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INFLUENCE OF VALUES AND EXPECTATIONS OF A HEALTHY WORK
ENVIRONMENT ON MIGRATION INTENTIONS OF NURSE GRADUATES IN A
CANADIAN BORDER CITY

By

Le Xin

A Thesis
Submitted to the Faculty of Graduate Studies
through the Faculty of Nursing
in Partial Fulfillment of the Requirements for
the Degree of Master of Science at the
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Windsor, Ontario, Canada

2015

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“Influence of Values and Expectations of a Healthy Work Environment on Migration
Intentions of Nurse Graduates in a Canadian Border City”

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July 30, 2015

DECLARATION OF ORIGINALITY

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ABSTRACT

Nurse migration, in combination with a projected global nursing shortage, has been generating serious concerns. A healthy work environment, essential for recruitment and retention, was identified to influence on migration intentions. Secondary data analysis exploring the influence of values and expectations of a healthy work environment on migration intentions of two classes of nursing graduates (2011 and 2013) in a Canadian border community in Ontario, Canada was conducted. The number of students considering migrating increased approximately four percent in 2013. The majority preferred to work in Canada but were willing to migrate because of a perceived absence of valued job factors. Both migrants and non-migrants valued the same eight healthy work environment job factors. The results found that both migrants and non-migrants lacked confidence valued healthy work environment job factors would be met in Canada.

DEDICATION

I would like to dedicate this work to my loving husband Honggang for his never ending support, to my darling children James, Jeremy and Jessie and to my amazing parents Weimin and Ling for teaching me the value of education. I truly could not have done this without their support, encouragement, and patience.

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CHAPTER ONE

Introduction

Migration is a worldwide phenomenon. Health care professionals play a significant role in this migration phenomenon (Choy, 2010) with more than a quarter of the medical and nursing workforces of Canada, Australia, the United Kingdom, and the United States (US) composed of foreign-educated health professionals (Kingma, 2006). Nurse migration, in particular, has been increasing dramatically throughout the world (International Center on Nurse Migration [ICNM], 2014; Kingma, 2007).

Nurses migrate for a variety of reasons: to pursue better economic opportunities, to escape oppressive political climates, to pursue better education, or for adventure (Kingma, 2007). Hall and colleagues (2013) identified five key motivators for Canadian nurses to migrate to the US including obtaining full-time nursing employment, personal or family reasons, a desire to travel, educational opportunities, and improved salary and benefits. After an extensive review of the migration literature and adaptation of the Value-Expectancy Framework (De Jong & Fawcett, 1981) to nurse migration, Freeman and colleagues (2012) identified eight categories of job factors as having the potential to influence nurses' intent to migrate (see Figure 1). These included: economic rewards, professional development, healthy work environment, personal safety, opportunities for adventure, autonomy in choice of workplace, the availability of support networks, and support of ethical practice; they identified specific job factors for each category.

Although attention has been focused on the reasons for nurse migration, very little attention has been paid to how nursing graduates make the decision to migrate based on what they value and expect in a healthy work environment (HWE). Another gap is the

lack of knowledge about nurses in border communities, such as the focus of this study in a border community in southwest Ontario. In Freeman's study (2012), 66.1% (n=76) graduates identified that they were considering migrating for work outside of Canada. They found that non-migrants valued a healthy work environment significantly more than migrants ($F = 8.17; p < .005$). In addition, they found that migrants had significantly higher expectations that their HWE ($t = -4.80; p < .001$) values would be met in another country rather than Canada. The finding of Freeman's study demonstrated that both migrants and non-migrants were only 50% confident that they would have HWE values met in Canada (Freeman et al., 2012). Although there is a great deal of research supporting the importance of a HWE and the retention of nurses (Heath, Johanson, & Blake, 2004), there has been a limited focus on the influence of the expectations of a HWE on their migration intentions.

A HWE is emerging as an important issue that influences the choice of work location. Rajacich and colleagues (2014) examined work environment factors influencing nurses' decisions of whether to work in Canada or the US (as commuter migrants) in a border city in south western Ontario. They found that the work environment, specifically work status congruence, professional development, organizational support and autonomy, play an important role in nurses' employment decisions thus influencing nurse migration. Zander et al. (2013) identified the promise of a positive work environment as having the strongest impact on intent to migrate, especially in border cities, where nurses have the option of leaving their home country and working in a foreign country as commuter migrants.

<p>Economic Rewards Full- time job Salary Benefits</p> <p>Professional Development Increase competencies Professional development</p> <p>Healthy Work Environment Supports health, safety, and well-being Supports quality patient care Appropriate staffing Visible nurse leaders Open communication and trust Good relationship with nurse manager Sufficient orientation program Flexible schedules</p> <p>Personal Safety Job located in a safe area Job allows living in a safe area Zero tolerance for workplace violence</p> <p>Adventure Adventure- live in new place Adventure-work in new place</p> <p>Autonomy Preferred job sector Preferred specialty</p> <p>Support Network Live close to family Live close to friends</p> <p>Ethical Practice Questioning unethical practices Supports error reporting Supports speaking up if risk of harm</p>

Figure 1
Eight Values and Expectation Categories with Job Factors for Each Category (Freeman et al., 2012, p.1533)

A HWE has also been identified as one factor that has been linked to nurse retention and contributes to the nurses' decision-making regarding employment location (Cameron, Armstrong-Stassen, Rajacich, & Freeman, 2010; Freeman, Baumann, Akhtar-Danesh, Blythe, & Fisher, 2012). A HWE is defined as "a practice setting that maximizes the health and well-being of nurses, quality patient outcomes and organizational and system performance" (Registered Nurses' Association of Ontario [RNAO], 2013). According to the American Nurses Association (ANA, 2014), a HWE is one that is safe, empowering, and satisfying. Investing in a healthy work environment has been recognized as a key strategy in workforce planning, both for retaining nurses in their home country (Kramer, Halfer, Maguire, & Schmalenberg, 2012; Dywili, Bonner, & O'Brien, 2013) and in attracting qualified nurses who are willing to return to their source countries (Zander et al., 2013). Gillis, Jackson, and Beiswanger (2004) identified that key components of a work environment that supported the retention of nurses included the presence of visible leaders, adequate compensation and benefits, and appropriate investment in continuing education and professional development of staff. Freeman et al. (2012) identified eight job factors for a HWE that included a) supports the health, safety, and well-being of nurse, b) supports provision of quality patient care, c) provides appropriate staffing levels for the type of patients and their acuity level, d) has visible nurse leaders who advocate for nurses and nursing practice, e) has strong nursing leadership demonstrated by an environment of open communication and trust, and where contributions valued, f) offers good working relationship with nurse manager, g) orientation of sufficient length to help transition to independent practice, h) offers scheduling that supports work life balance.

A number of studies have identified a poor working environment as a contributing factor to the under-supply of nurses in developed countries (Goodin, 2003).

Dissatisfaction with the work environment has been found to not only affect the retention rate of nursing staff, but also the quality of patient care and patient outcomes (Stuenkel, Nguyen, & Cohen, 2007). Therefore, creating and maintaining healthy work environments is critical if nurses are to be successfully recruited and retained. Moreover, ensuring the health, safety and well-being of the current and future nursing workforce is vital to the future of the health care system (RNAO, 2008).

Canadian nurses have a long history of migrating to the US (Little, 2007). A study by the RNAO (2001) found one of the reasons Canadian RNs migrated to the US was working conditions in Canada. Almost 80% of survey respondents in the US stated that they would consider returning to Canada if the government created a healthier workplace including creative and flexible scheduling, safe working environments, and accessible child care (Eager & Blythe, 2003).

Background and Significance of the Problem

The phenomenon of nurse migration is not new (Mejia, Pizurki, & Royston, 1979). The patterns can be described in three ways: (1) migration from developed to developed countries; (2) migration from developing to developed countries; and (3) migration from developing to developing countries (Buchan & Calman, 2004). The traditional pattern of nursing migration from developing countries to developed countries has had a long history (Kingma, 2007). Specifically, nurses migrated from what is referred to as “source countries” such as the Philippines, India, China, Korea, and African

to “destination countries” such as the United Kingdom, US, Canada, and Australia (Kingma, 2007). However, the exchange of nurses among developed countries has also been taking place for many decades (Aiken, Buchan, Sochaiski, Nichols, & Powell, 2004).

Nurse migration, in combination with a projected global nursing shortage, has been generating serious concerns. Nurse migration impacts both source countries and destination countries. The loss of skilled nurses not only seriously weakens the health care system of the source country, but also affects its health care economy (Choy, 2010). The loss of nurses from developing countries to developed countries is referred to as “brain drain” (Slote, 2011). This migration has been found to create an increased workload and stress for the nurses who remain in the source countries (Chikanda, 2005; Stilwell et al., 2003). Additionally, the resources required to help migrant nurses to adapt to new living and working environments in destination countries is becoming a significant concern (Konno, 2008; Omeri & Atkins, 2002).

Nurse migration, however, also has a positive impact if these nurses return to their home country (Choy, 2010). These returning migrants help improve the quality and status of both nursing care and nursing education by sharing international experiences and advanced skills (Nichols & Campbell, 2010). The return of these skilled migrant nurses to their home countries is referred to as a “brain gain” (Slote, 2011).

In the last few decades, because of Canadian health system reforms, many Canadian nurses have migrated for jobs outside of Canada. The US has been the major beneficiary of Canadian nurse migrants as a result of the reduction of full-time jobs for

nurses in Canada (Little, 2007). In the 1990s, due to restructuring in the Canadian hospitals, many Canadian registered nurses (RNs) migrated to the US or elsewhere (Baumann, Blythe, Kolotylo, & Underwood, 2004). Industry Canada (1999) estimated that approximately 27,000 RNs permanently migrated to the US during the 1990s. In the fiscal year of 2013, the National Council of State Boards of Nursing ([NCSBN], 2013) identified that RNs from Canada are the third highest country taking National Council Licensing Examination for Registered Nurses (NCLEX-RN) licensure exam (NCSBN, 2013). It is clear that the unstable employment conditions in Canada severely impact new nursing graduates' choice of job location. The migration of new graduates is of concern because it is very difficult to bring them back once they move away (RNAO, 2013).

The Canadian Nurses Association (CNA, 2009) estimated that Canada is facing a significant RN shortage with a short fall of over 60,000 nurses by 2022. In response, many colleges and universities increased their intake into nursing programs (Hancock, 2008). This response, however, has been criticized for treating the symptoms without dealing with the root cause (Dywili et al., 2013, p. 513). The question that needs to be addressed is why Canadian nurses migrate to other countries. Moreover, training more nurses without reducing their exit from the source country will inevitably only help the destination countries (Dywili et al., 2013). Recent studies support that retention can be enhanced by fostering a meaningful work environment for nurses (Cohn, Stuenkel, & Nguyen, 2009).

In recent years, a great deal of research has focused on the experiences of migrant nurses in destination countries. Zander et al. (2013) conducted a study that focused on the experiences of migrant nurses abroad to identify sound strategies for workforce planning

in Germany. Similarly, Wheeler, Foster and Hepburn (2013) studied the experiences of migrant nurses in the southeastern US using semi-structured interviews to provide implications for orientation programmers and recruitment and retention strategies. Limited attention has been focused on understanding what factors influence the migration intentions of nursing graduates, and specifically the role that a HWE plays in this decision making. It is crucial that policy makers, nursing leaders, and nursing educators understand the each job factor of HWE for nursing migration as this knowledge will guide interventions to retain them in Canada. More importantly, examining graduate nurses' values and expectations of a HWE on intent to migrate is a beginning step in dealing with the complex phenomenon of nursing migration (Lee & Moon, 2013), especially since there is a noticeable tendency for university-degree-qualified nurses to migrate (Thomas, 2006; El-Jardali, Merhi, Jamal, Dumit, & Mouro, 2009). Limited proactive planning can be done without some understanding of migration intentions and, the each job factor of HWE that influence Canadian nurse graduates' decision making. Exploring the values and expectations of a HWE and its influence on migration intentions has the potential to offer new insights and therefore new avenues for interventions. Moreover, this study is unique as it could inform the policy makers some of the factors influencing nurse migration, which will improve nursing human resource planning in the future.

