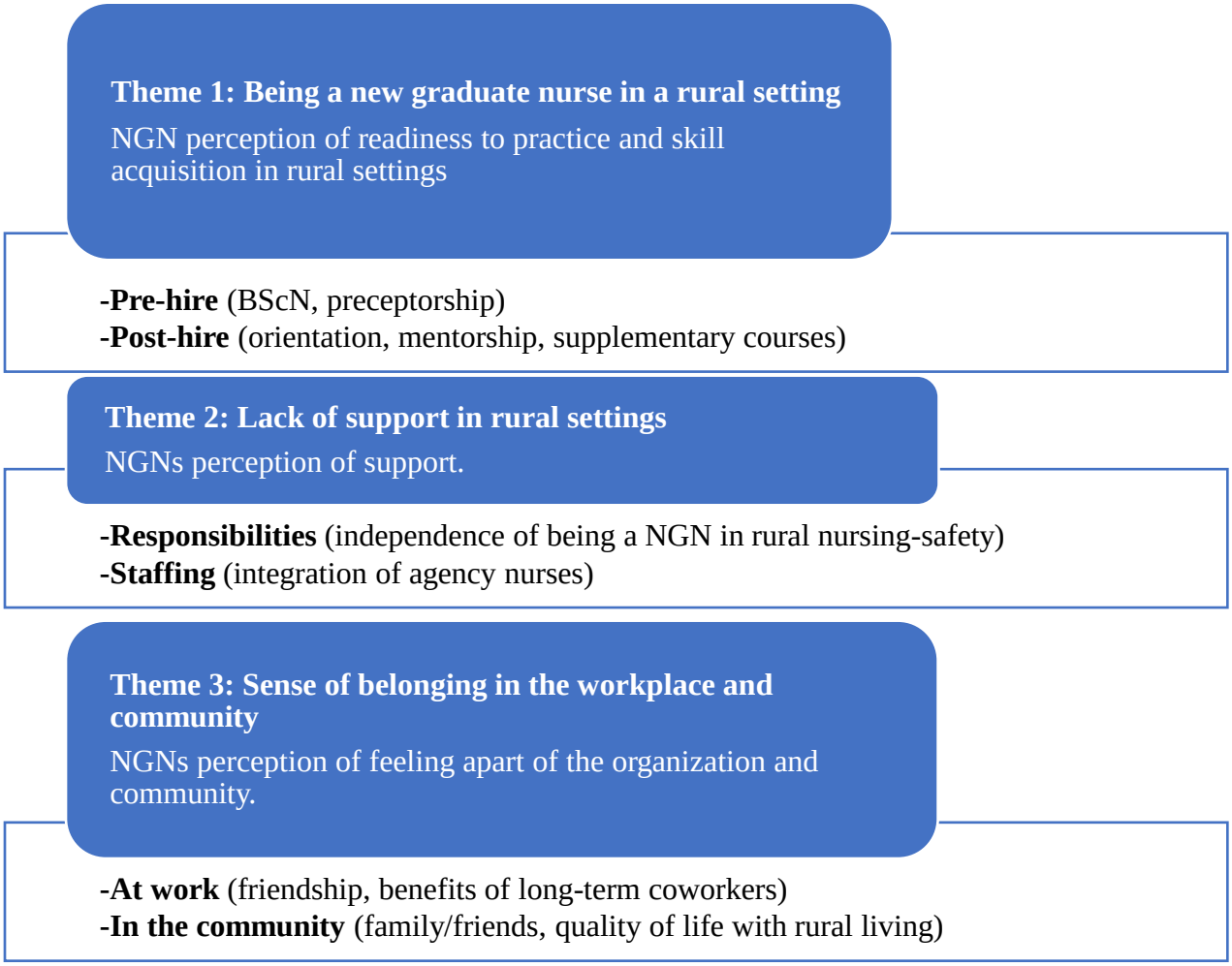
To determine participants’ turnover intent, they were asked two questions. The first question, “All things considered; I would like to find a comparable job in a different organization” (Mobley et al., 1978) was to be answered using a 5-point Likert scale (1=strongly disagree, 5=strongly agree). The participants mean score was 2.6 (SD=1.06) with a median of 2.5. Therefore, their intention to change jobs was low. The participants were asked a second question to determine if there was a difference between their decision to work in the organization versus the city: “All things considered; I would like to find a comparable job in a different city.” The participants’ mean score was 2.3 (SD=1.28, median=2, range=1-4). These lower scores represent a lower turnover intention to leave the organization or the rural area the participants currently work in.

5.3 Qualitative Data

Amongst those who completed the questionnaire (n=8), two chose to participate in a focus group. The focus group went for approximately 60 minutes. The focus group provided an opportunity to further explain the findings from the questionnaire and to gain a better understanding of NGNs’ transition to practice and retention in rural settings. Three themes and 6 sub-themes emerged from the data: 1) Being an NGN in a rural setting, 2) Lack of support in rural settings, and 3) Sense of belonging in the workplace and community (Figure 7).

Figure 7

Themes and sub-themes from the qualitative data



Theme 1: Being an NGN in a rural setting

NGNs perception of readiness to practice and skill acquisition during their period of transition to practice are achieved pre-hire through their nursing education and post-hire through continuing education.

Pre-hire. Pre-hire is described by participants as the period where they develop their knowledge and skills acquired through the nursing program and final clinical practicum, before

they begin their career. Baccalaureate nursing programs touch on various topics and clinical experiences, but participants noted that there seems to be a lack of theoretical content taught on nursing in rural settings: “I remember like a small section of the class, maybe like a very, very, very small section of a class that kind of touched on rural nursing. But nothing too extensive.” (P2). This was identified as problematic given that these two participants completed their nursing education in northern Ontario and had most of their placements in rural settings:

> I feel like we could be totally transparent in the sense that nursing in general, like real life nursing, nursing school prepared you for like the knowledge base. But even then, there's so much to learn. So, throwing in like the rural aspect, I find there wasn't a whole lot of specifics (P2).

Opportunities to work in specialized units directly from hire are greater in rural areas. Both participants in the focus group were assigned critical care settings from hire:

> So, for me, when I originally came out of school, I really wanted to do emerge/ICU. And it was easy for me to get into those positions simply because we're so rural, so North and a lot of those departments are integrated together (P2).

Post-hire. The post-hire period is described by participants as beginning the day they’re hired and includes the knowledge and skills that will be acquired through various training, as well as the process of advocating to receive these specialized trainings. Examples reported by the participants included: orientation and specialized training, such as Advanced Care Life Support (ACLS), Pediatric Advanced Life Support (PALS), Neonatal Resuscitation Program (NRP) and Trauma Nursing Core Course (TNCC).

> I've been asking for ACLS training, and I'm working in emerge, and I've been working in emerge for eight months, and I still don't have my ACLS, and I've been asking repeatedly… (P2).

P1 also discussed the lack of a consistent orientation due to the use of agency nursing staff, with up to 30-40% of their orientation being completed with an agency nurse. Whereas P2 shared that they were faced with numerous mentors throughout their orientation phase:

> …making sure you have like a mentor or even for like the first year, umm not necessarily being like extra staff and training, but like working with someone consistently for the first year that you know like hey, this is my partner, they know what I could do, I think that would have made a massive difference…

The participants also discussed their orientation experience and the recruitment strategy of financial incentives that was used by (*their*) rural hospital, which became contradicting for P2 when questioning the efficiency of such strategy when considering the retention of NGNs:

> The hospitals like to market *(sign on bonuses)* as kind of like, ooh, shiny. Look at us. Here's all this money. And when you're coming fresh out of school, it's like, ooh, I could kind of use some of that. And so, for me personally, I actually did end up accepting a fairly large sign on bonus (P2)

However, this participant reported a difficult transition which was heightened by a lack of mentorship, support and formal training; thus, this strategy was not effective at ensuring they remained in the hospital setting. Participants in the focus groups noted that they found the shift work difficult, their job stressful and had a difficult time feeling unsafe in their nursing practice: "I was feeling very stressed, overwhelmed all the time, uhh just from being overtired and then

also feel like unsupported and feeling like I was like not being able to practice as safely as I would like to be." (P2).

Theme 2: Lack of support in rural settings.

Participants described a lack of adequate support from their organization to safely perform nursing duties and to adequately transition from being a student to a RN. Two sub-themes emerged from the data collected during the focus group: increased responsibilities for a NGN and inadequate nursing staff.

Increased responsibilities for an NGN. Responsibilities in this context are defined as additional work duties which are assigned to NGNs in rural areas. Participants equated these additional responsibilities to be from a lack of staffing and resources to support complex patient care. For example, there may not always be a physician on-site and nurses tend to be cross trained in numerous departments, requiring specialized training to manage complex patient care scenarios (i.e.: PALS, ACLS, NRP, TNCC). Although this training is often paid for and organized by the institution, given the small number of staff requiring these trainings in these regions, it can take months to gather enough staff to fill a class, leaving the participants feeling underprepared in the months leading up to the anticipated training dates:

> I have my TNCC, but I only got that after six months of working there. So, they kind of throw you in and expect you to kind of deal with all these big things… You don't have training kind of thing, so you feel almost like underqualified a little bit. (P2).

As such, these nurses find themselves in situations they believe to be "unsafe" (P2); taking on additional duties such as being charge nurse, preceptor or caring for high-acuity patients with limited training. P1 shared:

> There's a little bit extra roles that we have to take on because of our location, we don't have lab technicians, there 24/7. So, we do lab like phlebotomy. We do the drawing of the blood. We do the vials. We do the processing of the blood and it's called point of care... So, we have to have a special training for that and not all the RPNs have that either.

Participants shared that, due to their high level of autonomy working in a rural setting, they require extra training. This training and responsibility contributed to developing their critical thinking skills. However, these additional responsibilities are also challenging as they take place during the transition phase of participants:

> The negative aspect is the fact that we're so green and new, not having all of the qualifications that follow with those high acuity settings like ICU-emerge. But the expectation is high. Intense role, like emerge, like I work emerge as well and…The expectation is there right from day one. It's not necessarily a groomed process as much. (P1).

Inadequate Staffing. Inadequate Staffing is defined as not having the necessary staff in a health care setting to meet the patients' and organization's needs. Focus group participants reported having worked with agency nurses, which heightened their feelings of being unsupported during their transition:

> Like getting paired with agency nurses right off the bat and all to them, they're great, but they are expected to be trained and ready to go within one to two shifts. And if you're the only other RN on that shift, whether you have a month of experience or 10 years of experience… they're like, hey, you're training this person and then it's hard for someone else to be a resource to you when you're trying to help them learn. But you're also still learning yourself. (P2)

Nurses in rural settings often need to work autonomously due to lower staff complement; this can be challenging for NGNs who are still developing their skills and confidence:

> So, for emerge in (*hospital*), … They're 12-hour shifts and 7:30 (*am)* until 11 *(pm).* You're the only RN. And then there's an RN triage nurse during the week from Monday to Friday. That's 11(*am)* to 7 *(pm).* Until they're there, so 7:30 (*am)* to 11 *(am),* you're alone. You call the doctor, and sometimes the doctor's there based on what comes in.… But then there's always one RN on the floor. So, you have that other person in the building to kind of bounce off of, and then there's typically two RPNs on the floor… But yeah, other than that… you're in emerge by yourself for a while and it's a hit or miss.... It's tough, it's tough. (P1).

