**THREE ESSAYS ON THE LABOUR MARKET
FOR REGISTERED NURSES IN CANADA**

A thesis

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in partial fulfillment of the requirements for the degree of

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in

Economics

By

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Dedication

This thesis is dedicated to my husband, my mother and the memory of my father.

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I would like to thank my thesis advisor, Frances Woolley, for all of her assistance and encouragement through this process. I appreciate all your help.

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Abstract

This thesis contains three essays and a short introductory and concluding chapter. The main theme of the thesis is related to the labour market for registered nurses in Canada. Even though the essays in this thesis share a common theme, they can be read independently without impeding the reader's understanding of the issues discussed in each.

The purpose of the first essay in this thesis is to examine if there is a wage premium paid to Canadian born nurses who have a baccalaureate in nursing (BN) and also enquires whether increases in education lead to increases in the probability of promotion into supervisory positions for Canadian born nurses. This study finds that there are significant wage premiums associated with a BN for both the female and male samples and the second finding in this research shows that increases in education do lead to increases in the probability of promotion for Canadian born nurses.

The purpose of the second essay is to analyze the labour market for immigrant nurses in Canada to see if there is a wage penalty associated with having foreign educational credentials. A second question in this study examines whether a nurse with foreign educational credentials has the same probability of working as a nurse in Canada compared to a nurse educated in Canada. This study finds that nurses educated outside of Canada do face wage penalties and they are also less likely to be employed as a nurse in Canada.

The final essay in this thesis examines the issue of retention in the nursing profession in Canada and addresses the question of what factors affect job search decisions. This research finds that job satisfaction and income are two variables that have a significant effect on decisions to search for a new job.

JEL classification: I21; J24; J31; J44

Keywords: Human capital, Earnings penalties, Educational credentials, Registered nurses, Quit decisions, Job satisfaction

Chapter 1

Introduction

Introduction *

1.1 Motivation and Contribution

The purpose of this introductory chapter is to provide the motivation for this thesis, to describe its contribution to the existing literature, as well as to provide a summary of its main results and implications. This thesis involves three individual papers examining various aspects of the labour market for registered nurses in Canada. The labour market for registered nurses represents a very interesting area for research and this thesis will examine several questions related to nursing and the labour market for nurses in Canada. Recent media reports identify shortages in the supply of registered nurses in Canada, as well as in many other countries in the world, and the aging population will only increase the demand for nursing services in the future.¹ There are numerous important policy implications surrounding the labour market for registered nurses in Canada. Nurses are a very important part of the health care system and we need to address the shortage of nurses in order to meet the demand for nursing services now and into the future. To date little economic research has looked into this specific Canadian labour market and an important contribution of this thesis is that it will fill in some of this gap.

There are various aspects of nursing that make it a very interesting area to study.

Nursing is one of the largest occupations in Canada. The fact that it is a large labour

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¹ Nursing services encompasses a variety of individuals, including registered nurses, licensed or registered practical nurses, nurses aides and nursing assistants to name a few. For the purposes of this thesis I will be examining only registered nurses and I will use the term nurses and nursing to refer exclusively to registered nurses.

market and occupation, allows for very detailed analysis to be carried out using large samples. In 2001 there were around 250,000 registered nurses in Canada. It is also an interesting group to examine because of the breakdown in the numbers for each gender who are in this specific occupation. Roughly 95% of nurses are female and only 5% male.

Nursing is one of the single largest occupations which require specific 'credentials' for entry. Educational credential recognition is a very important determinant of the occupations held by people with nursing training, particularly when the education is from a country other than Canada. The recognition of foreign nursing credentials allows for a source of nurses to meet the excess demand for nurses which is currently being seen in Canada. In Canada, nursing is a regulated profession, meaning that no one can practice the profession without a valid Canadian license. This licensing is done by the provincial and territorial nursing associations which are organized under the umbrella association of the Canadian Nurses Association. Registered nurses are those individuals who have successfully completed an approved program for professional nursing, have passed a written nurse registration examination, have demonstrated a competence in nursing and have demonstrated a competence in one or both of the official languages. Canadian and immigrant nurses alike must all have a valid Canadian license to practice nursing in Canada.

Nursing is an occupation which has experienced substantial amounts of 'brain gain' and 'brain drain' over the past. Many nurses who are educated in Canada move to the United States or other countries to work once they have graduated. Also, many nurses come to Canada from other areas in the world to work as nurses. England, the

Philippines and the Caribbean are examples of the more common source countries and regions of foreign nurses. The various source countries for registered nurses who immigrate to Canada allows for a high degree of variation in racial profiles and languages. These two issues are frequently found to have an effect on the earnings that individuals see in the workplace.