Purpose of the Study

The purpose of this study is to compare migration intentions of two classes of nursing graduates (2011 and 2013) in a Canadian border community and their values and expectations of a HWE. The Value-Expectancy (V-E) framework (De Jong & Fawcett, 1981) as used by Freeman et al. (2012) will guide the study.

Research Questions

The research questions include:

1. What are the differences between the individual 2011 and 2013 classes in migration intentions and their value and expectations of a HWE?
2. What are the differences in the values and expectations of the eight HWE job factors between the migrant group (intent to migrate) and non-migrant group (no intent to migrate) in the combined cohort?
3. For the migrants in the combined cohort, are there differences in their valuing of a job factor and their expectations of having it met in Canada versus another country?

The Value-Expectancy (V-E) Framework

The Value-Expectancy (V-E) framework (De Jong & Fawcett, 1981) will guide this study. The V-E framework was first applied to the study of nurse migration by Freeman and colleagues (2012) who stated that it had the potential to provide valuable insights into how an individual nurse arrives at the decision to migrate by weighing a complex array of personal values against the expectation of meeting them (p. 1535). Developed based on the theory of planned behavior (Ajzen, 1988), “The model assumes

migration is purposive behavior, that is, that the potential migrant makes a conscious decision to migrate or not to migrate through a process by which perceived consequences are weighed and evaluated” (De Jong & Fawcett, 1981, p. 57). The V-E model has been developed and applied to study migration decision-making in specific geographical locations for many years (De Jong et al., 1983; De Jong, Davis Root, Gardner, Fawcett, & Abad, 1986; De Jong & Richter, 1996, De Jong & Steinmetz, 2005; De Jong et al., 2013).

As described in Freeman et al. (2012), the basic components of the V-E model are values (goals) and expectancies (subjective probabilities). Although the formulation of the V-E model seems relatively straightforward, it had to be operationalized. De Jong and Fawcett (1981) reviewed the literature and generated seven conceptual categories for values that included: (a) wealth, (b) comfort, (c) status, (d) stimulation, (e) autonomy, (f) affiliation, and (g) morality. Correspondingly, each category was defined and potential conceptual indicators were outlined. The model requires that a measure of the importance for each value be obtained. A corresponding expectancy is then obtained for alternative locations. Expectancy is defined as the subjective probability that migrating to a certain location, will lead to the valued outcome (De Jong & Fawcett, 1981). Other factors found to be relevant to migration decision-making were also identified by De Jong (2000), which included gender roles, migrant networks, perceived family migration norms, residential satisfactions, and direct behavioral constraints and facilitators. These factors are modifiers that effect the decision to migrate.

The advantage of the V-E model for nurse migration research is that expectancies for alternation locations can be measured. Freeman and colleagues (2012) adapted the V-

E model to explore the intent to migrate among nurse graduates in a Canadian border city. In the study, eight job factors categories were identified (see Figure 1). These included a) economic rewards; b) professional development; c) healthy work environment; d) safe living and working environment; e) opportunity for adventure; f) autonomy in choice of workplace; g) social support and h) support of ethical practice (Freeman et al., p. 1534). Survey questions were framed as statements that asked about the importance (value) and the corresponding confidence (expectation) of a job factor to the individual. Both value scores and expectation scores were measured using a 5-point Likert scale.

Little is known about the migration intentions of graduating nursing students in general, and border city graduates in particular (Freeman et al., 2012, p. 1532). Freeman and colleagues (2012) adapted the V-E model to explore the migration intention of graduates in a Canadian border community and job factors influencing their decision making. They analyzed the eight categories of job factors but did not explore the individual factors in each category. This study is unique because it explores the values and expectations of two classes of nurse graduates on the individual job factors in the HWE category.

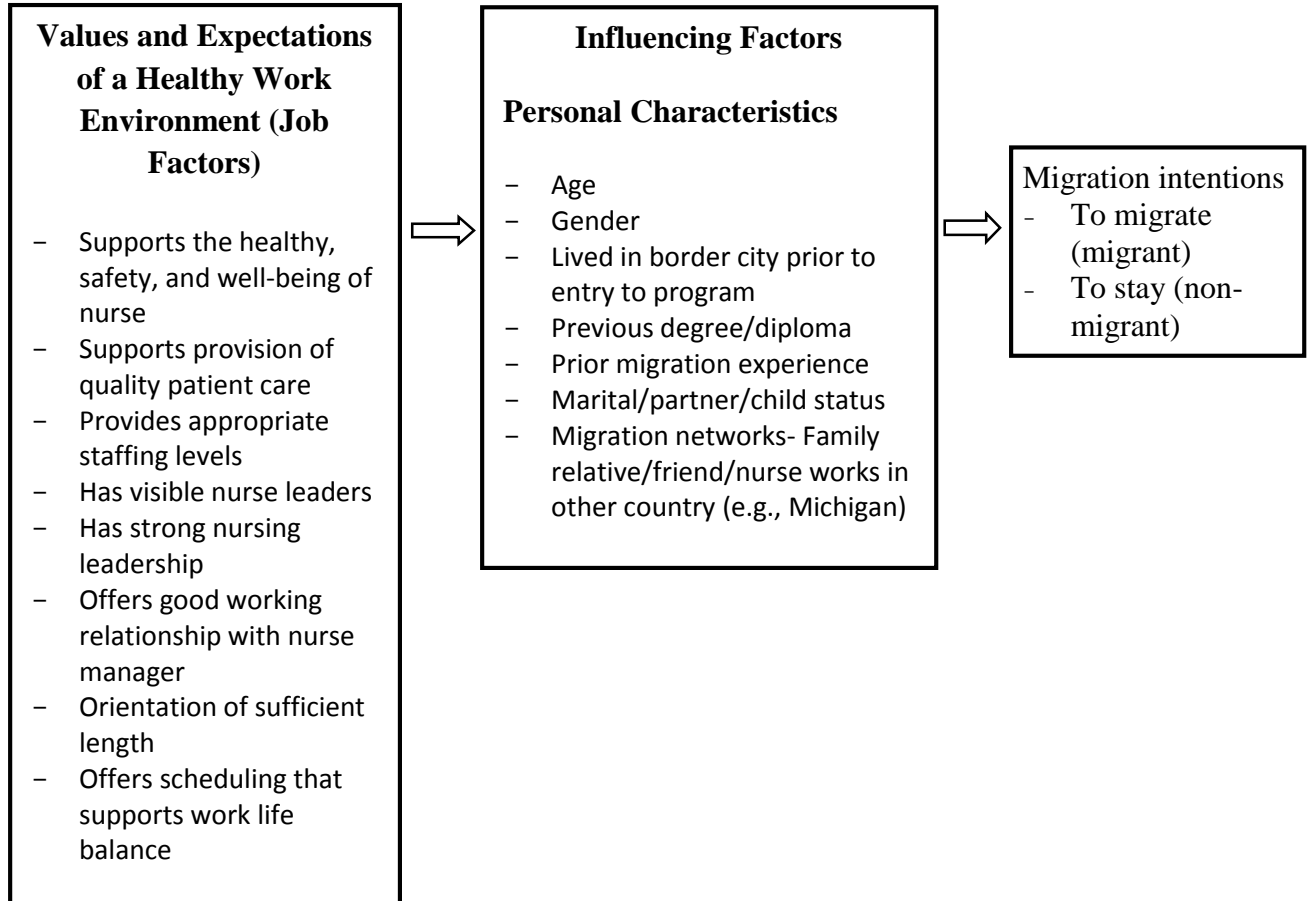


Figure 2 HWE Category

Values and Expectations of a Healthy Work Environment and Factors Influencing Migration Intentions (adapted from Freeman et al., 2012)

CHAPTER TWO

Literature Review

Search Strategies

A comprehensive search of the literature on nurse migration and the impact of a HWE on nurse migration was undertaken. The search process involved reviewing the electronic database, journals, relevant books, and dissertations. The following electronic databases were searched: Cumulative Index of Nursing and Allied Health Literature (CINAHL), MEDLINE, PubMed, EMBASE, PsychINFO, EBSCOhost (Health), Scopus, Journals@Ovid, and ProQuest. Full and truncated keywords used to retrieve relevant research articles included the following: nurse, nurs*, professional, health worker, migration, migrat*, immigration, imigrat*, emigration, emigrat*, international nurse migration, foreign nurse migration, overseas nursing migration, nursing mobility, work environment, nurse retention, nurse turnover, healthy work environment. No time limits were set on the search except those imposed by the individual indexes. Web search engines, such as Google Scholar, and migration specific web sites with research and resources indexes, such as the International Center for Nurse Migration (ICNM), International Organization for Migration (IOM), RNAO, CNA and World Health Organization (WHO) were searched. Grey literature was found through web search engines and by hand searching of published work, government reports, and books. In addition, reference lists were used to locate useful literature.

The literature review begins with a brief overview of the widespread nature of global migration, the definitions of the types of migration, and migration theory.

Migration

Each year, between 5 and 10 million people worldwide cross an international border to become residents in a different country (International Organization for Migration [IOM], 2004). In 2005, 191 million individuals, approximately three percent of the global population, were international migrants (United Nations Department of Economic and Social Affairs, 2006). Sixty percent of migration takes place between developing countries; only 40% of occurs among developed countries (IOM, 2005). Migration within countries is also significant and is most commonly from rural to urban areas. Approximately half of migration is considered to be labor migration and half of all migrant workers are female (Bach, 2007).

Types of migration defined. Migration is defined as the movement of people across a specified boundary for the purpose of establishing a new or semi-permanent residence (INDEPTH network, 2008). There are many different types of migration but the terms have not been standardized in the literature. For example, both “migration” and “immigration” and out-migration and “emigration” are used to differentiate the movement within or across national borders (Buchan, Kingma, & Lorenzo, 2005). National Geographic (2014) classifies migration by; internal migration (moving to a new home within a state, country or continent), external migration (moving to a new home in a different state, country or continent), emigration (leaving one country to move to another), immigration (moving into a new country), and return migration (when people move back to where they came from). Sherwood and Shaffer (2014) define nurse migration as the movement of nurses educated in one country (a source country) who leave to work and practice in a different country (destination country) (p. 47).

A unique type of nurse migrant is the daily commuter migrant who crosses an international border to work and returns to their home country after work (Freeman et al., 2012). This type of migration is common in communities along the US-Canada border where Canadian nurses have access to full time jobs in large American health care systems.

Migration theory. Although migration theories have been evolving for many years, there are few examples of their use in research on nurse migration (Freeman, 2012). These limit our ability to forecast, explain, study, and/or address issues related to increasing rates of nurse migration (Freeman et al., 2011). One of the most frequently used theories to explain nurse migration is the push-pull theory (Meija et al., 1979; Kline, 2003; Kingma, 2006a; Bach, 2007). Push factors for health workers include conditions of service, poor remuneration, civil unrest, feelings of lack of respect, lack of opportunities for postgraduate training, and poor governance and management of the health system in the countries. Pull factors include career advancement, greater financial rewards, opportunities for further training, improved working conditions, availability of jobs, job security, and job satisfactions (Aiken, Buchan, Sochalski, Nichols, & Powell, 2004; Evans & Tulaney, 2011; Riner, 2009). Although the push-pull theory provides an explanation of why nurses migrate, it does not explain individual decision making and has been criticized for its inability to explain why people decide not to migrate (Arango, 2000; De Jong & Fawcett, 1981).