Theme 3: Sense of belonging in the workplace and community

The final theme of *sense of belonging* is defined as NGNs perception of feeling as part of the organization and the community.

Organization. Participants discussed the high turnover of staff and limited number of NGNs in their work setting:

> There was a couple (*NGN*) on our like active care department which is an integrated medical/OB floor. Umm there was a few on that floor also and there was one in OR. And OR gets pulled a lot to emerge. So we seen some new grads in emerge sometimes from different departments, but not very often. And then right before I left in January, we had another new grad that just, just started, but for the time when I started, it was just me. (P2).

This high turnover and use of agency nursing staff created a lack of consistency in coworkers; participants reported little social relationships with coworkers outside of work: "Umm, I mean, I

had my like buddies within work. But umm other than that, like I didn't really hang out too much with anyone outside of work." (P2). Consequently, these participants did not have the opportunity to experience the benefits of established relationships with long-term coworkers due to the amount of agency nurses taking up full-time work assignments: "the one girl doesn't have a (*rotation*) partner, so it's filled with agency." (P1)

Community. The last subtheme is the sense of belonging experienced by NGNs in their community. This sense of belonging can be established with the help of their relationships with family and friends in the area, and the links established within their rural settings. Both participants had family and friends living where they chose to settle into their rural settings. They also both noted that they enjoyed the conveniences offered by their rural lifestyle with a short commute to work and having more time to spend with their family:

> (*Hospital*) is literally 2 minutes down my street, so I save a lot on quality of life as far as like I don't have to get up like exponentially early. Like I don't have to wake up two hours early before my shift even starts, to work a 12-hour day to travel like an hour and 45 minutes… I get to spend more time with my family prior to and afterwards working a 12-hour shift. (P1).

5.4 Integration of Quantitative and Qualitative Data

Based on the explanatory sequential model, the quantitative to qualitative sequence allows for the quantitative findings to be explained by the additional qualitative results (Creswell & Plano Clark, 2007). During the integration of the quantitative and qualitative data, the same three themes that appeared in the qualitative data emerged and were combined to become: 1) Being a NGN in a rural setting, 2) Lack of support in rural settings, and 3) NGNs sense of belonging in the workplace and community (Table 7). With the nature of the explanatory

sequential design, the quantitative results are used to further understand the qualitative results by providing quantitative explanations (Creswell & Plano Clark, 2007).

Table 7

Summary of quantitative and qualitative themes with differences and similarities

Quantitative questionnaire tool	Qualitative theme	Differences	Similarities
Casey-Fink (2008) **Lack of support and staff:** 62.5% had been charge nurse, 25% had been a preceptor, 2nd highest rank of factors to help NGNs feel more supported and integrated into the unit. **Training/Orientation:** 50%(n=4) less than 8 weeks. **Financial incentive:** salary satisfaction: 2.9 average out of 5.	**Lack of support and staff:** wanting to specialize in a specific department but then realizing the challenges and fear of safe practice, working alone, no doctor, agency nurses, **Training/Orientation:** P1: 30-40% of orientation was by agency nurses. Limited access to nursing education offered in rural areas. **Financial incentive:** Although signing bonuses provided, participants did not believe they were effective at retention.	Working with limited staff, including lack of physician on-site. Signing bonuses may not be an effective retention strategy.	Lack of support Lack of staff
Mitchell et al. Job Embeddedness **Quality of life/Community:** fit-community/safe neighbourhood all have an average of 4 or more. **Sense of belonging:** feel respected in the community, all participants work with 3 or more people, 75% have 1-5 coworkers who highly depend on them. **Family/Friends:** 87.5% have a partner who works and 37.5% own the home they live in, 5 have 3 or more family members nearby but the median for family roots in community is	**Quality of life:** short commute to work, more time with family, and enjoy the small-town feel. **Rural**: lack of rural nursing integrated in nursing education. Consolidation placements in rural settings may be helpful. Far for training opportunities/low availability of options for training. **Sense of belonging:** involved in community. **Family/Friends:** Partners and investments in houses highlighted.	-	Sense of belonging at work. Strong sense of belonging.

Quantitative questionnaire tool	Qualitative theme	Differences	Similarities
4.5 (average of 3.5), indicating personal links to the community.			
MOAQ-JSS:	**Quality of life/support:** shift work, stressful job, prefer a safe practice.	-	Lack of support.
Moderate job satisfaction (4.1/6).			
Turnover Intent (Mobley et al., 1978)	**Lack of support:** items which affected turnover are consistent mentorship and receiving required training in a timely manner.	-	One participant left bedside nursing.
Sense of belonging: 2.6/5 want to find a comparable job in a different organization. **Family/Friends and quality of life:** 2.3/5 want to find a comparable job in a different city.			

Theme 1: Being an NGN in a rural setting

The first theme, *Being a NGN in a rural setting* is defined as the NGNs perception of readiness to practice and skill acquisition in rural settings. Fifty per cent (n= 4) of participants who answered the survey indicated that their orientation was less than 8 weeks. In the focus group, participants reported that their orientation was difficult for several reasons, such as a lack of consistency of staff on the NGNs work line and that a portion of their orientation was completed with agency nurses who are not as familiar with the facility (Table 7). When asked to describe their orientation, different scenarios were noted: participants were pulled from their orientation in their specialized unit to work on the medical-surgical department which led to not receiving their full orientation, as well as being trained by inexperienced nurses or staff with a different scope of practice such as RPN's. In addition, participants reported not receiving a comprehensive training as there is limited access to certain specialties in their hospital (ex: not having an active delivery in obstetrics).

In the questionnaire, participants indicated that they had between 1 (n=1), 2 (n=3), 4 (n=1), and "many" or greater than 5 (n=2) preceptors during their training. One of the focus group participants reported having the same mentor during their orientation as they had during their consolidation (final practicum in baccalaureate nursing programs); they noted that this learning continuity was beneficial to their transition. The participant stated: "it was actually my senior practicum preceptor that ended up taking me once I became staff, umm and so she already kind of knew where my skill level was at ..." (P2).

In terms of finances, participants (n=8) rated their level of satisfaction with their salary as an average of 2.9 on a 5-point Likert scale (1 being the least satisfied and 5 being the most satisfied). Financial incentives are one of the recruiting and retention strategies used by rural

hospitals. Both focus group participants received sign on bonuses in exchange for return of service by either the hospital or the Ministry of Health and Long-Term Care. However, within a year, this strategy was not effective for one of the participants as described in the qualitative section above: “But despite that… it was still… was not enough to kind of hold me in for the three years that I signed on for. It ultimately came down to like, your mental health and your happiness is much more important…” (P2)

Theme 2: Lack of Support in rural settings

The second theme, *Lack of support in rural settings,* is described as participants’ perception of support from the organization in their rural setting. More than half (62.5%) of the participants have acted as a charge nurse in their first year of practice (Table 7). The focus group participants shared that being hired into specialty areas was easier to access in rural hospitals. They found working in these areas challenging given the level of autonomy expected of them:

> As much as it's kind of a pro to kind of get in where you want, get all that hands on experience. You're very quickly moved up the totem pole and kind of assuming responsibility. You grow seniority really quick... What kind of drove for me to kind of be like, hey, this isn't super safe (P2).

When asked what difficulties participants had during their transition from student to RN, the top two were fears, which included patient safety, and role expectations. As heard in the focus group, participants identified that while they enjoyed working in the department they prefer, this sometimes came at the cost of patient safety and a fear of losing their nursing license.

Participants were asked what could be done to feel more supported and integrated into their unit, 75% (n= 6) of participants selected increased support. Nurses in rural hospitals often need

to work independently given the lower number of nurses per shift. It is not uncommon for a nurse to be alone in a critical care setting:

> The way (*hospital*) emerg is, there's two RNs in the emerg and there's one RN that goes to ICU. If the ICU is closed then the third RN will be in emerg, but nine times out of 10 the ICU is open, so you're either working alone in the ICU, or you're essentially working alone in the emerg, so it just kind of felt like the support wasn't always there in terms of having a mentor constantly and to the point where it sometimes felt a little bit unsafe as well (P2).

Additionally, the limited access to an on-site physician added responsibilities to the nurses during emergency situations:

> If there's like stuff happening in emerge, and there's something happening on the floor, that one doctor has to prioritize and figure it out. So, if the doctor chooses to be covering something in emerge and you're the RN on the floor, … you're the next person in line to… to take care of that responsibility (P1).

Although these participants reported having a high level of autonomy and responsibility, participants also reported on the questionnaire a certain dissatisfaction with this level of responsibility (M= 2.8, SD=1.39). This result highlights that the participants in the study are moderately satisfied with their level of responsibilities.

One of the challenges expressed by participants was the high number of agency nurses in their settings. Participants reported lacking support when working with agency nurses due to their unfamiliarity with the department and their lack of investment in and commitment to the organization:

> I'm still scheduled to get the training done and they just happened to be the only person there and they were agency and there’s a lot of things that they would just omit. So I would

> be, say, charting. And then I was like, "well, what about this?" 'cause I still have questions, right? And they're like, "oh, we don't have to do that. Don't worry about it." And then the following day, the local core staff would be like, "well, why didn't you do this?" And I was like, "well, I was told not to." And they're like, "well, you should know better than that." It's like, well I don't know. I'm still learning kind of thing…(P1).

In the questionnaire, one participant commented about agency nurses potentially posing challenges in the workplace by completing the minimal work due to their feelings of lack of obligation towards the organization: "There are many agency nurses in our facility, and some are knowledgeable but there are also many who are there just for the amount of pay they are receiving." (Q8) Multiple have voiced/demonstrated since they are only agency, they do not have the obligation to complete specific tasks/charting. This leaves extra workload on core staff to complete other agency nurses' tasks/responsibilities (P1).

Theme 3: NGNs' sense of belonging and quality of life

This third theme relates to the development of NGNs' *sense of belonging in their relationships* with family and friends, with colleagues at work, as well as their quality of life. Most participants (87.5%, n=7) reported having a partner who works in the community, 37.5% (n=3) owning the home they live in, 62.5% (n=5) having three or more family members nearby; the median for family roots in community is 5 on a 5-point Likert scale (average of 3.5). Focus group participants expressed similar findings, that having family in the area where they work is a contributing factor to their decision to work in this rural setting (Table 7):

> I pursued a career in rural community just because of my current location already. We had reallocated from the big City in (*city name*) 10 years ago and it just works with my family dynamics. I have family in the region, so it's more or so family related. (P1).