By focusing specifically on registered nurses, this allows me to gain a more homogeneous sample. This also allows me to examine the process of wage determination and to address other important labour market questions in a specific, well defined labour market. Numerous studies look at various labour market questions and examine general answers to each of these questions. The objective of this study is to see how these questions apply to this specific labour market. Considering the shortage of nurses in Canada and elsewhere in the world, it is interesting to see if the nursing market responds in the same way to different concerns. Examining a single labour market can also help to provide various policy tools and suggestions to deal with the shortages seen in this area.

Finally, this allows me to focus my study on the effect of educational choices and educational credentials on the labour market for registered nurses in Canada. Again, this allows me to focus on a very specific, very well defined, narrow labour market so that I can examine very specific questions. In this case, I am interested in the question of educational choices and credential recognition for a specific group of people. There are many occupations that require specific credentials for entry into the profession, but this allows me to examine very fine details related to this particular group of people.

1.2 Summary of Findings and Policy Implications

In the first essay (Chapter 2), it is assumed that the individual has already made the educational choice to enter the field of nursing and this paper is an analysis of the wage premiums associated with a Bachelors degree in nursing. The purpose of the first paper in this thesis is to examine the determinants of earnings of baccalaureate nurses (BN) and hospital-based diploma nurses (RN) to see if there is a wage premium associated with the BN program among Canadian nurses. The main question asked in this paper is whether obtaining a BN as opposed to an RN is financially worthwhile. This study builds on an existing literature, which is mostly related to nurses in the United States, by adding to the Canadian literature. Significantly fewer studies have examined nursing in Canada and this research extends that. Using the confidential master files of the 2001 Census on Individuals, the determinants of nursing wages are estimated for men and women separately using a basic human capital model. A secondary analysis examines different age cohorts to reflect the changing educational requirements for nursing over time. This paper finds that it is financially beneficial to obtain a BN designation in Canada. This paper also finds that there are systematic differences between visible minorities for both male and female nurses and this supports the results found in the existing literature.

The results from the first paper lead to the motivation for the second paper. The second essay (Chapter 3) is an analysis of the labour market for immigrant nurses in Canada. In the first paper only Canadian nurses are examined and the second paper extends that research by analyzing foreign educational credentials. In this paper the wage differences between Canadian and foreign educated nurses are examined and this

paper asks the question of whether there is a wage penalty observed by those with a foreign nursing certification. In keeping with economic literature related to immigrant outcomes, it is hypothesized that individuals with foreign nursing degrees see lower wages than those with Canadian nursing degrees. The confidential master files of the 2001 Census on Individuals are used for this study as well. Various groupings of nurses from foreign countries are analyzed and the wages attained by these nurses are compared to those attained by nurses who were born or educated in Canada. The issue of educational credentials is a topic of interest in Canada since there is a shortage of nurses in the country and this could be a potential source of nurses to fill the gaps in this labour market.

The second question in this study examines whether a nurse with foreign educational credentials has the same probability of working as a nurse in Canada compared to a nurse who was educated in Canada. This study finds that nurses educated outside of Canada are less likely to be employed as a nurse while immigrant nurses who are educated in Canada are equally likely to be employed as a nurse in Canada. This result implies that foreign nursing credentials are not being recognized or valued in Canada.

Retention of registered nurses is also an important area to consider. If nurses leave the profession early, the benefits of improving recruitment and increasing the number of actively employed nurses are diminished. The third essay in this thesis (Chapter 4) examines the issue of retention and studies the job search decisions of registered nurses. Using the confidential master data files from the National Graduates Survey and the Follow-up Survey of Graduates from the Class of 1995, this paper

examines issues that affect the probability that a nurse will quit her job or search for new employment. This study finds that income and satisfaction with pay are two significant variables that influence a nurse's decision to search for a new job. Various policies could be examined to determine if there is a way to improve nursing satisfaction in order to keep the nurses that are in the profession there.

Considering the shortage of nurses in Canada and around the world, various issues need to be addressed in order to continue meeting the demand for nursing services into the future as demand increases. The recognition on foreign credentials allows for one avenue to examine for increasing the supply of registered nurses. Also, a detailed examination of factors that influence search decisions is important in keeping nurses in the profession. Further studies should examine the factors that determine job satisfaction for nurses and once these factors are identified, policies can be implemented to improve and maintain job satisfaction amongst nurses working in Canada.

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Chapter 2

Wages and Educational Credentials: The Case of Registered Nurses in Canada

Wages and Educational Credentials: The Case of Registered Nurses in Canada

2.1 Introduction and Motivation

In general, studies find that increases in education are associated with higher earnings and the purpose of this paper is to examine if there is a wage premium paid to Canadian nurses who have graduated from the baccalaureate nurses (BN) program. In keeping with human capital theory, it is hypothesized that nurses who have a Bachelors degree in nursing will earn more than nurses who are trained in a diploma nursing program. A second question that will be asked is whether increases in education lead to increases in the probability of promotion and increases in supervisory positions for Canadian nurses.