The Value-Expectancy (V-E) model was first adapted to identify factors that were driving migration intentions in nurse graduates in a Canadian border city by Freeman and colleagues (2012). According to De Jong and Fawcett (1981), “The model assumes

migration is purposive behavior, that is, that the potential migration makes a conscious decision to migrate or not to migrate through a process by which perceived consequences are weighted and evaluated” (p. 57). The advantage of using this model to migration research is that expectancies for alternative locations can be measured (Freeman et al., 2012). The V-E model provided a new approach to study nurses’ migration intentions.

Nurse Migration

The migration of nurses is dramatically increasing as the world grows borderless. The reasons for nurse migration are varied. Nurse migration affects different countries in different ways. This section will describe the reasons for nurse migration and the impact of nurse migration, factors supporting nurse migration and nurse migration and a HWE.

Reasons for nurse migration. The reasons for nurse migration are multifaceted. First, most of the studies supported that many nurse are seeking for better remuneration in another country as economic reasons for migration (Aboderin, 2007; Beaton & Walsh, 2010; Buchan et al., 2005; El-Jardali et al., 2009). Migrant nurses were driven by the desire to either send money back home as remittance to help family members or look for financial improvement and better benefit package for themselves (Mejia, 2004; Perrin, Hagopian, Sales, & Huang 2007; Troy, Wyness, & McAuliffe, 2007). Second, nurses often choose to migrate for professional growth, employment opportunities and career advancement, such as improved working conditions, better scheduling, paid education, more career options, stable full-time work, and job security (Dywili et al., 2013). Third, even without economic and professional motivating nurses to migration, several studies found that the social factors including living in a higher quality of life and a safer

environment are only reasons for some nurse migrants as their current living condition were unmanageable and unsafe (Chikanda, 2005; Thomas, 2006). Fourth, several studies reported that some nurse migrated because of political factors (Thomas, 2006; El-Jardali et al., 2009). They left their counties to search of security for themselves and their family. Fifth, a number of studies found that nurse migrants were motivated by personal factors, such as opportunities to travel and oversea working experience (Beaton & Walsh, 2010; Chikanda, 2005). Lastly, the global nursing shortage creates opportunities that give nurses the ability to move more easily between countries. Nurses have taken advantage of these opportunities to seek improved wages and working conditions abroad (Gamble, 2002).

Impact of nurse migration. With globalization, no country today is unaffected by nurse migration. Nurse migration has diverse and complex effects. The positive and negative effects of nurse migration are realized in both the countries that supply the nurses and those who receive them (Hancock, 2008).

On the negative side, the departure of nurse migrants can deplete a workforce and severely reduce the availability and quality of services in the health care system when they leave their own countries (Stalker, 2000). For example, the impact of nurse migration from the Caribbean countries resulted in insufficient nurses to support delivery of essential health care, decreased capacity to deliver health care, increased cost of recruitment and retention, compromised quality of care, and lower consumer and staff morale (Pan American Health Organization, 2001). Furthermore, a diminishing supply of nurses in the source countries may inflate wages, putting added pressure on the economy (Buchan & Calman, 2004). In addition, hiring nurse migrants may reduce the number of

jobs available to the native population of the destination countries (Stalker, 2000). Although nurse migration is used to solve the nursing shortage in many countries, it creates global inequities and impedes resolution of long-standing issue behind the shortage (McElmurry et al., 2006). According to McElmurry et al. (2006), massive nurse migration can result in institutions shut down and communities left without local health care in source countries, thus creating an environment that contradicts the primary health care principles of equity and accessibility (p. 231).

In addition to the negative impact, nurse migration has positive impacts when these nurses return to their home country (Choy, 2010). These returning migrants can help improve the quality and status of both nursing care and nursing education by sharing international experiences and advanced skills (Nichols & Campbell, 2010). Moreover, nurse migrants have been recognized as important contributors of remittances to the national economies of their home countries. These remittances play a significant role in reducing the level and severity of poverty and contribute to the economic development all over the world. Moreover, nurse migrants use the nurse remittances to lessen the burden on health systems by improving access to food, housing and education (ICNM, 2014).

Factors supporting nurse migration. There are many factors that encourage and support the movement of nurses. Nurse migrants, as professional and highly skilled laborers, are granted preferential treatment for admission to many countries (IOM, 2004). For example, labor mobility clauses in trade agreements between countries, such as the North American Free Trade Agreement (NAFTA), were written to facilitate migration (Blouin, 2005; Aiken, 2007). In addition, countries' immigration policies have been modified to allow additional visas for skilled professionals, such as nurses (Aiken, 2007).

Improving access to the writing of licensing exams is another strategy; the American exam (NCLEX-RN) has been made available since 2005 in many different countries to lessen the financial burden on qualified nurses who want to migrate to the US (Aiken, 2007).

A new development that may support nurse migration from Canada is that in January 2015 Canadian nurses will take the US-based NCLEX-RN as the licensing exam for entry-to-practice as an RN in Canada (College of Nurse of Ontario [CNO], 2012). “It is possible that adopting the NCLEX exam will contribute to an increase in Canadian nurse migration to the US, as Canadian nursing graduates will have the credential required to practice in the US” (Hall et al., 2013, p. 17).

The Impact of a Healthy Work Environment on Nurse Migration

A healthy work environment for nurses is complex and multidimensional, involving a variety of components. It is defined as “practice settings that maximize the health and well-being of the nurse, quality patient outcomes, organizational performance and societal outcomes” (RNAO, 2008, p. 14). According to Christmas (2008), work environment refers to “the tone of any workplace’ (p. 316). It is influenced by numerous factors, including peer relationships, the role of management, patient acuity, physical environment and availability of equipment (Christmas, 2008). Similarly, Kramer and colleagues (2012) define a work environment is an “alterable medium”, which can be used to improve the conditions and processes of practice and subsequently patient outcomes. The American Association of Critical- Care Nurses (AACN, 2005) published six criteria that are essential for a healthy work environment: communication, leadership,

appropriate staffing, decision making, recognition, and collaboration (Erenstein & McCaffrey, 2007). Freeman et al. (2012) defined a healthy work environment as one that reflects good working conditions for nurses (p. 1534).

A safe and healthy work environment is crucial for nurses if they are to be enticed to remain in the nursing workforce to provide the best patient care. Failure to do so in the current health care system will be detrimental to retaining nurses (RNAO, 2008). Additionally, nurse retention rates are closely linked with the work environment. A number of studies have examined that dissatisfaction with the work environment increased nurse turnover rates (Stuenkel et al., 2007). Moreover, nurses with negative perceptions of a new work environment may leave the position within the first year of employment, resulting in a waste of valuable recruitment and orientation resources (Stuenkel et al., 2007).

A HWE supports good working conditions for nurses, which can provide a better relationship between the nurses and the managers. Harmonious relationships with nurse managers in the work environment enhance staff's productivity, organizational commitment, and climate of patient safety (Stuenkel et al., 2007). In addition, one factor that has been identified as being important to a healthy work environment is the role of nurse leaders. A strong nursing leadership including visibility, accessibility and open communication with staff is critical to create and maintain a positive work environment, which is closely linked with nurse job satisfaction and retention (Aiken et al., 2004; Kleinman, 2004). Kramer and colleagues (2012) reported that the perception of adequate staffing is the measurable factor in creating a HWE. Adequate staffing can help and support nurses to better perform their duties and in turn to decrease the turnover rate.

Other job factors related to a HWE include appropriate orientation and flexible self-scheduling. Appropriate orientation, preceptorship and mentorship programs for new staff were found to be an efficient strategy in creating a HWE (Gillis et al., 2004). A flexible working schedule allowed nurses to choose their work schedule to balance their individual needs with work. The availability of self-scheduling has been identified as one of the job factors that pulls nurses to migrate (Cohen et al., 2009).

Significance and Gap in Current Literature Review

In January 2015, new Canadian graduate nurses will no longer take the Canadian Registered Nurse Examination (CRNE), but will take the NCLEX-RN exam (CNO, 2012). This change will make Canadian nurses the most mobile skilled workers in North America (Nelson, 2013) and allow Canadian nurses, especially in border communities, easier access to jobs in the US. Additionally, CNO recently implemented a new policy stating that its members practicing outside Ontario for more than three years will no longer be able to keep their professional license but will be designated as a “non-practicing class” (CNO, 2014). This change may prevent Canadian nurse migrants from returning to Canada. A loss of Canadian RNs has the potential to reduce the capacity of the health system, so it is essential that policy makers and nurse administrators understand the influence of new graduates’ values and expectations of a HWE on their migration intentions. This will allow for the development of effective retention strategies, focusing on HWE job factors that are valued by these nurses and both prevent the migration of these nurses and attract those who have left back to Canada.

To date, much of the nursing literature has focused on the trends and impact of global nurse migration with limited focus on the intent to migrate, especially of Canadian-educated RNs. Furthermore, a review of the literature found studies on the intent of nursing students to migrate from Israeli, Uganda, Korea (Hendel & Kagan, 2011;; Nguyen et al., 2008; Lee & Moon, 2013), but only one study exploring the migration intentions of recently graduated nurse in a Canadian border city (Freeman et al., 2012). Information on the views of the next generation of nursing professionals can help shape the education at training institutions as well as policy at the governmental level.

Numerous studies have examined the relationships of a HWE on nurse retention and turnover (Heede et al., 2013; Kramer et al., 2012; Erenstein & McCaffrey, 2007; Cohen, et al., 2009). However, limited research has focused on impact of HWE and its influence on nurse migration intentions. Research by Zander et al. (2013) supported that a HWE has the strongest impact on nursing intent to migrate in Europe, but no studies have been conducted on the impact of a HWE and nurse migration intention in Canada. Freeman and colleagues' (2012) did not analyze the specific job factors of a HWE that influenced the new graduates' migration intentions. Since it is vital for the study of this nursing population and understanding their beliefs, attitudes and expectations about HWE relative to the issues of migration and retention in Canada, this study will provide information to guide institutional and government policies and practices to recruit and retain nurses in Canada. Moreover, the V-E model will provide a new approach to analyze the values and expectations of HWE and intention of nurse migration.

In summary, this study will provide novel insights on the importance of the HWE in influencing nurse migration intention. It also will offer a snapshot of the nursing graduates' perception of the HWE, therefore providing guidelines for health institutions and organizations in designing a HWE to motivate new graduate nurses to stay within their own country to work. In addition, exploring and understanding the differences between the 2011 and 2013 cohorts in values and expectations of a HWE will offer a unique contribution to the nurse migration literature. Moreover, identifying the unique responses to each job factor in the HWE category among nursing graduates will provide further support for informing policy makers to improve nursing health human resource planning of a HWE in the future.

CHAPTER THREE

Methodology

Research Design

This study is a secondary analysis of the quantitative data from a mixed method study which explored the migration intentions of two graduating classes of baccalaureate nursing students in a Canadian border community and the job factors influencing their decision making. This study will analyze the values and expectations of a HWE on migration intention of these students. The survey data was collected on two cohorts; one in 2011 and the second in 2013.

Variable Definition

Freeman et al. (2012) defined the two groups of nurse graduates as migrants and non-migrants. The migrants were graduates who are considering working in nursing in another country. The migrant may move from Canada (e.g., North Carolina or Australia) or live in Canada but commute (commuter migrant) for work across an international border (e.g., Windsor-Detroit border). The non-migrants were graduates who were only considering working in Canada (p. 1533).

In this study, value is defined as the importance of each HWE job factor to the participant. Expectancy is defined as the confidence (expectation) of achieving this HWE job factor in a first job (Freeman et al., 2012, p. 1533).