Sense of belonging similarly translated to participants' work settings with all participants working with three or more coworkers regularly and 75% (n= 6) having between 1-5 coworkers who highly depend on them. Despite the strong relationships with their colleagues in the workplace, focus group participants expressed that this did not necessarily translate into their involvement with coworkers socially outside of work as their relationships remained uniquely in the workplace (P2). Additionally, participants rated their *sacrifice-community* with the help of three questions on a 5-point Likert scale (Table 6). The participants felt as though their neighborhood was safe with an average score of 4.6 (SD=0.5). They also rated that leaving their community would be hard, with an average of 3.5 (SD=1.5), and that people respect them a lot in their community with an average of 3.4 (SD=0.7). Participants in the focus group expressed being involved in their communities through recreational activities or through their children (Table 7):

> My boyfriend's…pretty heavily involved in the community here, so I often will tag along with him if there is anything, like he's very involved in the snowmobile club up here, so I'll help him with some stuff for that (P2).

Participants reported generally enjoying the communities they are part of and that the rural location of their community itself is not a barrier.

Finally, when asked in the questionnaire their level of job satisfaction on a 6-point Likert scale (n=8), participants' average score was 4.1 (SD=1.13). Participants in the focus groups noted that they found their jobs to be stressful between the shift work and their feelings of readiness. When asked if they would like to find a comparable job in a different city, the participants' average score was 2.3 (SD=1.28).

Chapter 6 – Discussion

The purpose of this thesis was to explore the transition to practice of NGNs and the factors that influence their retention in rural settings across Ontario. This discussion chapter will begin by a broad review of the framework that underpinned the study, as well as the results, followed by a discussion. The first discussion topic includes the interpretation of the quantitative data within the context of existing literature, reviewing NGNs itemized and overall satisfaction, using Lalonde and colleagues (2021) study as a comparison, followed by NGNs sense of belonging in comparison with Mitchell & Lee's (2001) study. The second discussion point highlights rural nursing and the effects on recruitment and retention. During this section, three subthemes will be explored: the implications of technology, nurses advanced roles in these settings and the financial incentives involved. Next, NGN support during transition in rural settings will be explored, with a lens on workplace support and mentorship. Finally, the final discussion point will touch on the impacts of NGNs developing a sense of belonging in rural settings, particularly in the community and workplace. Implications will be presented for NGNs, nurses, and nursing leaders. Finally, the strengths and limitations of this study will be presented to conclude this chapter.

6.1 Framework application

The combination of two models was used as a framework to guide this study: Boychuk Duchscher's Transition Stages Model (Boychuk Duchscher, 2008) and Mitchell and Lee's Job Embeddedness Model (Mitchell & Lee, 2001). In Boychuk Duchscher's theory, the process of *Becoming* encompasses the idea that NGNs experience, including anticipating, learning, performing, concealing, adjusting, questioning, revealing, separating, rediscovering, exploring, and engaging (Boychuk Duchscher, 2008). As part of the *Becoming* process, NGNs evolve

through three phases: 1) *Doing*, 2) *Being*, and 3) *Knowing* (Boychuk Duchscher & Windey, 2018) over the first 12 months of their practice. The transition to practice period has been described by NGNs as difficult as they flow through the transition stage of *Becoming* in the first 12 months of practice (Boychuk Duchscher, 2008). To further understand the role of the community in NGNs' transition within rural settings, Mitchell and Lee's Job Embeddedness Model (2001) was used to guide this study. More specifically, the *Links* category of this model describes a person's attachment to friends, family, colleagues and community (Mitchell & Lee, 2001). The *Community* can be interpreted as the environment at work and the creation of a sense of belonging.

Combining Boychuk Duchscher's Transition Stages Model (2008) with Mitchell and Lee's (2001) sense of belonging, allowed the student-researcher to explore the links between the NGNs' sense of belonging during their transition to practice and their retention in rural areas. These models also allowed her to better understand the importance of the socialization phase (Boychuk Duchscher, 2008; Boychuk Duchscher, 2009). This phase is an essential component of NGNs' job satisfaction (Boychuk Duchscher, 2009) and creating links with the organization (Boychuk Duchscher, 2008; Boychuk Duchscher, 2009, Mitchell & Lee, 2001).

6.2 Summary of the integration of quantitative and qualitative data

The use of the explanatory sequential model within the mixed method design allowed us to explore the transition to practice of newly graduated nurses and the factors that influence their retention in hospitals in rural communities across Ontario. For the quantitative portion, eight NGNs completed a questionnaire via SurveyMonkey©. Next, 2 NGNs participated in a focus group where three themes and 6 sub-themes were identified.

The participants in the focus group had between 0 and 12 months of experience as a nurse and therefore fall within the *Becoming* process of Boychuk Duchscher's Transition Stages Model (Boychuk Duchscher, 2008). Part of this process includes the third phase, *Knowing.* During this phase, the NGN may begin to show job dissatisfaction, criticize their working conditions and environment, and experience impatience with feelings of powerlessness to implement change in their practice environment (Boychuk Duchscher & Windey, 2018).

The use of Boychuk Duchscher's (2008) Transition Stages Model and Mitchell and Lee's (2001) Job Embeddedness Model allowed us to explore the links between the sense of belonging in times of transition to practice and the retention of NGNs in rural areas.

The findings of the integration of the quantitative and qualitative data revealed the importance of both the support of NGNs during their transition to practice and the sense of belonging felt by NGNs in these settings. Three themes emerged from the integration of the data sets: 1) Being a NGN in a rural setting, 2) Lack of support in rural settings and 3) Sense of belonging and quality of life.

6.3 Discussion

This section will begin with an interpretation of the quantitative data within the context of the wider literature. It will then describe the study's findings on rural nursing and the effects on recruitment and retention, NGN support during transition in rural settings and the impacts of NGNs developing a sense of belonging in the workplace and community. These will be examined closely by comparing them against literature and providing implications for nursing policy, nursing education, nursing research and nursing leadership.

6.3.1 Interpretation of quantitative data within the context of the wider literature

6.3.1.1 NGNs' itemized satisfaction. The nine satisfaction items of the Casey-Fink (2006) questionnaire were able to understand participants' satisfaction. In another longitudinal mixed-methods study conducted by Lalonde and colleagues, (2021) which evaluated NGNs' satisfaction in Canadian adult ICUs, the means for the nine items ranged from 2.77 (SD=0.203) to 3.19 (SD=0.21) across the four time points at which the online survey was completed. In this study, the average means amongst this same item was 3.06 (SD=1.14). The general satisfaction rates are therefore similar in both studies. Unfortunately, individual item rankings were unable to be compared as Lalonde et al. (2021) did not publish results for each individual item.

6.3.1.2 NGNs' overall satisfaction. NGNs overall satisfaction was evaluated with the help of the MOAQ-SS tool. On a 6-point Likert scale, participants rated their overall satisfaction with their job as 4.1 (SD=1.13), identifying that there is room for improvement for NGNs work satisfaction. Lalonde and McGillis Hall (2016) used the same tool in a cross-sectional study among 45 NGNs who worked in a variety of settings, varying from pediatrics, medical and surgical. They used this tool on a 7-point Likert scale, 1 being strongly disagree and 7 being strongly agree, and had an average of 6.26 (SD=0.99). NGNs reported an approximate 20% higher level of satisfaction in Lalonde & McGillis Hall's (2016) study. Lalonde and McGillis' (2016) study was not a rural specific study and 88% of the participants were hired through the official New Graduate Nurse initiative. This initiative ensures that NGNs are guaranteed a minimum of 12-weeks of orientation during the first 26 weeks of full-time employment contract (Lalonde & McGillis Hall, 2016). It is also worth noting that 84% of the nurses in the study were working in their preferred hospital, and 68% in their preferred practice area. More than half

(58%) had previously worked in or completed a placement in the unit and 38% had completed their consolidation in the unit.

Mobley and colleagues' (1978) questionnaire was used to determine the NGNs intent to turnover in medium sized south-eastern hospitals in the US, the average in this study ranged between 2.3 (SD=1.28) and 2.6 (SD=1.06) (1=strongly disagree and 5=strongly agree). In comparison, Lalonde et al. (2016) used Mobley's turnover intent tool as well and had a mean of 1.7 (SD=0.83) overall. The intent to turnover in this study was higher than Lalonde & McGillis Hall's (2016) study, which is not surprising as not all NGNs had a minimum of 12 weeks of orientation, and orientation programs are linked to lower turnover rates and better job satisfaction (Lalonde & McGillis Hall, 2016).

6.3.1.3. Sense of belonging. Four constructs of JE were considered in this study *Fit-Community, Sacrifice-Community, Links-Community* and *Links-Organisation.* The items for each construct were measured using a 5-point Likert scale in this study. The average means for each construct are: *Fit-Community:* 4.17, *Sacrifice-Community:* 3.83 and *Links-Community:* 3.5. These constructs were also explored in Mitchell and Lee's (2001) empirical study about voluntary turnover amongst hospital workers (it was not specified whether if nurses were included in this study). The average means for these were: *Fit-Community:* 4.04 (SD=0.63) and *Links-Community:* 1.32 (SD=0.86). Average means found for the *Fit-Community* item in this study are similar to Mitchell and Lee's (2001). Those found for *Links-Community* in this study surpassed those from Mitchell and Lee's (2001) study, perhaps identifying the enhanced links in rural settings.

6.3.2 Rural nursing and the effects on recruitment and retention among NGNs

There are many unique considerations that need to be taken for rural nursing including recruitment, job satisfaction and retention. These challenges can be due to several factors, including a lack of resources such as updated equipment and materials, and a wide role that includes extra responsibilities for the NGN (Bratt et al., 2012; Calleja et al., 2019; Lea et al., 2005; Lea, 2017; Smith & Vandall-Walker, 2017). This next section will describe the challenges faced in rural settings regarding technology, nurses advanced roles, and financial incentives as well as their effects on recruitment and retention of NGNs.

6.3.2.1 Technology. In this study, when asked what the least satisfying aspects of their work were, 62.5% of participants (n=5) identified the system (e.g., outdated facilities and equipment, small workspace, charting, paperwork). This item was also rated as the highest in Lalonde et al. (2021) study, which explored NGNs' transition to practice in the ICU setting, varying between 33-60% of NGNs selecting it as their least satisfying aspect of their work across four data collection points during their first two years of practice. This highlights that NGNs are dissatisfied with the ancient systems that surround their workplaces. The higher average in this study compared to Lalonde et al.'s (2021) could be affiliated to the rural context. The NGNs in this study graduated during the COVID-19 pandemic, where technology played a big role in workload and the flow of patient care. Certain examples of the use of technology during the pandemic include communicating with families via video and having access to specific materials in each room such as vital sign machines and charting set-ups to review previous documentation, reports and orders (RNAO, n.d.). Due to the need to wear personal protective equipment (PPE) in most patient rooms, having access to adequate technology during these times can ease the

workload of nurses by enabling them to do multiple tasks during one interaction with the patient (Dykes & Chu, 2021).

6.3.2.2 Advanced roles. It has been reported both in the literature and this current study that nurses in rural settings tend to have greater autonomy and responsibilities compared to urban settings (Bratt et al., 2012; Lea, 2017; Smith & Vandall-Walker, 2017). In this current study, participants were moderately satisfied (2.8, SD=1.39) with the amount of responsibility they have. This score was also lower than Lalonde et al.'s (2021) study, with average rates of satisfaction varying between 3.60 (SD= .24) to 3.30 (SD= .52) across four data points over a two-year period. In th**e** current study, 55.6% (n=5) of NGNs reported being assigned as charge nurse within their first 12 months of practice, and 22.2% (n=2) having had acted as a preceptor. The Ontario Ministry of Health & Long-Term Care (2023) recommends that preceptors have a minimum of 3-5 years of nursing experience. Both roles encompass many responsibilities which are not appropriate for a novice nurse. According to Benner's (1982) Novice to expert model of skill acquisition, NGNs are considered as advance beginners due to their limited prior experience in actual situations; these nurses continue to occasionally require supportive cuing and are not yet ready to independently support another learner (Murray et al., 2019). Placing them in these advanced roles prematurely without the necessary skills or confidence could lead to job dissatisfaction and turnover as witnessed in the current study.

Given the shortage of nurses, it is apparent in this study that many advanced beginner nurses (Benner, 1982) are being assigned to high-acuity units or given advanced responsibilities. In addition to their increased levels of autonomy and responsibilities, nurses in rural settings are sometimes known as "Generalists" and must cross-train between different departments, including critical care (Smith & Vandall-Walker, 2017). The majority (75%, n= 6) of participants

reported being assigned to a specialty area of nursing, which usually requires additional knowledge and training (Emergency Nurses Association of Ontario (ENAO), 2019). Although the participants in the focus group were excited to work in a specialty area they were passionate about, an important question to consider is if NGNs are being put into roles they may not be ready for. NGNs are being assigned to specialty areas while they remain in the beginner stages of their career and lack the access to appropriate training and exposure to rural nursing during their nursing education. Both nurses in the focus group identified little to no content coverage on rural nursing throughout their undergraduate program, discouraging the thought of a career in this setting. According to the National Nursing Education Framework published by the Canadian Association of Schools of Nursing (CASN) (2022), it is only required to cover primary health care principals in urban, rural and remote practice contexts and not necessarily the skills that the "generalist" nurses in these settings may need to perform (CASN, 2022).

The study participants highlighted that the circumstances that encompass rural healthcare can lead to NGNs feeling unsafe in their practice due to increased autonomy and responsibilities. In the questionnaire, fear (e.g., patient safety) was identified as the second highest difficulty during transition from student to RN with 50% (n=4) of participants selecting this option in a select all that apply question. Fear was tied with role expectations and followed lack of confidence, which was identified as the highest difficulty. Lea et al. (2005) also found that NGNs transitioning in rural settings lead them to feeling unsafe and unsupported. Due to the nature of rural healthcare, nurses working in these areas often operate without medical support which can require the nurses to work beyond their scope of practice (Lee et al., 2005). For example, in

Smith & Vandall-Walker's (2017) study, NGNs reported having to make high-level decisions about medications and patient care due to the absence of pharmacists and physicians onsite.

6.3.2.3 Financial incentives. Salary is often discussed when reviewing recruitment and retention efforts. Participants in this study reported moderate satisfaction with salary (2.9, SD=.99). According to a review of rural hospital websites across Ontario (Table 1), 34 (60.7%) of the hospitals described financial incentives on their website. It would have been beneficial to know how many participants received a financial incentive to return to a rural area in this study. The pandemic has helped shed light on the salary inequities that nurses face in their profession due to the existence of Bill 124. Bill 124 was introduced in 2019 to cap the wage increases of Ontario Public Service employees at one percent total for three years (ONA, 2023). It appears the province relies on nurses' good-will to continue working for a salary that does not meet some of the highest inflation rates seen in a generation, when in fact, the lack of salary has been identified as a low satisfaction point for NGNs (ONA, 2023). Most of nurses (75%, n=6) in the study selected patients and families as the most satisfying aspect of their work environment, compared to 25-33% between two timeframes in Lalonde et al.'s (2021) study in Canadian ICUs. This can partially be attributed to the nurses' interest in patient care.

6.3.3. NGN support during transition in rural settings

A need for support (e.g., from senior peers and interdisciplinary team members, education, and training) is identified as one of the primary factors that facilitate NGN transition to practice (Boychuk Duchscher, 2008; Lee et al., 2005). This next section will describe the identified supports required in the workplace and mentorship.

6.3.3.1 Workplace supports. The questionnaire revealed that 62.5% (n=5) of NGNs lacked confidence during their transition from student to RN. Lack of confidence was also selected by 60% of participants during Time 2 which was 1-year post-hire in Lalonde et al.'s study (2021). This lack of confidence reveals a need for enhanced organizational support. When asked how to make them feel more supported and integrated into the unit, participants selected improved work environment (e.g., gradual ratio changes, more assistance from unlicensed personnel, involvement in schedule and committee work) as the leading factor (with 87.5% (n=7)) to help them during this transition. Following improved work environment was a need for increased support from managers, RNs, and educators in the form of feedback, support and mentorship as the second highest factor to help them feel more supported and integrated into the unit (75%, n=6). Improved work environment was selected by 33-50% of participants in Lalonde et al.'s (2021) study between the timeframes of 1-month and 2-year post orientation. Increased support was equally identified in Vanderspank-Wright et al.'s (2019) qualitative portion and Lalonde et al.'s (2021) quantitative portions of their studies. For the quantitative portion, it was identified as a need throughout all four timeframes, ranging from 17-50% (Lalonde et al., 2021). Both employers and employees have an active role to play in ensuring that this balance is maintained, and that employees are adequately supported in their efforts to maintain this work-life balance. Employers should actively support and encourage NGNs' efforts to maintain this balance, which can be difficult given incentives to work overtime hours with shift premiums ultimately taking away from them having an active social life in the community. In a literature review conducted by Bennett et al. (2012), it was found that nurses felt a sense of pressure from management to take on more responsibilities but were not necessarily supported to do so. Additionally, when asked what the most satisfying aspects of their work environment was,

ongoing learning was tied for the lowest ranking (n=3) along with positive work environment and professional nursing role. In Bratt et al.'s (2012) study, it was found that after completing the nurse residency program, the group of rural nurses had a significantly higher job satisfaction and lower job stress compared with the group of urban nurses. Additionally, across all the time-periods, the rural nurses had significantly lower levels of stress caused by the physical work environment and at the end of the program had less stress related to staffing compared to the urban nurses (Bratt et al., 2012). It is important to note that this study took place in the USA and all participants had a 12-month nurse residency program which included mentorship and in-class education sessions. In the current study, half of the NGNs (n=4) had less than 8 weeks of orientation.

6.3.3.2 Mentorship. Other important supports for NGNs are preceptors and mentors (Mbemba et al., 2013). Preceptors encourage, advise, evaluate, and act as an example to NGNs (Lalonde & Legris, 2018). Preceptors help nurses develop their confidence, clinical skills, and knowledge (Lalonde & Legris, 2018). In this study, 4 out of 8 participants reported being assigned to 3 or more preceptors during their orientation. In Lalonde et al.'s (2021) study, 50% of the participants reported having more than one preceptor during their orientation. Having multiple preceptors has been shown to create a lack of proficiency among NGNs during their orientation process (Casey et al., 2004). In a thesis conducted by Alessia Parker, it was found that as the number of preceptors increased during the nurses' orientation, the nurses' satisfaction and level of support decreased (Parker, 2016). Consequently, in a study conducted by Casey et al., (2004), it was identified that if an NGN has three or more preceptors, the orientation process does not progress as seamlessly. Having a consistent preceptor has shown to assist with the socialization of NGNs in the practice setting (Lalonde & McGillis Hall, 2016). A positive and

engaging preceptorship can foster an environment of continuous learning and help reduce NGN stress. It is essential that NGNs receive support and feel supported to facilitate their transition to practice and decrease their feelings of stress and incompetence (Bennett et al., 2012; Boychuk Duchscher, 2008).

Moreover, it is becoming increasingly difficult to find qualified preceptors to support NGNs in their transition due to the high turnover and attrition rates in the profession (Calleja et al., 2019). Moore & Cagle (2012) highlight the importance of quality preceptor relationships during a NGNs transition to practice. In this study, participants highlighted that often they were assigned to an agency nurse as a preceptor given the increased presence of these nurses in the present context. Consequently, participants reported feeling unsupported during their transition, particularly because they had to work with irregular agency staff who were less familiar with the setting and care. Participants in the focus group faced inconsistencies in their training due to having several mentors during their orientation, some even being agency nurses.

6.3.4. Impacts of NGNs' developing a sense of belonging

Mitchell and Lee (2001) have demonstrated the importance of a sense of belonging and its ties to job embeddedness. This next section will describe the impact of NGNs developing a sense of belonging in the workplace and in the community, as well as the importance of building and having meaningful relationships with both coworkers and people in the community.

6.3.4.1 Community. NGNs in this study demonstrate Mitchell and Lee's (2001) *Links: Community*, showing that the participants have strong attachments to people in the community. The literature supports these findings; one of the primary reasons for NGNs choosing a rural area to begin their career is having been from the area originally, to be with family or within commuting distance of family and have a surrounding support network (Molanari, 2011; Smith

& Vandall-Walker, 2017). Cosgrave et al. (2018) have identified a relationship between easier transitions amongst NGNs who are originally from the rural community compared to those who originate from another city. The majority of participants in this study had underlying reasons for returning to their communities to begin their practice. It was noted when doing an environmental scan of hospital websites that 16 (28.6%) hospitals advertised unique community incentives including the promotion of an outdoor lifestyle (Table 1). According to Molanari et al. (2011), there is a component for rural lifestyle preference for those choosing to live in these communities. Advertising these unique characteristics is an easy and low-cost recruitment strategy for hospitals.

6.3.4.2 Workplace. Links which are created through teams, and work projects lead to constituent commitments (Reichers, 1985). These commitments come from relationships established with colleagues and influence the NGNs attachment to the organization (Graen et al., 1985; Mitchell & Lee, 2001). Consequently, as demonstrated with Mitchell and Lee's (2001) *Links: Organization* dimension, the use of agency nursing staff has created a lack of consistency in coworkers as discussed by the participants in the focus group, which acts as a barrier for nurses to create social relationships with coworkers outside of work.