A HWE is defined as “good working conditions for nurses” and comprised of eight job factors: a) supports the health, safety, and well-being of nurses; b) supports provision of quality patient care; c) provides appropriate staffing levels for the type of

patients and their acuity level; d) has visible nurse leaders who advocate for nurses and nursing practice; e) has strong nursing leadership demonstrated by an environment of open communication and trust, and where contributions values; f) offers good working relationship with nurse manager; g) orientation of sufficient length to help transition to independent practice; and h) offers scheduling that supports work life balance (Freeman et al, 2012, p. 1534).

Survey

The survey was developed through a literature review, concept analysis (Freeman et al., 2011), and in consultation with experienced faculty members and designed using the V-E model (Freeman et al., 2012). Face and content validity of the survey was conducted (Freeman et al., 2012).

The self-report web-based survey (see Appendix A) was comprised of four sections as described by Freeman et al. (2012). Section one was completed by all respondents and included questions related to work location. Participants were then directed to either section two (for migrants) or three (for non-migrants) to answer questions regarding job values and expectations depending on their migration intentions identified in section one. Next, all participants were asked to answer section four on demographics and work place preferences (p. 1534) that have been shown to influence migration intentions such as age, gender, partner and children status, and a previous history of migration (Buchan & Sochalski, 2004; De Jong, 2000; Kingma, 2006).

As described by Freeman and colleagues (2012), questions were framed as a statement that asked about the important (value) of a job factor to the individual, for

example, “How important is a job that supports the health, safety, and well-being of nurses?” Correspondingly, the following question was framed as a statement that asked about the confidence (expectancy) of a job factor to the individual, for example, “How confident are you that your first nursing job in Canada will support the health, safety, and well-being of nurses?” Value scores were measured by a 5-point Likert scale which ranged from 1 (very unimportant) to 5 (very important). Expectation scores were measured on a 5-point Likert scale ranging from 1 (Not confident at all) to 5 (Extremely confident. I am about 100% certain).

Sample and Setting

The sample for the study was two classes of baccalaureate graduating nursing students in a southwest Ontario nursing school in 2011 and 2013. The nursing school was selected for the study because of the accessibility to the researcher. In addition, the university was selected because it is located in a Canadian border community.

Nonprobability convenience sampling was used. In 2011, students were recruited through emails. A three-contact email strategy with two mailed reminders at weekly interval was used to increase response rate (Dillman, Smyth, & Christian, 2009). In 2013, the students were granted permission to complete the online survey during the class time. All participants were provided the opportunity to register for a draw or gift card, as an incentive, after survey completion.

The data was collected during February and April, 2011 and March 2013. There were a total of 549 graduates who were eligible to participate in the study, 281 students in 2011 and 268 students in 2013. In 2011, the response rate to the survey was 40.9% ($n =$

115). The majority of the survey was completed ($n = 107$) in its entirety with few missing responses. Eight (7.0%) surveys were only partially completed. These cases were not deleted to preserve the sample size and allowed completed responses to be included in the analysis. In 2013, 141 surveys were completed, a response rate of 52.6%; 11 surveys were discarded as they were 50 percent incomplete resulting in a final response rate of 48.5% ($n = 130$). Therefore the total sample for this study is 245 representing a response rate of 44.6%.

To estimate the power for this study G* Power 3.1.9.2. (Faul, Erdfelder, & Lang, 2009) was used. The current study, with a sample size of 245, was found to have sufficient cases to achieve a study power of 0.80, a medium effect size of 0.30, and a significance of $\alpha = 0.05$.

Ethics Considerations

The original studies were approved by the university Research Ethics Board (REB) in 2011 and 2013. For this study, the *application to involve human participants in research secondary use of data* form was submitted for approval from the REB at the same university prior to conducting this study. Before completing the online survey, participants provided consent by clicking “I consent to participate”. In addition, participants were informed and gave consent to the use of this data in subsequent studies where their confidentiality and anonymity would be ensured. All data will be kept in a locked cabinet and computer files will be stores in a password-protected computer in which only the primary researcher has access.

Collection Procedures

Data was collected between February and April in 2011 and in March 2013. The web-based survey was delivered through a URL by using a password. An excel spreadsheet was used to save data in order to eliminate the need for data entry. A unique identifying code was created to allow the matching of this survey with any future follow-up studies by the researcher.

Data Analysis

IBM SPSS Statistics 22 was used for data analysis in the study. Accuracy of entries and missing data were addressed in the original studies. In addition, Listwise deletion was used for missing entries. Descriptive statistics was used for the analysis of demographic characteristics and the value and expectations mean scores. Because each variable was measured on 5 point Likert-scales, it is anticipated that the data will not be normally distributed. A decision was made to analyze this data using nonparametric rank analysis. The analysis for each research question is described below.

The survey used in this study is not a psychometric scale. The researcher is interested in the unique response to each job factor in the HWE category, which can provide further support to inform policy makers on each element in order to improve nursing human resource planning of a HWE.

Research question one

What are the differences between the individual 2011 and 2013 classes in migration intentions and their value and expectations of a HWE?

Research question one will use a Mann Whitney U test. Meanwhile, Chi-Square comparison test will be used to determine difference in the demographics of nursing graduates in the individual 2011 and 2013 classes. The level of significance was set throughout at .05.

Research question two

What are the differences in the values and expectations of the eight HWE job factors between the migrant group (intent to migrate) and non-migrant group (no intent to migrate) in the combined cohort?

Research question two will use a Mann Whitney U test. Meanwhile, a Chi-square comparison test will be used to analyze the differences in the characteristics (demographics) between migrant and non-migrant on their perception of HWE in the combined cohort. The level of significance was set throughout at 0.05.

Research question three

For the migrants in the combined cohort, are there differences in their valuing of a job factor and their expectations of having it met in Canada versus another country?

Research question three will use a Wilcoxon signed ranks test. The level of significance was set throughout at 0.05.

CHAPTER FOUR

Findings

This chapter summarizes the results of the statistical analyses. A description of the data screening and cleaning process is provided, followed by a summary of the sample characteristics. Finally, the analysis associated with each of the three research questions is presented.

Data Screening and Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 22. A two tailed alpha of 0.5 was used to determine the significance of the statistical findings. The two data sets from 2011 and 2013 were combined and will be referred to as the *combined cohort*.

Prior to data analysis, the data were screened for missingness, outliers, and normality (El-Masri & Fox-Wasylyshyn, 2005; Polit & Beck, 2007). Of the 245 completed online surveys from the original study, nine cases had more than 50 % missing data on the survey items and were deleted (Raymond & Roberts, 1987) leaving 236 cases for statistical analysis. The missing data were missing at random. These were treated with listwise deletion, which has been reported as an appropriate method for treating missing data on psychometric measures (El-Masri & Fox-Wasylyshyn, 2005; Tabachnick & Fidell, 2007)

Several variables were recoded. The variable *marital status* (the sum of single, single with child, married/common law/partnered with no children, married/common law/partnered with child, divorced/separated/widowed with no children, and

divorced/separated/widowed with child) was collapsed into two categories: single and partnered. The variable *lived in border community prior to program entry* (Windsor-Essex area, Sarnia area, Chatham area, and other area) was collapsed into two categories: border and non-border. The variable *preferred work hours* (full time, part time, casual, and other) was collapsed into two categories: full time and other. The variable *year born* was computed to *age in years* and collapsed into two categories: 24 years or less and 25 years or more. The variable *current plans for location* (Canada, local community, Michigan, other US city/country, no plans) was collapsed into three categories: Canada, other country, and no plans. Also, the variable *preferred working location* was collapsed into two categories: Canada and other country.

Descriptive statistics were used to describe the sample characteristics and the values and expectations mean scores; Chi-Square test was used to determine differences in the demographics of nursing graduates in the individual 2011 and 2013 classes and to explore differences in the characteristics of migrants and non-migrants on their perception of a HWE in the combined cohort.

The survey was composed of single items measured on an ordinal scale. Additionally, some of the variables were not normally distributed. A decision was made to analyze this data using nonparametric rank analysis. Mann-Whitney U test was used to compare independent observations; Wilcoxon signed ranks test was used to compare paired/dependent observations (Polit & Beck, 2007). Mann-Whitney U was conducted to determine if there was a difference in the values between migrants and non-migrants and differences in their expectations of working in Canada for the combined cohort.

Additionally, Mann-Whitney U was used to examine if there was a difference in values

and expectations on each HWE job factor between the individual 2011 and 2013 classes. For the migrant group, a Wilcoxon signed ranks was used to explore the differences of migrants' job expectations for a HWE in Canada and for another country.

Study Purpose and Research Question

The purpose of this study is to compare migration intentions of two classes of nursing graduates (2011 and 2013) in a Canadian border community and their values and expectations of a HWE. The research questions included:

1. What are the differences between the individual 2011 and 2013 classes in migration intentions and their value and expectations of a HWE?
2. What are the differences in the values and expectations of the eight HWE job factors between the migrant group (intent to migrate) and non-migrant group (no intent to migrate) in the combined cohort?
3. For the migrants in the combined cohort, are there differences in their valuing of a job factor and their expectations of having it met in Canada versus another country?

Results

Survey response. Participants were recruited from two classes of baccalaureate graduating nursing students in a southwest Ontario nursing school in 2011 (N = 281) and 2013 (N = 268). In 2011, the response rate to the survey was 40.9% (115/281). Additionally, a response rate to the survey in 2013 was 48.5% (130/268). A total of 236 completed surveys were retained in this study after 9 cases were deleted, demonstrating a 43% (236/549) response rate.

Research Question 1: What are the differences between the individual 2011 and 2013 classes in migration intentions and their value and expectations of a HWE?

Sample characteristics. Table 1 provides a comparison of the demographics of the individual 2011 and 2013 classes based on their migration intentions. The classes were very similar with regard to demographics. The majority of graduates in both 2011 and 2013 classes were female, single, born in Canada, lived in border community, and preferred full time job. Although not significant ($p = .53$), the number of students considering migrating increased approximately four percent in 2013. The only significant difference between the classes was that the 2013 class identified knowing fewer nurses in Michigan ($p = .02$)

Table 2 demonstrates the values and expectations of a HWE between the 2011 and 2013 classes. Prior to analysis, all assumptions of the statistical test were verified as being met. There were no significant differences found in the mean and median scores between the 2011 and 2013 classes with respect to their values and expectations of the HWE factors. Findings identified that both classes valued the eight HWE equally (very important; $Mdn = 5$). Both the 2011 and 2013 classes had same medians with respect to the expectations of the HWE job factors in Canada. The results indicate that both classes lack confidence that Canada would offer the HWE that they value. For example, findings identify that both classes were only 50% confident that their first job in Canada would support healthy safety and well-being of nurse ($M = 3.40$ and 3.35 ; $Mdn = 3$ and 3 , respectively; $p = .81$), provide appropriate staffing levels ($M = 2.62$ and 2.77 ; $Mdn = 3$ and 3 , respectively; $p = .25$), have visible nurse leaders ($M = 3.04$ and 3.09 ; $Mdn = 3$ and 3 , respectively; $p = .74$), have strong nursing leadership ($M = 2.97$ and 3.09 ; $Mdn = 3$ and

3, respectively; $p = .36$), offer good working relationship with their manager ($M = 3.51$ and 3.34; $Mdn = 3$ and 3, respectively; $p = .24$), provide sufficient orientation ($M = 2.76$ and 3.07; $Mdn = 3$ and 3, respectively; $p = .06$), and offer flexible scheduling ($M = 2.47$ and 2.50; $Mdn = 3$ and 3, respectively; $p = .86$).