Kramet et al. (2011) report that NGNs in rural areas often socialise with coworkers due to a limited number of other young adults in the area. Indeed, in the current study, participants highlighted that they interact with at least three coworkers regularly, have friends nearby, and peer support was important to them. Peer support was also identified as the most satisfying aspect of the work environment in Lalonde et al.'s (2021) study. Hence, social connectiveness is one of the most satisfying aspects for NGNs. Nurses rely on these work relationships to build social connections outside of work (Kramet et al., 2011). However, focus group participants

mentioned not having a social relationship with coworkers outside of work. This is problematic as NGNs require social relationships to connect both with the community and organization (Mitchell & Lee, 2001). These links and relationships are critical in creating social relationships and ensuring attachment to friends, family, colleagues, and the community (Boychuk Duchscher, 2008; Mitchell and Lee, 2001). However, it was later discussed that one participant is the first core nurse staff hire since 2020 and the other participant was the only new graduate hire in the emergency department for her graduating year. It appears that smaller rural hospitals have difficulties hiring core nursing staff, and in consequence, they hire more agency nurses which takes the place for the potential of long-term coworker relationships and mentorships. However, the survey findings identify that the NGNs have a good relationship with coworkers and their work environment and that they would have to sacrifice these if they left their community, demonstrating that NGNs can still establish meaningful work relationships with staff other than NGNs. Additionally, the literature identifies that positive work relationships are associated with a better connection outside of work (Mitchell & Lee, 2001). These positive relationships can influence NGNs' intention to stay within their city. In the survey, the NGNs identified their intent to find a comparable job in a different city as 2.3 on a 5-point Likert scale. This low score can be related to the NGNs perceived quality of life living in a rural setting with the short travel times, the nurses' ties in their communities, and the proximity of their families and friends. Turnover is a key concept when studying job outcomes in the nursing workforce (Woodward & Willgerodt, 2022). Certain factors which affect turnover include leadership, organizational commitment, team relationships, team cohesion, recognition, and work-family conflict (Nei et al., 2015).

Another strategy which was highlighted by Bratt et al., (2012), was to incorporate the construct of Job Embeddedness into the nurse residency programs in rural settings. It would be advantageous to help the NGNs recognize the benefits of Job Embeddedness in their workplace and community through these programs (Bratt et al., 2012).

6.4 Implications

The Canadian Nurses Association (n.d.) estimated that by 2022, there would be a shortage of 60,000 full-time nurses. The COVID-19 pandemic highlighted this shortage, and the importance of the nursing profession (Royal Society of Canada, 2022). The value of nurses to the public and to politicians became apparent (Çatker, 2022). With the help of social media, nurses and nursing unions have had a platform to speak and share their concerns around their well-being, patient care and safety, as well as the reality of the health care system today. This next section will present implications for nursing policy, education, research, and leadership.

6.4.1 Implications for nursing policy

The Ontario Ministry of Health and Long-Term Care (MHLTC) should enhance their existing financial incentives for NGNs in rural areas. There are several programs and incentives aimed to recruit nurses back to a rural or remote area, such as the Nursing Community Assessment Visit Program, the Tuition Support Program for New Nurses and Return of Service Agreements (Ministry of Health and Long-Term Care, 2023). However, the review of the rural hospital websites completed as part of this thesis (Table 1) indicate that these incentives are not advertised effectively. Additionally, there are no financial retention incentives for NGNs who stay past their 2 to 4-year commitment program. It would be helpful to introduce long-term incentive programs to encourage lasting retention, building senior and experienced staff in healthcare organizations.

Additionally, the College of Nurses of Ontario's (CNO) recently updated their strategic plan (2021-2024), which included four primary pillars, the fourth being to engage and mobilize their stakeholders. The CNO could collaborate with colleges and universities across Ontario to help grow access to virtual continuing education programs to facilitate access to these platforms for nurses in rural settings. Another collaboration could be established with internationally educated nurses to ensure immigrated nurses' retention once they begin practicing in Ontario. This could include the formation of an official affiliation with the Canadian Nurses Association and a proper orientation program to ensure they feel comfortable practicing according to Ontario's standards of care and adequate follow-up from the organizations leadership team to ensure continued satisfaction in the workplace and community.

The findings of this study and previous ones (Lalonde et al., 2021) suggest that NGNs rank their satisfaction with salary as average. This holds heavy political implications that hospitals have limited control over. For example, hospital budgets are approved and set by the MHLTC. Bill 124, which was passed in 2019, prevents the Ontario Nurses Association from bargaining for better wages. Bill 124 interferes with nurses' rights to free collective bargaining during a time of severe inflation. This bill also discriminates against the female-dominated profession of nursing. In 2023, this bill was ruled by the Superior Court of Ontario as unconstitutional and has since been repealed, permitting the reopening and arbitrations of collective agreements (ONA, n.d.).

6.4.2 Implications for nursing education

The literature highlights that NGNs feel they enter the nursing profession under-prepared, and experience challenges during transition (Joseph et al., 2022). Within the current study, NGNs felt there was insufficient content on rural nursing in their undergraduate education. As

such, increasing content related to rural nursing within nursing curriculum could be one strategy aimed at improving NGNs' understanding of the realities of practicing nursing in rural settings, as well as highlighting the benefits of rural nursing.

There is also a limited number of colleges or universities that are in rural communities or in northern Ontario. There needs to be an increase in institutions that are located within or near rural communities, which offer placements in rural healthcare facilities to increase awareness and recruitment to these areas. Nursing students found that having an opportunity to experience living and working in a rural or remote area were important in their decision of choosing their first nursing assignment (Lea et al., 2005; Terry et al., 2020). This could also help foster an educational experience which is geared towards future nurses who wish to return to these rural communities after their studies, including practicum placements which highlight the various roles of nurses in these centers. This study, as well as others (Cosgrave et al., 2018; Lea et al., 2005), suggest that nurses who move to rural areas do so because of a pre-existing link with the community. Local placements and recruitment could create more links for students who are new and unfamiliar with these rural settings.

6.4.3 Implications for nursing research

Given the findings of this study and the existing literature, a research priority to support NGN transition to practice and retention in rural settings would be essential to further explore the differences between urban and rural NGNs who graduate from similar organizations. This could help us better understand the fluctuation of their satisfaction and help identify which stages prove to be more difficult in the urban vs rural setting, as well as strategies that could be helpful to the NGNs.

Additionally, NGNs sense of belonging in the community and "generalist" role in the hospital are important aspects to consider for NGNs working in rural settings. It would be important to explore whether the "generalist" role is associated to rural nurses having a greater level of autonomy. This knowledge will support the recommendation for strategies focused on improving their retention and consequently improving the quality of healthcare offered to patients living in these environments.

6.4.4 Implications for nursing leadership

Nursing leadership should ensure that NGNs are provided with sufficient support during their transition period, such as providing consistent orientation with 1-2 mentors. Given the lack of full-time experienced nurses, organizations may need to explore innovative mentorship and preceptorship models which include online modules as outlined in the CASN Nurse Residency Program (n.d.). There are also other online preceptor preparation programs such as Preceptor Education Program for health professionals and students (PEP) (n.d.) which could be considered. In addition, mentors and preceptors should receive adequate training to fulfill their role. Mentorships are an essential element to a successful transition to practice amongst NGN's (Lalonde et al., 2021).

Additionally, NGNs sense of belonging has been identified as a recurring theme throughout this study. It would be important for nursing leadership to immerse NGNs into the workplace and community itself through a team approach, highlighting optional committees and engagement activities.

Furthermore, the importance attributed to NGNs' personal social circles was identified with the links that they had in their communities. Based on findings from this study and the literature, there was commonality that many NGNs working in rural areas had a partner, family

and/or close friends nearby. This could direct future recruitment initiatives to begin in secondary school since NGNs seem to be attracted to return to their hometown once they have completed post-secondary education, or to target NGNs who are originally from rural communities to help improve retention.

In this study, we were able to describe hospital recruitment strategies from their website (Table 1). There were inconsistencies in hospitals who promoted financial and community incentives for relocating to a rural community. Hospitals could use nurses' interest in these areas to their advantage and promote the unique lifestyle that these regions offer, along with financial incentives. Advertising the lifestyle that can be acquired in rural settings is a recruitment strategy which is supported by Molanari et al. (2011) study, where RNs chose rural nursing due to a preference for the way of living and community. Mbemba et al. (2013) conducted an umbrella review (n= 5) to determine the effectiveness of interventions to promote nurse retention in rural or remote areas. It was noted that financial-incentive programs were found to be effective in the recruitment of nurses in remote areas but were not as effective for long-term retention (Mbemba et al., 2013). As such, it could be recommended that hospital leadership invest in highlighting their financial and community incentives to bolster interest in their communities.

6.5 Strengths and limitations of this study

To the student-researcher's knowledge, this study is the first aimed at exploring the transition to practice of NGNs and the factors that influence their retention in rural settings across Ontario. The quantitative data presented similarities to the qualitative portion of the study, increasing the credibility of the results despite the small sample size. It is hoped that this study can help guide rural nurse managers to better identify gaps in their NGN orientation programs, integration into the organization and community, and recruitment and retention strategies.

Ultimately, this may translate to better NGN retention and a satisfactory transition to practice in rural settings.

Recruitment was a challenge in this study. The initial estimate of participants was inaccurate due to there not being a hospital for every community identified on the Communities by RIO Score list, eliminating 73% of the estimated target communities. Due to these recruitment challenges, all communities on the RIO Score (OMHLTC, 2013) were included; the minimum score to be considered on this list is 40. Participants also expressed that given their adapted learning environment and style during the COVID-19 pandemic, many of their classmates had failed their NCLEX-RN and were waiting to rewrite the exam. Given these challenges described, the sample size is small and may not depict an accurate provincial representation of rural NGNs. A small sample size can present certain limitations, such as producing false-positive results or over-estimating an association (Hackshaw, 2008). Additionally, due to the small sample size, certain themes were not able to be explored to their full potential such as agency nurses and orientation and were limited to the experiences of two NGNs. However, it's important to note that this study was explorative, and the student-researcher was able to meet this expectation despite the small sample size.

Furthermore, as recruitment was completed via social media, the sample may be biased towards the student-researcher and committee's circle of social media contacts. Likewise, the NGNs who participated in the focus group attended the same nursing school and both graduated in 2020, not accurately representing nursing programs across Ontario at various points before, during and after the COVID-19 pandemic.

Chapter 7-Conclusions

This master's thesis identified various themes surrounding NGNs transition to practice and retention in rural healthcare settings. A review of the literature pertaining to rurality and nursing in this context, NGNs experiences of transition in rural settings was conducted.

This mixed-methods study, utilizing Boychuk Duchscher's (2008) Transition Stages Model and Mitchell & Lee's (2001) Job Embeddedness Model, was conducted to explore the impact of rural communities and organizations on NGN transition and retention. The use of these models helped identify three major themes: being an NGN in a rural setting, lack of support in rural settings, and NGNs' development of sense of belonging and quality of life. These themes describe the NGNs' transition to practice and retention in rural settings across Ontario and shed light on the various implications that affect these nurses.

NGNs are an integral component of the nursing profession that we need to foster and respect. This thesis allowed the student-researcher to identify factors that impact these NGNs, such as their satisfaction in rural healthcare, their nursing education, their social connections, and their transition to practice in a unique setting.

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Appendix A

Permission to use Transition Stages Model Figure

Yes you do. I would enjoy it if you sent me your final thesis Emily.

Kukwstsetsemc (Thank-You),

[redacted]

Dr. Judy Boychuk Duchscher (she/her) RN, BScN, MN, PhD
Adjunct Professor, School of Nursing

Return to reading section 2.2.1

Appendix B

Permission to use Transition Shock Model Figure

Absolutely Emily! Let me know if you need more visuals of the model. As well, if you don't have my book it's likely a good idea. Where are you located and I'll get a book to you.

Kukwstsetsemc (Thank-You),

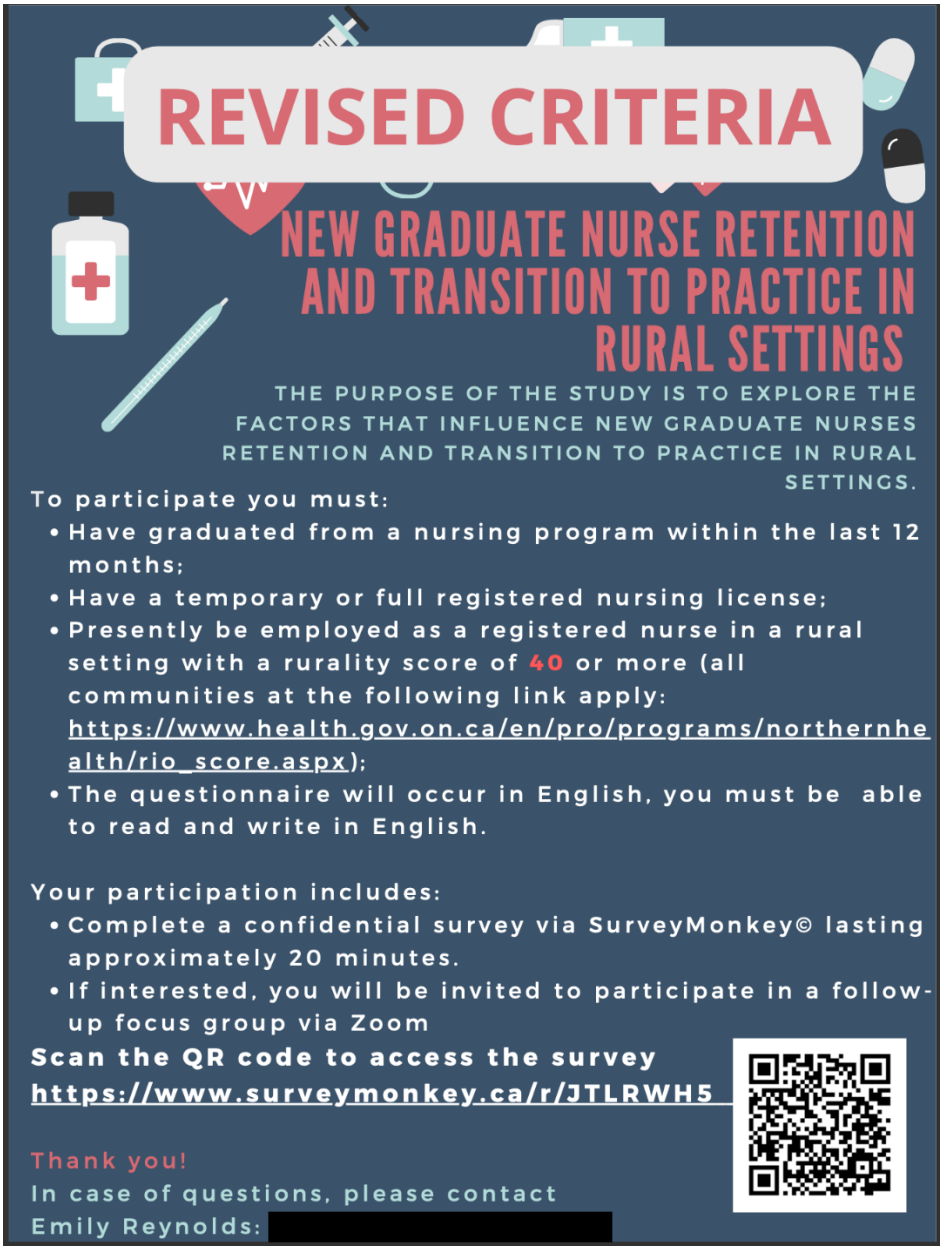
[redacted]

Dr. Judy Boychuk Duchscher RN, BScN, MN, PhD

Return to reading about the Transition Shock Model

Appendix C

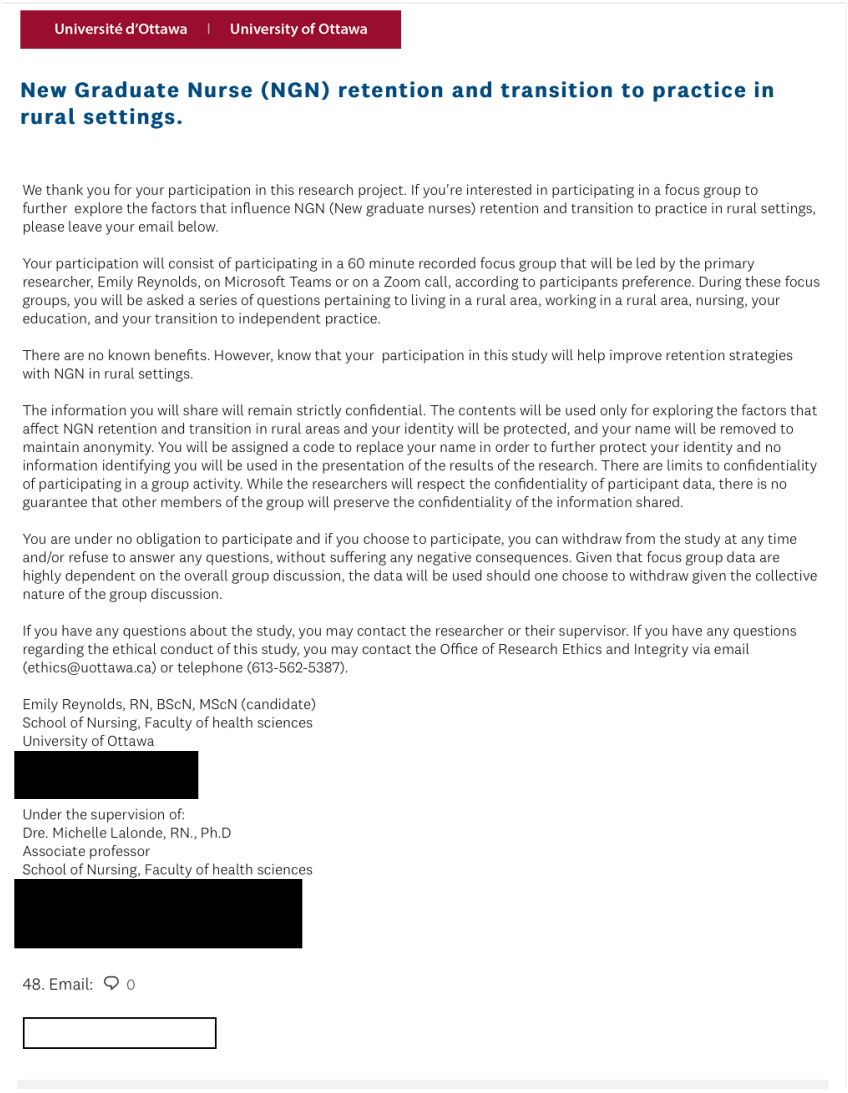
Recruitment poster



Return to reading section 4.4 or section 5.1

Appendix D

Focus Group invitation



Université d'Ottawa | University of Ottawa

New Graduate Nurse (NGN) retention and transition to practice in rural settings.

We thank you for your participation in this research project. If you're interested in participating in a focus group to further explore the factors that influence NGN (New graduate nurses) retention and transition to practice in rural settings, please leave your email below.

Your participation will consist of participating in a 60 minute recorded focus group that will be led by the primary researcher, Emily Reynolds, on Microsoft Teams or on a Zoom call, according to participants preference. During these focus groups, you will be asked a series of questions pertaining to living in a rural area, working in a rural area, nursing, your education, and your transition to independent practice.

There are no known benefits. However, know that your participation in this study will help improve retention strategies with NGN in rural settings.

The information you will share will remain strictly confidential. The contents will be used only for exploring the factors that affect NGN retention and transition in rural areas and your identity will be protected, and your name will be removed to maintain anonymity. You will be assigned a code to replace your name in order to further protect your identity and no information identifying you will be used in the presentation of the results of the research. There are limits to confidentiality of participating in a group activity. While the researchers will respect the confidentiality of participant data, there is no guarantee that other members of the group will preserve the confidentiality of the information shared.

You are under no obligation to participate and if you choose to participate, you can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. Given that focus group data are highly dependent on the overall group discussion, the data will be used should one choose to withdraw given the collective nature of the group discussion.

If you have any questions about the study, you may contact the researcher or their supervisor. If you have any questions regarding the ethical conduct of this study, you may contact the Office of Research Ethics and Integrity via email (ethics@uottawa.ca) or telephone (613-562-5387).

Emily Reynolds, RN, BScN, MScN (candidate)
School of Nursing, Faculty of health sciences
University of Ottawa
[redacted]

Under the supervision of:
Dre. Michelle Lalonde, RN., Ph.D
Associate professor
School of Nursing, Faculty of health sciences
[redacted]

48. Email: 0

Return to reading section 4.4

Appendix E

Consent form: questionnaire

Invitation to participate: I am invited to participate in the abovementioned masters of nursing thesis research study conducted by Emily Reynolds and supervised by Dr. Michelle Lalonde.

Purpose of the study: The purpose of the study is to explore the factors that influence NGN retention and transition to practice in rural settings.

Participation: My participation will consist of completing an electronic questionnaire of approximately 20 minutes, using SurveyMonkey©. During the completion of the questionnaire, I will be asked to answer a series of questions pertaining to my transition to independent practice as a nurse and my experiences living and working in a rural area.

Risks: My participation in this study will entail that I discuss sensitive topics, and this may cause me to feel emotional and/or psychological discomfort. I have received assurance from the researcher that every effort will be made to minimize these such as the option to refuse to answer, the option to withdraw from the study and identities will not be revealed.

Benefits: There are no known benefits. However, my participation in this study will help improve retention strategies with NGN in rural settings.

Confidentiality and Privacy: I have received assurance from the researcher that the information I will share will remain strictly confidential. I understand that the contents will be used only for exploring the factors that affect NGN retention in rural areas and that my identity will be protected and any identifiable information such as my email and my postal code will be removed to maintain anonymity. To minimize the risk of security breach and to help ensure my confidentiality, it is recommended that I use standard safety measures, such as signing out of my account, closing my browser, and lock my device when I am no longer using it/when I have completed the study.

Conservation of data: The data collected (questionnaires) will be kept securely in a locked file until they are destroyed according to the University of Ottawa procedure. All data will be kept in a locked file and destroyed ten years after the data collection date.

Voluntary participation: I am under no obligation to participate and if I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If I choose to withdraw, all data gathered until the time of withdrawal will be removed from the dataset and not used in the study.

If I have any questions about the study, I may contact the researcher or her supervisor. If I have any questions regarding the ethical conduct of this study, I may contact the Office of Research Ethics and Integrity via email (ethics@uottawa.ca) or telephone (613-562-5387).

By participating in this study, I agree that I:
-Have graduated from a nursing program within the last 12 months;
-Have a temporary or full registered nursing license in Ontario;
-Work and live in a rural area with a Rurality Index of 70 or more (visit https://www.health.gov.on.ca/en/pro/programs/northernhealth/rio_score.aspx to know if your community is applicable);

-The questionnaire will occur in English, I confirm that I can read and write in English.