Table 1
Class of 2011 and class of 2013: Chi-square Comparisons of Sample Characteristics and Migration Intentions

Variable	n (%)		χ^2	P
	2011 Class	2013 Class		
Migration Intention				
Yes	71 (67)	92 (70.8)	.39	.53
No	35 (33)	38 (29.2)		
Age				
24 years or less	70 (66)	79 (60.8)	.69	.40
25 years +	36 (34)	51 (39.2)		
Gender				
Females	86 (81.1)	109 (83.8)	.30	.58
Males	20 (18.9)	21 (16.2)		
Single/Partnered Status				
Single	76 (71.7)	100 (76.9)	.84	.36
Partnered	30 (28.3)	30 (23.1)		
Born in Canada				
Yes	83 (78.3)	107 (82.3)	.60	.44
No	23 (21.7)	23 (17.7)		
Preferred Work Hours				
Full time	82 (77.4)	103 (79.2)	.12	.73
Other	24 (22.6)	27 (20.8)		
Know Nurse in Michigan				
Yes	65 (61.3)	60 (46.2)	5.39	.02*
No	41 (38.7)	70 (53.8)		
Family/relative works in Michigan				
Yes	72 (67.9)	79 (60.8)	1.30	.25
No	34 (32.1)	51 (39.2)		
Previous Degree/Diploma				
Yes	16 (15.1)	28 (21.5)	1.60	.21
No	90 (84.9)	102 (78.5)		
Lived in border community prior to program entry				
Yes	90 (84.9)	103 (79.2)	1.66	.20
No	16 (15.1)	27 (20.8)		

Note. χ^2 Chi square for independence; p^* significant two tailed p value at an α of .05

Table 2
2011 class compared with 2013 class: Mann-Whitney U Comparisons of Values and Expectations of HWE Job factors

Variable	n	Values				Expectations Canada			
		M ± S.D.	Median	z	p	M ± S.D.	Median	z	p
Well-being of nurse									
2011 class	106	4.57 ± 1.10	5.0	-.06	.95	3.40 ± 1.05	3.0	-.24	.81
2013 class	130	4.65 ± .94	5.0			3.35 ± .98	3.0		
Quality patient care									
2011 class	106	4.57 ± 1.08	5.0	-.16	.88	3.52 ± .97	4.0	-.56	.57
2013 class	130	4.59 ± 1.04	5.0			3.56 ± .89	4.0		
Appropriate staffing levels									
2011 class	106	4.59 ± .97	5.0	.41	.68	2.62 ± 1.19	3.0	1.16	.25
2013 class	130	4.58 ± 1.05	5.0			2.77 ± 1.00	3.0		
Visible nurse leaders									
2011 class	106	4.40 ± 1.04	5.0	-.65	.52	3.04 ± .99	3.0	.33	.74
2013 class	130	4.41 ± .90	5.0			3.09 ± .90	3.0		
Strong nursing leadership									
2011 class	106	4.58 ± 1.02	5.0	-1.22	.22	2.97 ± .99	3.0	.92	.36
2013 class	130	4.52 ± 1.01	5.0			3.09 ± .91	3.0		
Good working relationship with manager									
2011 class	106	4.46 ± 1.03	5.0	.11	.92	3.51 ± .81	3.0	-1.19	.24
2013 class	130	4.52 ± .91	5.0			3.34 ± .89	3.0		
Sufficient length of orientation									
2011 class	106	4.74 ± .94	5.0	-.97	.33	2.76 ± 1.23	3.0	1.88	.06
2013 class	130	4.71 ± .89	5.0			3.07 ± .95	3.0		
Flexible Schedule									
2011 class	106	4.32 ± 1.07	5.0	-.69	.49	2.47 ± .99	3.0	.18	.86
2013 class	130	4.32 ± .92	5.0			2.50 ± .95	3.0		

Note. n = number of responses; M: mean; S.D. = Standard Deviation; p: significant two tailed p value at an α of .05

Research Question 2: What are the differences in the values and expectations of the eight HWE job factors between the migrant group (intent to migrate) and non-migrant group (no intent to migrate) in the combined cohort?

Table 3 provides a comparison of the demographics of migrants and non-migrants in the combined cohort. The majority of graduates identified that they preferred to work in Canada ($n = 205, 87\%$) but two thirds ($n = 163, 69\%$) were considering migrating outside of Canada for a first job. Approximately 20% ($n = 47$) identified that they planned to leave Canada for work; of these 16% ($n = 37$) were planning to work as commuter migrant (e.g. in Michigan) and 4% ($n = 10$) wanted to work in another US city or country. A quarter ($n = 62, 26\%$) identified plans to migrate to other cities in Canada.

Two thirds (63.1 %) of the participants were 24 years of age or less and females composed 82.6% ($n = 195$) of the sample. The majority were single ($n = 171, 72\%$) and had no children ($n = 167, 71\%$). Almost one fifth ($n = 44, 19\%$) reported having a previous degree or diploma before they entered the nursing program. Most preferred full time work ($n = 185, 78\%$) and 19% ($n = 46$) identified that they were born outside of Canada. Almost 53% knew a nurse ($n = 125$) or had a family member or friend ($n = 151, 64\%$) who worked in Michigan. Chi-square test for independence indicated a statistically significant association between intent to migrate and knowing a nurse in Michigan ($p = .03$), intent to migrate and having a family member or friend who worked in Michigan ($p = .01$), intent to migrate and having previous degree/diploma ($p = .02$), intent to migrate and current plans for location ($p < .001$), intent to migrate and preferred working location ($p < .001$), and intent to migrate and lived in border community prior to program entry ($p < .001$).

Table 4 compares the differences between the migrant and non-migration groups in their values and expectations of the eight HWE job factors. Except for an orientation program, both migrants and non-migrants valued the same HWE factors as indicated by similar mean and median scores; the non-migrant group however valued an orientation program significantly more than migrant group ($M = 4.93$ and 4.63 ; $Mdn = 5$ and 5 , respectively; $p = 0.013$). Additionally, the results suggested that both groups lacked confidence that their values of a HWE would be met in Canada. For example, mean values identified that both migrant and non-migrant ($M = 2.69$ and 2.73 ; $Mdn = 3.0$ and 3.0 , respectively; $p = .70$) groups were only 50% confident that their first job in Canada would provide appropriate staffing levels. As well, both migrants and non-migrants ($M = 2.44$ and 2.60 ; $Mdn = 3.0$ and 3.0 , respectively; $p = .22$) indicated similar expectations that values of offering flexible schedules would be 50% met for their first job in Canada.

Table 3

Combined cohort: Chi-square Comparisons of Sample Characteristics between migrants and non-migrants

Variable	n (%)		χ^2	P
	Non- migrants	Migrants		
Age				
24 years or less	47 (64.4)	102 (62.6)	.07	.79
25 years +	26 (35.6)	61 (37.4)		
Gender				
Females	65 (89)	130 (79.8)	3.03	.08
Males	8 (11)	33 (20.2)		
Single/Partnered Status				
Single	52 (71.2)	124 (76.1)	.62	.43
Partnered	21 (28.8)	39 (23.9)		
Born in Canada				
Yes	63 (86.3)	127 (77.9)	2.26	.13
No	10 (13.7)	36 (22.1)		
Preferred Work Hours				
Full time	60 (82.2)	125 (76.7)	.90	.34
Other	13 (17.8)	38 (23.3)		
Know Nurse in Michigan				
Yes	31 (42.5)	94 (57.7)	4.68	.03*
No	42 (57.5)	69 (42.3)		
Family/relative works in Michigan				
Yes	38 (52.1)	113 (69.3)	6.53	.01*
No	35 (47.9)	50 (30.7)		
Previous Degree/Diploma				
Yes	7 (9.6)	37 (22.7)	5.71	.02*
No	66 (90.4)	126 (77.3)		
Current Plans for Location				
Canada	66 (90.4)	109 (66.9)	16.98	<.001*
Other country	3 (4.1)	44 (27)		
No plans**	4 (5.5)	10(6.1)		
Preferred Working Location				
Canada	73(100)	132 (81)	15.98	<.001*
Other country	0 (0)	31 (19)		
Lived in border community prior to program entry				
Yes	51(69.9)	142(87.1)	13.28	<.001*
No	22(30.1)	21(12.9)		

Note. χ^2 Chi square for independence; p^* significant two tailed p value at an α of .05;

** excluded from analysis

Table 4
 Combined Cohort: Mann-Whitney U Comparisons of Values and Expectations of HWE Job Factors between migrants and non-migrants

Variable	n	Values				Expectations Canada			
		M ± S.D.	Median	Z	p	M ± S.D.	Median	z	p
Well-being of nurse									
Migrants	163	4.52 ± 1.17	5.0	-.62	.54	3.35 ± 1.00	3.0	-.66	.51
Non-migrants	73	4.81 ± .43	5.0			3.42 ± 1.03	4.0		
Quality patient care									
Migrants	163	4.49 ± 1.20	5.0	-.9	.37	3.55 ± .92	4.0	-.01	.99
Non-migrants	73	4.78 ± .58	5.0			3.52 ± .93	4.0		
Appropriate staffing levels									
Migrants	163	4.49 ± 1.15	5.0	-1.72	.09	2.69 ± 1.09	3.0	-.38	.70
Non-migrants	73	4.81 ± .57	5.0			2.73 ± 1.10	3.0		
Visible nurse leaders									
Migrants	163	4.31 ± 1.10	5.0	-1.00	.32	3.07 ± 1.00	3.0	.27	.79
Non-migrants	73	4.60 ± .49	5.0			3.07 ± .81	3.0		
Strong nursing leadership									
Migrants	163	4.45 ± 1.14	5.0	-1.47	.14	3.03 ± .97	3.0	-.31	.75
Non-migrants	73	4.75 ± .60	5.0			3.05 ± .90	3.0		
Good working relationship with manager									
Migrants	163	4.45 ± 1.08	5.0	.17	.87	3.39 ± .88	3.0	-.52	.60
Non-migrants	73	4.60 ± .64	5.0			3.47 ± .82	3.0		
Sufficient length of orientation									
Migrants	163	4.63 ± 1.04	5.0	-2.48	.01*	2.87 ± 1.09	3.0	-1.31	.19
Non-migrants	73	4.92 ± .49	5.0			3.07 ± 1.10	3.0		
Flexible schedule									
Migrants	163	4.30 ± 1.08	5.0	0.65	0.52	2.44 ± 0.98	3.0	-1.23	.22
Non-migrants	73	4.37 ± 0.72	5.0			2.60 ± 0.94	3.0		

Note. n = number of responses; M= mean; S.D. = Standard Deviation;
 p* significant two tailed p value at an α of .05

Research Question 3: For the migrants in the combined cohort, are there differences in their valuing of a job factor and their expectations of having it met in Canada versus another country?

For the combined cohort of migrants, a Wilcoxon Signed ranks test was conducted to determine if there was a difference between the expectations of having a HWE job factor met in Canada or another country (see Table 5). Wilcoxon Signed ranks test suggested no significant difference between Canada and another country in supporting health, safety, and well-being of nurse ($M = 3.35$ and 3.45 ; $Mdn = 3$ and 4 , respectively; $p = .31$), supporting provision of quality patient care ($M = 3.55$ and 3.66 ; $Mdn = 4$ and 4 , respectively; $p = .17$), and offering good working relationship with nurse manger ($M = 3.39$ and 3.38 ; $Mdn = 3$ and 3 , respectively; $p = .69$). However, the findings showed that migrants had significantly higher expectations that appropriate staffing levels ($M = 2.69$ and 3.20 ; $Mdn = 3$ and 3 , respectively; $p < .001$), visible nurse leaders ($M = 3.07$ and 3.26 ; $Mdn = 3$ and 3 , respectively; $p = .007$), strong nursing leadership ($M = 3.03$ and 3.24 ; $Mdn = 3$ and 3 , respectively; $p = .01$), sufficient orientation ($M = 2.87$ and 3.22 ; $Mdn = 3$ and 3 , respectively; $p < .001$), and flexible scheduling supporting work life balance ($M = 2.44$ and 3.01 ; $Mdn = 3$ and 3 , respectively; $p < .001$) would be met in another country rather than in Canada.

Table 5
 Combined Cohort: Wilcoxon Signed Ranks test Comparison of the Expectations for First Job in
 Canada or Another Country in Migrant Group

Variable	n	Expectations Mean \pm SD			z	p	
		Canada Median	Median	Another Country			
Well-being of nurse	163	3.35 \pm 1.00	3.0	3.45 \pm .89	3.0	1.01	.31
Quality patient care	163	3.55 \pm .92	4.0	3.66 \pm .90	4.0	1.36	.17
Appropriate staffing levels	163	2.69 \pm 1.09	3.0	3.20 \pm 1.11	3.0	4.99	<.001*
Visible nurse leaders	163	3.07 \pm 1.00	3.0	3.26 \pm .86	3.0	2.69	.007*
Strong nursing leadership	163	3.03 \pm .97	3.0	3.24 \pm .88	3.0	2.56	.01*
Good working relationship with nurse manager	163	3.39 \pm .88	3.0	3.38 \pm .83	3.0	-.41	.69
Sufficient length of Orientation	163	2.87 \pm 1.09	3.0	3.22 \pm 1.03	3.0	3.49	<.001*
Flexible schedule	163	2.44 \pm .98	3.0	3.01 \pm 1.02	3.0	5.86	<.001*

Note. n = number of responses; S.D. = Standard Deviation; z: Wilcoxon statistic;
 p* significant two tailed p value at an α of .05

CHAPTER FIVE

Discussion

A healthy work environment (HWE) is one factor that has been linked to the well-being of nurses, quality patient outcomes, and organizational and health system performances (Heath et al., 2004; Cohen et al., 2009; Kramer et al., 2012). Additionally, a HWE is essential for nurse retention and is recognized as having the strongest impact on intent to migrate (Cameron et al., 2010; Freeman et al., 2012). Therefore creating and maintaining a HWE is a key strategy in workforce planning for both retaining nurses and attracting them to return to their source countries (Zander et al., 2013). It is important to understand what Canadian nursing graduates value and expect in a HWE and how this influences their decision whether to migrate or stay in Canada. This would support the development of appropriate policies that can be put in place to ensure that Canada has a sufficient supply of nurses to meet future healthcare needs (Rajacich et al., 2014).

This secondary analysis was conducted on a sample of participants who were baccalaureate nursing graduates in a Canadian border community. These participants completed an anonymous self-report web-based survey. The following discussion presents the study findings within the context of existing literature. Implications and recommendations for nursing practice, nursing research, and nursing policy will be provided. This will be followed by the limitations of the study.

Migration Intentions of Nurse Graduates

There is a significant volume of literature available on nurse migration (e.g., who migrates, when do they migrate, where do they migrate from and to, and experiences of

migrant nurses), but there is limited research that is specifically focused on migration decision making of nursing graduates. There were several interesting findings in this study that contribute to this gap.

Over the past century, nurse migration has become an increasingly widespread phenomenon (Hendel & Kagan, 2011), and, the global nursing shortage has led to an increase in the number of nurses who migrate (Buchan & Calman, 2004; Little, 2007; Riner, 2009). This study identified that over the course of two years (2011 and 2013), there was an increase of almost four percent in nursing graduates who voiced intent to migrate. The finding supports previous findings of the attraction of the US as a destination for Canadian nurses seeking employment (Little, 2007; McGillis Hall, Peterson, Price, Lalonde, & MacDonald-Rencz, 2013). Additionally, this study is congruent with a previous study that found that Canadian nurses who had recently graduated preferred to stay in Canada to work, but were willing to migrate (Freeman et al., 2012); the majority of both cohorts preferred to work in Canada, but two-thirds indicated that they were considering migrating outside the country for work. The findings support previous research that found that Canada is losing baccalaureate-prepared nurses who migrate from Canada to the US (McGillis Hall et al., 2013).

Personal Characteristics Influencing Migration Intentions

The majority of graduates in this study were young, indicating that they had entered the nursing program from high school. Although age and gender were not found to influence migration in this study, it has been a factor in other studies (Robinson, Murrells, & Griffiths, 2008), resulting in recommendations to increase the diversity of students as a strategy to reduce migration (Freeman et al., 2012, p.1541).

The findings of this study are congruent with the previous study that identified living in a border community influenced migration intentions (Freeman et al., 2012). Windsor is the city with the largest number of cross-border commuters in Canada (Dunphy, 2014). Border city migration is also influenced by the ability of nurses to be commuter migrants who are able to live in their home country but commute for work across an international border (Freeman et al., 2012).

Results from this research lend support to previous findings that graduates migrate to the US for full-time work (McGillis Hall et al., 2013). These findings suggest that had full-time jobs been available to them, these nurses would have been interested in working in Canada and could potentially be retained in this country.

Furthermore, participants identified that family members who worked in Michigan were an influence on migration intentions (Freeman et al., 2012). Nurse graduates in this study were more likely to consider migration if they knew a nurse working in Michigan. This finding is in keeping with other studies that found migrant nurses were influenced by colleagues who had migrated (Dywili et al., 2013) and support the existence of migration networks in border communities (Freeman et al., 2012). Interestingly, this study found that migrants in the 2013 class knew fewer nurses working in Detroit than in the past. This finding may indicate that a fluctuating Canada/US currency rate might have impacted the numbers of nurses who work in Detroit (Dunphy, 2014). This study supports previous findings that decision making of whether a nurse will migrate or stay is a complex phenomenon (Lee & Moon, 2013).

HWE Job Factors Influencing Migration Intentions

Although there is a great deal of research supporting the importance of a HWE and the retention of nurses, limited literature was found on whether a HWE influences the intent to migrate. A HWE is crucial for nurses if they are to be enticed to remain in the nursing workforce to provide quality patient care (RNAO, 2008). Additionally, nurse retention rates are closely linked with the work environment and the creation of supportive HWE is a key determinant to successful nurse retention (Cohen et al., 2009; Gillis et al., 2004; Stuenkel et al., 2007). A discussion of the values and expectations of a HWE are provided in the following sections.

Values of HWE. Findings from this study indicate that all of the participants valued the same eight HWE job factors, whether they indicated intent to migrate or stay in Canada. This is not a surprising finding as Freeman et al. (2012) identified these factors from an extensive literature review of a HWE. As described in Freeman et al. (2012), based on the V-E model, the decision to migrate or stay is made by weighing what one values against the expectation of having these values met in a certain location. Both migrants and non-migrants voiced that all HWE job factors were highly valued. A question that is raised by these findings is the usefulness of measuring values in this population because all participants rated the values the same, that is, as very important. According to De Jong and Fawcett (1981) the advantage of this model for migration research is that expectancies for alternative locations can be measured. They proposed an algebraic formula: $MI = \sum VE$, where V is the value of the outcome; E is the expectancy that migration will lead to the desired outcome; MI represents the strengths of the intention to migrate, and is the sum (Σ) of the value multiplied by the expectancy (p. 47).

Higher scores were indicative of an increased probability of the individual moving to that location. This supports the need identified by Freeman et al. (2012) to work on the developing the questionnaire into a psychometric scale that could be used to predict migration behavior.

Expectations of HWE. This study lends support to the idea that a HWE influences the decision of where to work. The findings identified that perceptions of HWE job factors from nursing graduates were consistent between the two cohorts. Additionally, migrants and non-migrants believe their job expectations regarding a HWE are the same. All participants expected, with only a 50% confidence that their valued HWE factors would be met in Canada, a matter of grave concern. These uncertain perceptions of HWE from graduates could push them to seek work outside of Canada in search of work environment that supports the well-being of nurses, quality patient care, appropriate staffing levels, visible nurse leaders, strong nursing leadership, good working relationship with manager, sufficient length of orientation, and flexible scheduling. This finding is consistent with previous research that identified a positive working environment as an influence on nurses' decision of where to work (Rajacich, et al., 2014).

Furthermore, participants who voiced intent to migrate had more confidence that five of eight HWE job factors (appropriate staffing levels, visible nurse leaders, strong nursing leadership, sufficient length of orientation, and flexible schedule) would be better met in a country other than Canada. This finding supports previous researchers who determined that nurse staffing levels were related to job satisfaction, and in turn influenced their intention to leave (Lambrou, Merkouris, Middleton, & Papastavrou, 2014). In addition, the study provides further support that visible nurse leaders play a

critical role in creating a HWE, which will increase staff retention rate (Duffield, Roche, Blay, & Stasa, 2011). Also, a strong nursing leadership that includes visibility, accessibility and open communication with staff is critical to creating and maintaining a positive work environment and is closely linked with nurses' job satisfaction and retention (Aiken et al., 2004; Kleinman, 2004). Furthermore, this study lends support to the importance of a sufficient nurse orientation program (Rollins, 2014). Finally, the findings are consistent with research that identifies that nurses value flexible scheduling and its availability encourages nurse to migrate to a setting that provides it (Cohen et al., 2009). A flexible work schedule allows nurses to choose their work schedule to balance their individual needs with work. This finding also supports those of Cameron et al. (2010), who found that work scheduling appeared pull nurses from Canada to work in the US. Freeman et al. (2012) identified that clinical instructors and clinical experiences play a significant role in framing perceptions of a HWE (p.1540). A question that is raised by the current findings is why these nurse graduates have negative perceptions of the HWE in Canada. This issue requires further investigation.

Implications

Implications for Nursing Practice Environments

This study offers insights into HWE job factors that influence nursing graduates' decision to migrate or stay in Canada. These eight factors were identified as important in the creation of a HWE and the findings of this analysis reinforce their importance to new graduates. Given that a positive HWE is essential for nurse recruitment and retention (Heath, 2004), this study argues that health care organization must address these factors.

For example, flexible scheduling has been identified as important to nurses (Rajacich et al., 2014). Orientation programs have likewise been identified as important to preventing newly hired nurses from migrating, and it plays a critical role in retention of the new graduate nurses (Morton, 2014). Moreover, strong nursing leadership at the unit level plays an important role in nurse retention and leads to decreased intent to leave (Duffield et al., 2011; Spence Laschinger, Wong, Grau, Read, & Pineau Stam, 2012). Creative strategies need to be investigated and implemented in order to encourage nurse graduates to stay in Canada.

Implications for Nursing Research

Future research on nurse graduates in other geographic locations is recommended. In addition, to improve nurse human resource planning, there is a need to track the mobility of new graduates in the future. The nursing profession also needs to focus attention on methods to predict nurse migration. The Value-Expectancy model operationalized in this study needs to be developed into a psychometric scale that would assist with better understanding and predicting the global movement of nurses.

Implications for Nursing Policy

This research has several implications for policy makers. It highlights that the nursing graduates living in border cities have workplace choices available to them that do not exist in other communities (Freeman et al., 2012). Moreover, positive HWE job factors may influence the decision to migrate. Therefore, efforts should be made to address the factors that support a HWE, since it is a key contributing factor to migration decisions. In addition, policy makers should consider implementing advertisement or

media strategies that highlight the availability of a HWE to nurses in Canada. Such strategy is particularly important to ensure that Canadian nurses continue to be employed within Canada, especially with the US-based NCLEX-RN licensing exam having been adopted by Canada in January, 2015 (CNO, 2012). Given the importance of each of these HWE factors to nursing graduates, policy makers should work with leaders in health care to formulate strategies that make these factors a reality in the work environment. This would encourage the new graduates to stay and help to retain nurses who are already in the workplace.

Furthermore, CNO's new policy regarding the non-practicing class may prevent Canadian nurse migrants from returning to Canada (CNO, 2014). If new graduates migrate, this new policy may be a barrier that prevents them from easily returning to Canada for employment, thus potentially contributing to a future nursing shortage. Therefore it is essential that future studies track the impact of these changes in policy.