Emily Reynolds, RN, BScN, MScN (student-researcher)
School of Nursing, Faculty of health sciences
University of Ottawa
[redacted]

Dr. Michelle Lalonde, RN., Ph. D
Associate professor
School of Nursing, Faculty of health sciences
University of Ottawa
[redacted]

1. Acceptance: By selecting the consent statement below, I agree to participate in this research study.
    a. Yes, I accept the conditions of participation.
    b. No, I do not accept the conditions of participation.
2. What is your age?
3. Gender
    a. _____
4. Population specialty
    a. Pediatrics
    b. Adults/Seniors
    c. Both
    d. Other (please specify)
5. Area of specialty (select all that apply)
    a. Adult Medical-Surgical
    b. Adult Critical Care
    c. OB/ Post Partum
    d. NICU
    e. Emergency Department
    f. Oncology
    g. Transplant
    h. Rehabilitation
    i. OR/PACU

j. Psychiatry/Mental Health
k. Ambulatory/Outpatient Clinic
l. Nephrology
m. Neurology
n. Cardiovascular
o. Gerontology
p. Palliative care
q. Other: _____

6. **Year of Graduation: _____**
7. **Postal code of the hospital that you're currently employed: _____**
8. **What previous health care work experience have you had:**
    a. Volunteer
    b. Nursing Assistant
    c. Medical Assistant
    d. Unit Secretary
    e. EMT
    f. Student Externship
    g. Other *(please specify)*: _____
9. **Have you functioned as a charge nurse?**
    a. Yes
    b. No
10. **Have you functioned as a preceptor?**
    c. Yes
    d. No
11. **How long was your unit orientation?**
    a. Still ongoing
    b. ≤ 8 weeks
    c. 9-12 weeks
    d. 13-16 weeks
    e. 17-23 weeks
    f. ≥ 24 weeks
12. **How many *primary* preceptors have you had during your orientation?**
    _____ number of preceptors.

13. **Describe your orientation and preceptorship that you received upon hire.**

Please indicate how much you disagree (1) or agree (5) with the following statements by selecting the number that best represents your answer.

14. I love the place where I live.
15. The weather where I live is suitable for me.
16. This community is a good match for me.
17. I think of the community where I live as home.

18. The area where I live offers the leisure activities that I like.
19. Leaving this community would be very hard.
20. People respect me a lot in my community.
21. My neighborhood is safe.
22. My family roots are in this community.

Please select one answer to the questions below.

23. How many coworkers do you interact with regularly?
    1=< 1, 2=1-2, 3=3-5, 4=6-10, 5=> 10.
24. How many coworkers are highly dependent on you?
    1=< 1, 2=1-2, 3=3-5, 4=6-10, 5=> 10
25. How many work-related teams are you on?
    1=< 1, 2=1-2, 3=3-5, 4=6-10, 5=> 10
26. How many work-related committees are you on?
    1=< 1, 2=1-2, 3=3-5, 4=6-10, 5=> 10
27. Are you currently in a common-law relationship or have a partner?
    1= no, 2= yes, partner not working, 3= yes, partner works
28. Do you own the home you live in?
    1= no, 2= yes
29. How many family members live nearby?
    1=< 1, 2=1-2, 3=3-5, 4=6-10, 5=> 10
30. How many of your close friends live nearby?
    1=< 1, 2=1-2, 3=3-5, 4=6-10, 5=> 10

Please indicate how much you agree or disagree with the following statements by selecting the number that best represents your answer.

31. ‘‘All in all I am satisfied with my job.”
    a. Disagree very much
    b. Disagree moderately
    c. Disagree slightly
    d. Agree slightly
    e. Agree moderately
    f. Agree very much
32. All things considered; I would like to find a comparable job in a different organization.
    a. Strongly disagree
    b. Disagree
    c. Neutral
    d. Agree
    e. Strongly agree
33. All things considered; I would like to find a comparable job in a different city.
    a. Strongly disagree
    b. Disagree
    c. Neutral
    d. Agree
    e. Strongly agree

Please indicate your level of satisfaction with the following statements.

34. Salary
    a. Very dissatisfied
    b. Moderately dissatisfied
    c. Neither satisfied nor dissatisfied
    d. Moderately satisfied
    e. Very satisfied
35. Vacation
    a. Very dissatisfied
    b. Moderately dissatisfied
    c. Neither satisfied nor dissatisfied
    d. Moderately satisfied
    e. Very satisfied
36. Benefits package
    a. Very dissatisfied
    b. Moderately dissatisfied
    c. Neither satisfied nor dissatisfied
    d. Moderately satisfied
    e. Very satisfied
37. Hours that you work
    a. Very dissatisfied
    b. Moderately dissatisfied
    c. Neither satisfied nor dissatisfied
    d. Moderately satisfied
    e. Very satisfied
38. Weekends off per month
    a. Very dissatisfied
    b. Moderately dissatisfied
    c. Neither satisfied nor dissatisfied
    d. Moderately satisfied
    e. Very satisfied
39. Your amount of responsibility
    a. Very dissatisfied
    b. Moderately dissatisfied
    c. Neither satisfied nor dissatisfied
    d. Moderately satisfied
    e. Very satisfied
40. Opportunities for career advancement
    a. Very dissatisfied
    b. Moderately dissatisfied
    c. Neither satisfied nor dissatisfied
    d. Moderately satisfied

e. Very satisfied

41. Amount of encouragement and feedback
    a. Very dissatisfied
    b. Moderately dissatisfied
    c. Neither satisfied nor dissatisfied
    d. Moderately satisfied
    e. Very satisfied
42. Opportunities for choosing shifts worked
    a. Very dissatisfied
    b. Moderately dissatisfied
    c. Neither satisfied nor dissatisfied
    d. Moderately satisfied
    e. Very satisfied

Please select all that apply (Questions 43 to 46)

43. What difficulties, if any, are you currently experiencing with the transition from the "student" role to the "RN" role?
    f. role expectations (e.g. autonomy, more responsibility, being a preceptor or in charge)
    g. lack of confidence (e.g., MD/PT communication skills, delegation, knowledge deficit, critical thinking)
    h. workload (e.g., organizing, prioritizing, feeling overwhelmed, ratios, patient acuity)
    i. fears (e.g., patient safety)
    j. orientation issues (e.g., unit familiarization, learning technology, relationship with multiple preceptors, information overload)
44. What could be done to help you feel more supported or integrated into the unit?
    k. improved orientation (e.g., preceptor support and consistency, orientation extension, unit specific skills practice)
    l. increased support (e.g., manager, RN, and educator feedback and support, mentorship)
    m. unit socialization (e.g., being introduced to staff and MDs, opportunities for staff socialization)
    n. improved work environment (e.g., gradual ratio changes, more assistance from unlicensed personnel, involvement in schedule and committee work)
45. What aspects of your work environment are most satisfying?
    o. peer support (e.g., belonging, team approach, helpful and friendly staff)
    p. patients and families (e.g., making a difference, positive feedback, patient satisfaction, patient interaction)
    q. ongoing learning (e.g., preceptors, unit role models, mentorship)
    r. professional nursing role (e.g., challenge, benefits, fast pace, critical thinking, empowerment)
    s. positive work environment (e.g., good ratios, available resources, great facility, up-to-date technology)
46. What aspects of your work are least satisfying?

t. nursing work environment (e.g., unrealistic ratios, tough schedule, futility of care)
u. system (e.g., outdated facilities and equipment, small workspace, charting, paperwork)
v. interpersonal relationships (e.g., gossip, lack of teamwork, politics)
w. orientation (e.g., inconsistent preceptors, lack of feedback)

Please share any comments or concerns you have about your residency program:

Return to reading section 4.5 or section 4.7

Appendix F

Casey-Fink sociodemographic questions (2006)

1. What is your age?
2. Gender
    a. _____
3. Population specialty
    e. Pediatrics
    f. Adults/Seniors
    g. Both
    h. Other (please specify)
4. Area of specialty (select all that apply)
    r. Adult Medical-Surgical
    s. Adult Critical Care
    t. OB/ Post Partum
    u. NICU
    v. Emergency Department
    w. Oncology
    x. Transplant
    y. Rehabilitation
    z. OR/PACU
    aa. Psychiatry/Mental Health
    bb. Ambulatory/Outpatient Clinic
    cc. Nephrology
    dd. Neurology
    ee. Cardiovascular
    ff. Gerontology
    gg. Palliative care
    hh. Other: _____
5. **Year of Graduation: _____**
6. **Postal code of the hospital that you're currently employed: _____**
7. **What previous health care work experience have you had:**
    h. Volunteer
    i. Nursing Assistant
    j. Medical Assistant
    k. Unit Secretary
    l. EMT
    m. Student Externship
    n. Other *(please specify)*: _____
8. **Have you functioned as a charge nurse?**
    e. Yes
    f. No
9. **Have you functioned as a preceptor?**

g. Yes
h. No

10. **How long was your unit orientation?**
    g. Still ongoing
    h. ≤ 8 weeks
    i. 9-12 weeks
    j. 13-16 weeks
    k. 17-23 weeks
    l. ≥ 24 weeks
11. **How many** *primary* **preceptors have you had during your orientation?**
    _____ number of preceptors.

12. **Describe your orientation and preceptorship that you received upon hire.**

Return to reading section 4.1 or 4.5

Appendix G

Job Embeddedness questions

Fit-Community
1. I love the place where I live.
2. The weather where I live is suitable for me.
3. This community is a good match for me.
4. I think of the community where I live as home.
5. The area where I live offers the leisure activities that I like.

Sacrifice-Community
1. Leaving this community would be very hard.
2. People respect me a lot in my community.
3. My neighborhood is safe.