Limitations

Limitations include sample and setting. As in all studies using secondary data, the researcher has no control over the data collection process, how well it was done, and whether participants understood the questions (Boslaugh, 2007). The researcher was unable to explore additional questions that arose during the literature review and analysis. Additionally, this study is analyzing data already collected and therefore has similar limitations described in the original study (Freeman et al., 2012). For instance, the findings may not be generalizable to other populations since the study used convenience sampling and focused on cohorts of nursing graduates from a university located in one border community. Finally, the use of self-report measures depends on subjective recall

and thus may carry a degree of response bias. This limitation was minimized by ensuring anonymity of responses and allowing participants privacy during completion of the web-based survey.

Conclusion

There has been little or no substantive examination of HWE job factors influencing the migration intentions of nurse graduates. Findings from this study provide insights and key strategies that can be taken by policy makers and nursing leaders to create an environment that retains new graduates in Canada, by focusing on job factors valued by this group including appropriate staffing levels, visible nurse leaders, strong nursing leadership, sufficient length of orientation, and flexible scheduling. Specific HWE strategies for deterring nurse migration are necessary to reverse the job factors that induce nurses to leave. As well, while nurses can be expected to continue to migrate to the US, proactive efforts that change existing policies and practices in Canada are central for effective nursing human resource planning and keeping these new graduates from leaving now and in the future.

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Appendix A: Survey

From Freeman, M., 2012. Nurse migration intentions in a Canadian border city (Doctoral dissertation). Appendix K of information letter, consent, and web-based Survey

Section 1: Your First Job in Nursing Following Graduation

The following questions are about your **first job** in nursing following graduation. Please read each item and choose **one** response from the list provided.

1. If you had your **choice** of work location, where would your first job in nursing be?
 - Windsor Essex, Sarnia, or Lambton
 - Michigan (e.g., Detroit, Port Huron)
 - Another city/province in Canada. Please identify city/province: _____
 - Another U.S. location or another country. Please identify city/country: _____

2. What are your **current plans** for your first job in nursing? This refers to your plans. You do not need to have received a job offer to identify your plans.
 - Live and work in the Windsor Essex, Sarnia or Lambton area.
 - Live in the Windsor Essex, Sarnia or Lambton area but work in Michigan (e.g., Detroit; Port Huron)
 - Move to another city/province in Canada. Please identify: _____
 - Move to another country. Please identify: _____
 - I have not made any plans for my first nursing job.

3. Which of the following options best describes your **current plans** for your first job in nursing?
 - I am making this decision freely. It is my choice.
 - I am making this decision because of A lack of jobs in my preferred work location.
 - I am making this decision because of another reason. Please specify: _____
 - I have no current plans for my first job so this does not apply to me.

4. For your first nursing job, are you considering working **outside** of Canada?
 - No. I have never considered working outside Canada. Participant taken to Section 3.
 - Yes. I am considering working outside of Canada. Participant taken to Section 2
 - Yes. I have accepted a job outside Canada. Participant taken to Section 2

Section 2: Job Values and Expectations: Working in Canada or Other Countries

The following questions are organized into eight sections.

Please rate:

- How important each job factor is to you.
- How confident you are that you will achieve your goals whether your **first nursing job** is in Canada or in another country.

Value Scale Choices	Expectancy Scale Choices
1 very unimportant	1= Not confident at all.
2 unimportant	2= Slightly confident. I am about 25% certain.
3 neither important nor unimportant	3= Somewhat confident. I am about 50% certain.
4 important	4= Very confident. I am about 75% certain
5 very important	5= Extremely confident. I am about 100% certain.

Healthy Work Environment

1. How important is a job that supports the health, safety, and well-being of nurses?
2. How confident are you that your first nursing job in Canada will support the health, safety, and well-being of nurses?
3. How confident are you that your first nursing job in another country will support the health, safety, and well-being of nurses?
4. How important is a job that is focused on supporting nurses in providing quality patient care?
5. How confident are you that your first nursing job in Canada will support nurses in providing quality patient care?
6. How confident are you that your first nursing job in another country will support nurses in providing quality patient care?
7. How important is a job that has staffing levels that are appropriate for the type of patients and their acuity level?
8. How confident are you that your first nursing job in Canada will provide staffing levels that are appropriate for the type of patients and their acuity level?
9. How confident are you that your first nursing job in another country will provide staffing levels that are appropriate for the type of patients and their acuity level?
10. How important is a job that has visible nurse leaders who advocate for nurses and nursing practice?
11. How confident are you that your first nursing job in Canada will have visible nurse leaders who advocate for nurses and nursing practice?
12. How confident are you that your first nursing job in another country will have visible nurse leaders who advocate for nurses and nursing practice?
13. How important is a job that has strong nursing leadership demonstrated by an environment of open communication and trust, and where your contributions are valued?
14. How confident are you that your first nursing job in Canada will have strong nursing leadership demonstrated by an environment of open communication and trust, and where your contributions are valued?
15. How confident are you that your first nursing job in another country will have strong nursing leadership demonstrated by an environment of open communication and trust, and where your contributions are valued?
16. How important is it that you have a good working relationship with your nurse manager?
17. How confident are you that you will have a good working relationship with your nurse manager in your first nursing job in Canada?
18. How confident are you that you will have a good working relationship with your nurse manager in your first nursing job in another country?
19. How important is it that your job provides an orientation program that is of sufficient length to help you in your transition to independent practice?

20. How confident are you that your first nursing job in Canada will provide an orientation program that is of sufficient length to help you in your transition to independent practice?
21. How confident are you that your first nursing job in another country will provide an orientation program that is of sufficient length to help you in your transition to independent practice?
22. How important is a job that supports work life balance by offering flexible schedules and/or self scheduling?
23. How confident are you that your first nursing job in Canada will support work life balance by offering flexible schedules and/or self scheduling?
24. How confident are you that your first nursing job in another country will support work life balance by offering flexible schedules and/or self scheduling?

Section 3: Job Values and Expectations: Working in Canada

The following questions are organized into eight sections.

Please rate:

- How important each job factor is to you.
- How confident you are that you will achieve your goals in your **first nursing job in Canada**.

Value Scale Choices	Expectancy Scale Choices
1 very unimportant	1= Not confident at all.
2 unimportant	2= Slightly confident. I am about 25% certain.
3 neither important nor unimportant	3= Somewhat confident. I am about 50% certain.
4 important	4= Very confident. I am about 75% certain
5 very important	5= Extremely confident. I am about 100% certain.

Healthy Work Environment

1. How important is a job that supports the health, safety, and well-being of nurses?
2. How confident are you that your first nursing job in Canada will support the health, safety, and well-being of nurses?
3. How important is a healthy work environment that is focused on supporting nurses in providing quality patient care?
4. How confident are you that your first nursing job in Canada will provide a healthy work environment that is focused on supporting nurses in providing quality patient care?
5. How important is a job that has staffing levels that are appropriate for the type of patients and their acuity level?
6. How confident are you that your first nursing job in Canada will provide staffing levels that are appropriate for the type of patients and their acuity level?
7. How important is a job that has visible nurse leaders who advocate for nurses and nursing practice?
8. How confident are you that your first nursing job in Canada will have visible nurse leaders who advocate for nurses and nursing practice?

9. How important is a job that has strong nursing leadership demonstrated by an environment of open communication and trust, and where your contributions are valued?
10. How confident are you that your first nursing job in Canada will have strong nursing leadership demonstrated by an environment of open communication and trust, and where your contributions are valued?
11. How important is it that you have a good working relationship with your nurse manager?
12. How confident are you that you will have a good working relationship with your nurse manager in your first nursing job in Canada?
13. How important is it that your job provides an orientation program that is of sufficient length to help you in your transition to independent practice?
14. How confident are you that your first nursing job in Canada will provide an orientation program that is of sufficient length to help you in your transition to independent practice?
15. How important is a job that supports work life balance by offering flexible schedules and/or self scheduling?
16. How confident are you that your first nursing job in Canada will support work life balance by offering flexible schedules and/or self scheduling?

Section 4: Demographics and Work Place Preferences

The following questions will help to describe the profile of new graduate nurses in this region.

1. Did you already have a university degree and/or college diploma in another discipline before you entered this nursing program?
Yes
No
2. The following best describes me:
 Single
 Single with child/children
 Married/common law/ partnered, no children
 Married/common law/ partnered, with child/children
 Divorced/Separated/Widowed, no children
 Divorced/Separated/Widowed, with child/children
3. Do you have a **relative or friend** who works in Michigan?
Yes
No
4. Do you have a relative or friend who works as a **nurse** in Michigan?
Yes
No
5. I was born in Canada
Yes
No If no, in what year did you migrate to Canada _____
What was your city and country of birth? _____
6. I started this nursing program at:

- University of Windsor
- St. Clair College Windsor campus
- St. Clair College, Thames campus
- St. Clair College, Lambton campus
- Other Please specify: _____

7. Before entering this nursing program I lived in:

- Windsor-Essex area
- Sarnia area
- Chatham area.
- Other. Please specify: _____

8. After graduation, I prefer to work in nursing:

- Full- time (37.5 to 40 hours each week)
- Part- time (less than 32 hours per week)
- Casual (a few days per month)
- Other Please explain: _____

9. What is your gender?

- Female
- Male

10. What year were you born? _____

Appendix B
University of Windsor Research Ethics Board Approval 2011 study



OFFICE OF THE RESEARCH ETHICS BOARD

Today's Date: February 03, 2011
Principal Investigator: Ms. Michelle Freeman/ Ms. Andrea Baumann
REB Number: 28940
Research Project Title: REB# 11-004: Workforce Integration of New Nurses: Exploring Employment Goals, Expectations, and Intent to Migrate of Nursing Graduates in a Canadian Border City
Clearance Date: February 1, 2011
Project End Date: October 31, 2011
Milestones:
Renewal Due-2011/11/30(Pending)

This is to inform you that the University of Windsor Research Ethics Board (REB), which is organized and operated according to the Tri-Council Policy Statement and the University of Windsor Guidelines for Research Involving Human Subjects, has granted approval to your research project on the date noted above. This approval is valid only until the Project End Date.

A Progress Report or Final Report is due by the date noted above. The REB may ask for monitoring information at some time during the project's approval period.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the REB. Minor change(s) in ongoing studies will be considered when submitted on the Request to Revise form.

Investigators must also report promptly to the REB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

Forms for submissions, notifications, or changes are available on the REB website: www.uwindsor.ca/reb. If your data is going to be used for another project, it is necessary to submit another application to the REB. We wish you every success in your research.

Pierre Boulos, Ph.D.
Chair, Research Ethics Board

This is an official document. Please retain the original in your files.

2011 Manaraa Avenue, Windsor, Ontario, Canada N9B 3P4 | tel: 519.253.3000



Appendix C

McMaster University Research Ethics Board Approval 2011 study



RESEARCH ETHICS BOARD



REB Office, 293 Wellington St. N., Suite 102, Hamilton, ON L8L 8E7
Telephone: 905-521-2100, Ext. 42013
Fax: 905-577-8378

Research Ethics Board Membership

Suzette Salama PhD
Interim Chair/Ethics Representative
Donald Arnold MD, MSc FRCP(C)
Hematology & Thromboembolism
Mary Bedek CCHRA (C)
Privacy Officer
Morris Blajehman MD FRCP(C)
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Alex Spyropoulos MD, FACP, FCCP,
FRCP
Medicine/Thrombosis Service
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Pediatrics
Marie Townsend BA(Hons), MBA
Administration
Kathryn Weibert MD
Transfusion Medicine
Andrew Worster MD
Emergency Medicine
Ed Younglai PhD
Obstetrics/Gynecology

February 9, 2011

PROJECT NUMBER: 11-009

PROJECT TITLE: Workforce Integration of New Nurses:
Exploring Employment Goals, Expectations,
and Intent to Migrate of Nursing Graduates
In a Canadian Border City

PRINCIPAL INVESTIGATOR: Dr. Andrea Baumann

This will acknowledge receipt of your letter dated February 4, 2011 which enclosed a copy of the University of Windsor REB approval, the revised consents for the Survey and Follow-Up Interviews, the revised Letter of Information for Survey and the revised e-mail announcements for the above-named study. These issues were raised by the Research Ethics Board at their meeting held on January 18, 2011. Based on this additional information, we wish to advise your study has been given **final** approval from the full REB. The proposal, version 1.0 dated December 21, 2010, including the Letter of Information for Survey, version 2.0 dated February 4, 2011, the Consent for Participate in Research Interview, version 2.0 dated January 24, 2011, the Consent to Participate in Research, version 2.0 dated February 4, 2011, the Initial E-mail Invitation and Follow Up E-mails #1 & #2 both version 2.0 dated February 4, 2011 and the Poster Announcements version 1.0 dated December 17, 2010 was found to be acceptable on both ethical and scientific grounds. **Please note** attached you will find the Information Letter/Consent Forms and recruitment posters with the REB approval affixed; all consent forms and recruitment materials used in this study must be copies of the attached materials.