Links-Organization
1. How many coworkers do you interact with regularly?
   1=< 1, 2=1-2, 3=3-5, 4=6-10, 5=> 10.
2. How many coworkers are highly dependent on you?
   1=< 1, 2=1-2, 3=3-5, 4=6-10, 5=> 10
3. How many work-related teams are you on?
   1=< 1, 2=1-2, 3=3-5, 4=6-10, 5=> 10
4. How many work-related committees are you on?
   1=< 1, 2=1-2, 3=3-5, 4=6-10, 5=> 10

Links-Community
1. Are you currently in a common-law relationship or have a partner?
   1= no, 2= yes, partner not working, 3= yes, partner works
2. Do you own the home you live in?
   1= no, 2= yes
3. My family roots are in this community.
Strongly disagree Disagree Neither disagree or agree Agree Strongly agree
4. How many family members live nearby?
   1=< 1, 2=1-2, 3=3-5, 4=6-10, 5=> 10
5. How many of your close friends live nearby?
   1=< 1, 2=1-2, 3=3-5, 4=6-10, 5=> 10

Return to reading section 4.5

Appendix H

Casey Fink questionnaire (2006)

III. How *satisfied* are you with the following aspects of your job:

	VERY DISSATISFIED	MODERATELY DISSATISFIED	NEITHER SATISFIED NOR DISSATISFIED	MODERATELY SATISFIED	VERY SATISFIED
Salary	O	O	O	O	O
Vacation	O	O	O	O	O
Benefits package	O	O	O	O	O
Hours that you work	O	O	O	O	O
Weekends off per month	O	O	O	O	O
Your amount of responsibility	O	O	O	O	O
Opportunities for career advancement	O	O	O	O	O
Amount of encouragement and feedback	O	O	O	O	O
Opportunity for choosing shifts worked	O	O	O	O	O

IV. Transition (please circle any or all that apply)

1. What difficulties, if any, are you currently experiencing with the transition from the *"student"* role to the *"RN"* role?

a. role expectations (e.g. autonomy, more responsibility, being a preceptor or in charge)
b. lack of confidence (e.g. MD/PT communication skills, delegation, knowledge deficit, critical thinking)
c. workload (e.g. organizing, prioritizing, feeling overwhelmed, ratios, patient acuity)
d. fears (e.g. patient safety)
e. orientation issues (e.g. unit familiarization, learning technology, relationship with multiple preceptors, information overload)

2. What could be done to help you feel more supported or integrated into the unit?

a. improved orientation (e.g. preceptor support and consistency, orientation extension, unit specific skills practice)
b. increased support (e.g. manager, RN, and educator feedback and support, mentorship)
c. unit socialization (e.g. being introduced to staff and MDs, opportunities for staff socialization)
d. improved work environment (e.g. gradual ratio changes, more assistance from unlicensed personnel, involvement in schedule and committee work)

3. What aspects of your work environment are most satisfying?

a. peer support (e.g. belonging, team approach, helpful and friendly staff)
b. patients and families (e.g. making a difference, positive feedback, patient satisfaction, patient interaction)

c. ongoing learning (e.g. preceptors, unit role models, mentorship)
d. professional nursing role (e.g. challenge, benefits, fast pace, critical thinking, empowerment)
e. positive work environment (e.g. good ratios, available resources, great facility, up-to-date technology)

4. What aspects of your work environment are least satisfying?

a. nursing work environment (e.g. unrealistic ratios, tough schedule, futility of care)
b. system (e.g. outdated facilities and equipment, small workspace, charting, paperwork)
c. interpersonal relationships (e.g.gossip, lack of recognition, lack of teamwork, politics)
d. orientation (inconsistent preceptors, lack of feedback)

5. Please share any comments or concerns you have about your residency program:

_____

_____

Return to reading section 4.5

Appendix I

MOAQ-JSS questionnaire

Annexe I: MOAQ-JSS

	Disagree very much	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree very much
1. ‘‘All in all I am satisfied with my job.”	1	2	3	4	5	6

Return to reading section 4.5

Appendix J

Turnover Intent Questionnaire (Mobley et al., 1978)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1) All things considered; I would like to find a comparable job in a different organization.	1	2	3	4	5
2) All things considered; I would like to find a comparable job in a different city.	1	2	3	4	5

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Appendix K

Focus group discussion guide

Hello,

My name is Emily Reynolds and I am a master's student in nursing at the University of Ottawa under the supervision of Professor Michelle Lalonde. The goal of my thesis is to explore the factors that influence NGN retention and transition to practice in rural settings. Thank you for completing the questionnaire and indicating your interest in participating in this focus group.

During the focus group, I would like us to discuss the following themes: rural settings, transition to practice, support and a sense of belonging.

Before starting, I must obtain your consent to participate in this study. You have received a consent by email. We will reread it together (distribution, reading aloud, signature, delivery, start of recording).

I assure you that the information shared during the focus group will be confidential. I understand that there are limits to confidentiality and that the Principal Investigator, Emily Reynolds is a Registered Nurse and a member of the College of Nurses of Ontario (CNO). I am aware of the limits to confidentiality of participating in a group activity. While the researchers will respect the confidentiality of participant data, I understand that they cannot guarantee that other members of the group will preserve the confidentiality of the information I will share. I understand that I am responsible for maintaining confidentiality and security of my data in this context. If I choose to withdraw from the study, the data collected up to that time will be destroyed and therefore will not be used. Given that focus group data are highly dependent on the overall group discussion, the data will be used should one choose to withdraw given the collective nature of the group discussion.

Do not hesitate to raise your hand if you have any questions, need clarification or if you wish to intervene throughout the discussion. First, I would like to learn a little more about you.

Professional career

- Name
- How long have you worked as an RN?
- In which city do you work?

We will now get into the topic of retention.

1) Why did you decide to pursue a career in a rural area?
2) What are the most positive aspects of working as a NGN in a rural setting?
3) What are the most challenging aspects of working as a NGN in a rural setting?

4) Are you involved in your community?
    a. Explain the importance of your involvement in your community for your sense of belonging.

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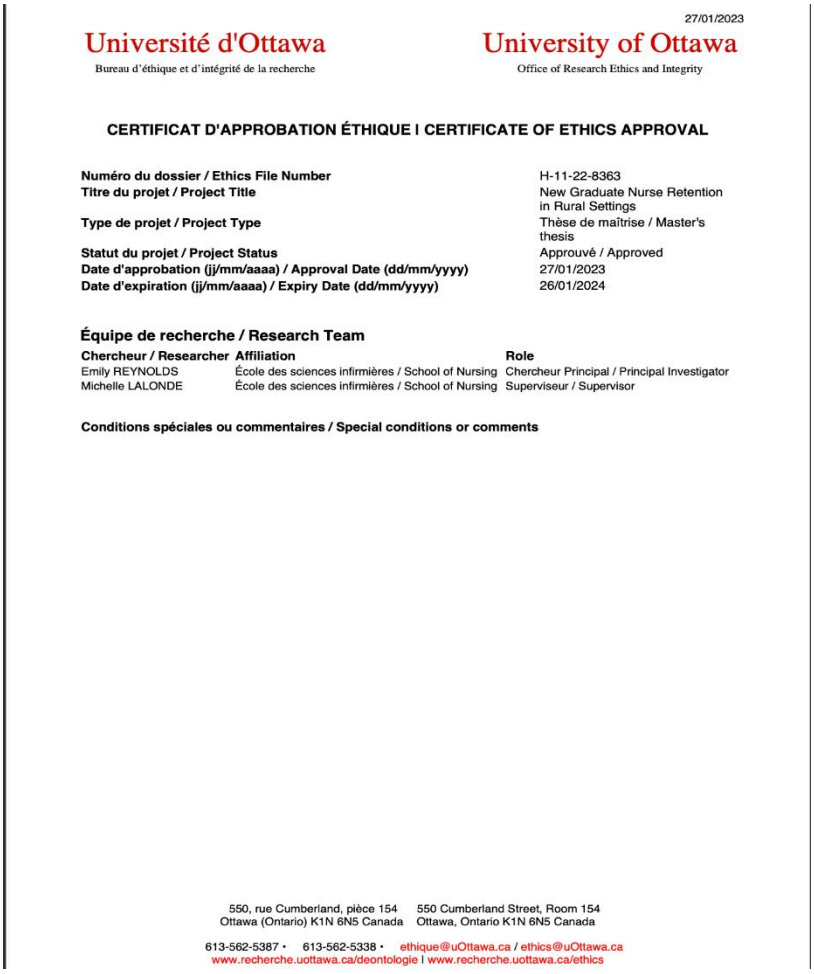
Appendix L

Ethics approval



27/01/2023

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

University of Ottawa
Office of Research Ethics and Integrity

CERTIFICAT D'APPROBATION ÉTHIQUE I CERTIFICATE OF ETHICS APPROVAL

Numéro du dossier / Ethics File Number	H-11-22-8363
Titre du projet / Project Title	New Graduate Nurse Retention in Rural Settings
Type de projet / Project Type	Thèse de maîtrise / Master's thesis
Statut du projet / Project Status	Approuvé / Approved
Date d'approbation (jj/mm/aaaa) / Approval Date (dd/mm/yyyy)	27/01/2023
Date d'expiration (jj/mm/aaaa) / Expiry Date (dd/mm/yyyy)	26/01/2024

Équipe de recherche / Research Team

Chercheur / Researcher	Affiliation	Role
Emily REYNOLDS	École des sciences infirmières / School of Nursing	Chercheur Principal / Principal Investigator
Michelle LALONDE	École des sciences infirmières / School of Nursing	Superviseur / Supervisor

Conditions spéciales ou commentaires / Special conditions or comments

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Appendix M

Letter of information and consent – Focus group

Title of the study: New Graduate Nurse (NGN) retention and transition to practice in rural settings.

Emily Reynolds, RN, BScN, MScN (candidate)
School of Nursing, Faculty of health sciences
University of Ottawa
[redacted]

Under the supervision of:
Dre. Michelle Lalonde, RN., Ph. D
Associate professor
School of Nursing, Faculty of health sciences
University of Ottawa
[redacted]

Invitation to participate: I am invited to participate in the abovementioned Masters of Nursing thesis research study conducted by Emily Reynolds and supervised by Dre. Michelle Lalonde.

Purpose of the study: The purpose of the study is to explore the factors that influence NGN retention and transition to practice in rural settings.

Participation: My participation will consist of participating in a 60-minute semi-directed interview recorded session that will be led by the primary researcher, Emily Reynolds, on Microsoft Teams or on a Zoom call, according to participants preference. During this interview, I will be asked a series of questions pertaining to living in a rural area, working in a rural area, nursing, my education, and my transition to independent practice.

Risks: My participation in this study will entail that I discuss sensitive topics, and this may cause me to feel emotional and psychological discomfort. I have received assurance from the researcher that every effort will be made to minimize these such as the option to refuse to answer, the option to withdraw from the study and identities will not be revealed. In case I have such feelings, the research team invites you to consult Wellness Together Canada https://www.wellnesstogether.ca/en-CA .

Benefits: There are no known benefits. However, my participation in this study will help improve retention strategies with NGN in rural settings.

Confidentiality and Privacy: I have received assurance from the researchers that the information I will share will remain strictly confidential. I understand that the contents will be

used only for exploring the factors that affect NGN retention in rural areas and that my identity will be protected, and my name will be removed to maintain anonymity. I will be assigned a code to replace my name in order to further protect my identity and no information identifying me will be used in the presentation of the results of the research.

Conservation of data: The audio/video recordings, transcriptions, notes taken during the focus groups and consent forms will be kept securely in a locked file. The recordings will be destroyed once the research project is complete according to the University of Ottawa procedure, all data will be kept in a locked file and will be destroyed ten years after the data collection date.

Voluntary participation: I am under no obligation to participate and if I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If I choose to withdraw from the study, the data collected up to that time will be destroyed and therefore will not be used.

If I have any questions about the study, I may contact the researcher or their supervisor. If I have any questions regarding the ethical conduct of this study, I may contact the Office of Research Ethics and Integrity via email (ethics@uottawa.ca) or telephone (613-562-5387).

It is recommended that I keep a copy of this consent form for my records.

Acceptance: By signing my name below, I agree to participate in this research study.

Participant's name: _____

Participant's signature: _____ Date: _____

Researcher's signature: _____ Date: _____

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