We are pleased to issue final approval for the above-named study for a period of 12 months from the date of the REB meeting on January 18, 2011. Continuation beyond that date will require further review and renewal of REB approval. Any changes or revisions to the original submission must be submitted on an REB amendment form for review and approval by the Research Ethics Board.

The Hamilton Health Sciences/McMaster Health Sciences Research Ethics Board operates in compliance with and is constituted in accordance with the requirements of: The Tri-Council Policy Statement on Ethical Conduct of Research Involving Humans; The International Conference on Harmonization of Good Clinical Practices; Part C Division 5 of the Food and Drug Regulations of Health Canada; and the provisions of the Ontario Personal Health Information Protection Act 2004 and its applicable Regulations.

PLEASE QUOTE THE ABOVE-REFERENCE PROJECT NUMBER ON
ALL FUTURE CORRESPONDENCE

Sincerely,

Suzette Salama PhD.,
Interim Chair, Research Ethics Board

Appendix D
University of Windsor Research Ethics Board Approval 2013 study

Office of the Research Ethics Board



Today's Date: February 28, 2013
Principal Investigator: Dr. Michelle Freeman
REB Number: 30723
Research Project Title: REB# 13-045: (Request to Have Proposal Executively Reviewed) Workforce Integration of New Nurses: Exploring Employment Goals, Expectations, and Intent to Migrate of Nursing Graduates in a Canadian Border City
Clearance Date:
Project End Date: November 30, 2013
Milestones:
Renewal Due-2013/11/15(Pending)

This is to inform you that the University of Windsor Research Ethics Board (REB), which is organized and operated according to the Tri-Council Policy Statement and the University of Windsor Guidelines for Research Involving Human Subjects, has granted approval to your research project on the date noted above. This approval is valid only until the Project End Date.

A Progress Report or Final Report is due by the date noted above. The REB may ask for monitoring information at some time during the project's approval period.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the REB. Minor change(s) in ongoing studies will be considered when submitted on the Request to Revise form.

Investigators must also report promptly to the REB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

Forms for submissions, notifications, or changes are available on the REB website: www.uwindsor.ca/reb. If your data is going to be used for another project, it is necessary to submit another application to the REB. We wish you every success in your research.

Pierre Boulos, Ph.D.
Chair, Research Ethics Board

This is an official document. Please retain the original in your files.



Appendix E

University of Windsor Research Ethics Board Approval 2015 study



Today's Date: December 22, 2014

Principal Investigator: Ms. Le Xin

REB Number: 32190

Research Project Title: REB# 14-271: Influences of Values and Expectations of a Healthy Work Environment on Migration Intentions of Nurse Graduates in a Canadian Border City

Clearance Date: December 17, 2014

Project End Date: February 28, 2015

Milestones:

Renewal Due-2015/05/01(Pending)

This is to inform you that the University of Windsor Research Ethics Board (REB), which is organized and operated according to the Tri-Council Policy Statement and the University of Windsor Guidelines for Research Involving Human Subjects, has granted approval to your research project on the date noted above. This approval is valid only until the Project End Date.

A Progress Report or Final Report is due by the date noted above. The REB may ask for monitoring information at some time during the project's approval period.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the REB. Minor change(s) in ongoing studies will be considered when submitted on the Request to Revise form.

Investigators must also report promptly to the REB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

Forms for submissions, notifications, or changes are available on the REB website: www.uwindsor.ca/reb. If your data is going to be used for another project, it is necessary to submit another application to the REB.

We wish you every success in your research.

Alan Scoboria, Ph.D.
Chair, Research Ethics Board
Lambton Tower, Room 1102 A
University of Windsor

Appendix F
Information Letter, Consent and Web-based Survey

**Exploring Integration of New Nurses into the Workforce:
A Study of Employment Goals, Expectations and Intent to Migrate of Nursing Students in a Canadian
Border City**



Letter of Information

My name is Michelle Freeman. I am a PhD student at McMaster University and am conducting a study on nursing students who are graduating from the University of Windsor in June 2011.

As part of my study, I am inviting you to complete an online survey. The study is called: "Exploring Workforce Integration of New Nurses: A Study of Employment Goals, Expectations and Intent to Migrate of Nursing Students in a Canadian Border City".

The purpose of my study is to explore the goals, expectations and intent to migrate of fourth year baccalaureate nursing students (class of 2011) in a Canadian border city as they prepare for their first nursing job. In addition, the research will describe the demographic characteristics of this group of new nurses.

This survey consists of a series of questions. **There are no right or wrong answers.** Only **one response** is required for each question. I am interested in **your opinion** about job factors that are important to you and how confident you feel that a job in Canada or in another country (if you are thinking of nursing jobs in other countries) will meet your expectations.

This questionnaire will take approximately 20-30 minutes to complete.

After completing the survey, you will be invited to enter a draw for one of three Devonshire dollars gift certificates of \$150, \$100 and \$75 (CDN). The e-mail you enter for the draw **will not** be tied to the data that you provide on the survey. The survey data will be anonymous.

If you wish to participate, please enter the generic userID and password provided at the following URL:

userID: **nurse**

password: **grad2011**

<http://www.uwindsor.ca/samplestudy>

Please contact me if you have any questions. I can be reached by e-mail at mfreeman@uwindsor.ca or by phone at 519-253-3000 Ext. 4812.

Your time and thoughtful responses will contribute to this study, and are greatly appreciated.
Thank you very much for your participation.

[Proceed to the Letter of Consent](#)

CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: Exploring Workforce Integration of New Nurses: A Study of Employment Goals, Expectations and Intent to Migrate of Nursing Students in a Canadian Border City

You are asked to participate in a research study conducted by Michelle Freeman, a PhD student at McMaster University. The results of the study will be used in partial fulfillment of the Doctor of Philosophy of Nursing.

If you agree to participate in the study, please click "I consent to Participate" at the bottom of the page and follow the instructions. If you have any questions or concerns about the research, please feel to contact Michelle Freeman at 519-253-3000 Ext. 4812 or mfreeman@uwindsor.ca or her supervisor Dr. Andrea Baumann at 905-525-9140 Ext. 22581 or baumanna@mcmaster.ca.

Purpose of the Study

The purpose of this survey is to explore the goals, expectations and intent to migrate of fourth year baccalaureate nursing students (class of 2011) in a Canadian border city as they prepare for their first nursing job. In addition, the research will describe the demographic characteristics of this group.

Procedures

If you volunteer to participate in this study, you will be asked to complete a survey online. The survey will include questions about you, your preferred work location, the importance of certain job factors to you and how confident you are in achieving these factors in your first job in nursing.

This survey takes approximately 20-30 minutes to complete, although individual completion times may vary depending on your computer system. You may stop and save your survey responses at any point and resume where you left off at any time before you submit your completed survey. You may complete the survey at a location of your choice. The completed survey will be sent to researchers with your IP address as the only other identifying information attached to your survey.

Risks

The study carries no actual or potential physical risk. Social and psychological risks associated with identity disclosure are minimal. Efforts were made to minimize this risk through coding so that responses cannot be linked to respondents except by the respondents themselves.

Benefits and compensation

There are no direct benefits to the individuals participating in this study. The findings will be used to inform policy makers, professional and licensing bodies and health care institutions of job factors which are important to attracting and retaining new nurses and this group's intentions to migrate for nursing jobs and may impact future nursing graduates.

By participating you will be eligible to enter your name into a draw for one of three Devonshire dollars gift certificates of \$150, \$100 and \$75 (CDN). You will be given the choice of entering this draw after completing and submitting your survey.

Confidentiality and Anonymity

Confidentiality and your anonymity are ensured and your survey responses will not be traced back to you. All data analyses and reporting of the study results will be group based and your individual responses will not be analyzed or reported separately.

To ensure the confidentiality of your responses, you will be assigned a unique identifying code that will be only identifiable by you (MM and YY of your birth date, last three university ID numbers, the first initial of your mother's name, and the last letter of your given name). This code will allow matching of the survey that you complete with any future follow up studies without allowing the investigators to know who you are. Several steps will be taken to ensure the confidentiality of survey data you submit. All incoming surveys will travel through a secure third party electronic server that strips the sender's e-mail address before delivery to protect the participants' anonymity. The "stripping" is done mechanically and involves the deletion of email address information that would normally be attached to a survey response that is received electronically. The date and time of submission and the IP address will be the only additional information attached to the surveys. Such information is used solely for the purpose of excluding duplicate submissions. Should you

choose to enter the draw, the email address you provide will be used solely for the purpose of the draw and will be deleted after the draw is complete.

Only the researcher, researcher assistant, and the researcher's committee directly associated with this study will have access to the data for the purposes of analysis and conducting the study. Any reports of this study made available to participants or sent to a scientific journal for publication will contain information that reflects group results and not information about specific individuals. Data will be retained for a period of 10 years after publication in a secure place, after which time it will be disposed of in a secure manner (e.g. shredded or electronically deleted).

The principal investigator will only have access to your name and e-mail address to contact you if you win the draw.

Results of research.

The study results will be available by October 31, 2011 on the Research Ethics Board website under Study Results (<http://www.uwindsor/reb>).

Participation and withdrawal.

Your participation in the study is completely voluntary and you may withdraw at any point. If you volunteer to be in this study, you may withdraw at any time up to the point before you submit your electronic survey responses without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study.

Rights of research subjects

You may withdraw your consent at any time and discontinue participation without penalty as described above.

This study has been reviewed and received ethics clearance through McMaster University Research Ethics Board and the University of Windsor Research Ethics Board.

If you have questions regarding your rights as a research subject, please contact:

The Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; telephone: 519-253-3000 ext. 3916; e-mail: reb@uwindsor.ca.

Office of the Chair of the Hamilton Health Sciences/Faculty of Health Sciences Research Ethics Board at (905) 521-2100, Ext. 42013.

Subsequent use of data

This data may be used in subsequent studies. If used in subsequent studies, your confidentiality and anonymity will be ensured.

If you consent to participate in the research project, you may proceed to the questionnaire.

When prompted, please use the following generic userID and password.

userID: **nurse**

password: **grad2011**

This will ensure your anonymity. The survey requests that you create your own personal password. This will allow you to save your answers and return to complete the survey at a later date if you choose not to complete it in one sitting. Follow the link 'Return to Survey' if you have already created your personal password.

It is recommended that you print out a copy of this letter of information for your records.

(ATTACHED PDF COPY of CONSENT)

Following the link below indicates that you voluntarily consent to participate in the research project and you consent to the subsequent use of the data.

[I consent to Participate](#)

If you would like to participate but want to complete the questionnaire at another time, please come back at a later time to consent to participate and enter the generic userID and password.

[I do not consent to Participate](#)

VITA AUCTORIS

NAME: Le Xin

PLACE OF BIRTH: Wuhan, Hubei Province, China

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Bachelor of Science in Nursing.
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