One of the reasons to examine this hypothesis is that there has been a push in recent years by the Canadian Nurses Association (CNA) to eliminate the community college based diploma based registered nurse training programs. At the time of the 2001 Census, students preparing for a career in nursing in BC, Alberta, Saskatchewan, Ontario, Quebec, the Northwest Territories and the Yukon, had a choice of obtaining either a registered nurse diploma or a Bachelors degree, while students from all other provinces were required to obtain a Bachelors degree in nursing to begin a career in nursing.

In Canada, until recently, registered nurses have had two main paths to human capital acquisition; these are the baccalaureate nurse and community college based diploma nurse. Over time, the educational requirements and necessary credentials for registered nurses in Canada have been evolving to meet the changing technological

advances in medicine. The Bachelor of Nursing program has been in existence for many years in Canada, but it had not been required as the minimum educational credential for entry into the profession. In the 1960s most nurses were educated in a hospital based nursing program and over time the nurse's training programs were available through either a hospital or a community college as well as through the university Bachelor of Nursing program. Each of these programs involved both classroom education and clinical training on the hospital wards. The hospital training programs were phased out in the early 1990s, leaving those who wished to train as a nurse the choice between a community college or university program. Individuals wishing to enter the nursing profession had to make a decision between the costs and time involved in both programs and the potential earnings they could attain as a registered nurse once they had graduated. The community college programs have now been integrated with and work collaboratively with the universities to train nurses. Currently, the nursing student can enrol in the program at either a community college or university and has a baccalaureate degree in nursing conferred upon them from the collaborative university. Once a nurse graduates from a nursing program s/he must write and pass the licensing exam in the province in which they wish to work.

There are also a number of additional institutional details that have an effect on the earnings that nurses can attain. The nursing profession is regulated and controlled by provincial nursing associations, which in turn are overseen by the Canadian Nursing Association. In general, the various provincial nursing unions in most of the institutions where nurses are employed set the minimum and maximum earnings that nurses in Canada observe. Information was gathered from all the unions representing registered

nurses for each provincial nursing association and Table 2.1 shows the pay scale details, effective January 2002 for the various provincial nursing associations across Canada.

Table 2.1: Basic Wage Structure for Registered Nurses in Canada (January 2002)

Union	Dollars per Hour		Annual Income	
	Minimum	Maximum	Minimum	Maximum
Alberta Nurses Union (UNA)	24.70	32.42	50573.35	66381.12
Ontario Nurses Association (ONA)	21.75	32.71	43758.00	65812.50
British Columbia Nurses Union (BCNU)	24.70	32.42	47112.00	61836.00
Saskatchewan Union of Nurses (SUN)	21.34	25.92	48681.02	58464.00
Nova Scotia Nurses Union (NSNU)	22.34	26.22	49061.00	57335.00
Manitoba Nurses Union (MNU)	21.48	25.33	50141.79	59113.03
Newfoundland Nurses Union (NLNU)	20.05	25.62	43163.12	55152.16
New Brunswick Nurses Union (NBNU)	20.16	24.53	45159.53	55005.75
Prince Edward Island Nurses Union (PEINU)	19.35	23.58	44928.00	54756.00
Quebec Nurses Union (FIIQ)	17.11	25.49	34064.02	50730.03

Note: The above data is from the Canadian Federation of Nurses Unions National Database.

The details presented in this table mostly apply to full time general duty registered nurses who work in either hospitals or nursing homes or for those who work as public health nurses or as home care workers.² The pay structures do not depend on the specific educational qualifications that the individual has. Nurses with an RN or a BN see the same earnings. The annual salaries listed refer to a nurse who works full time and full year at 37.5 hours per week. The hourly wages apply to both full time and part time nurses. The range seen in the hourly wages represents a difference in the location or place that a nurse works and also in the length of time s/he has been working as a nurse. There are different unions that bargain on behalf of nurses in different

² This pay scale does not include those who are head nurses or supervisors, nurse practitioners, clinical nurse specialists, licensed practical nurses, nurses aides, student or graduate nurses (those who have graduated from a nursing program but have not yet written or passed their licensing exam).

places of employment and these differences are also reflected in the pay scales.

However, the wages are relatively comparable across the various unionized places of employment. There are often different unions representing nurses in hospitals and nursing homes and frequently nurses working in other industries are not represented by unions. Because of the differing levels of unionization and variation across provinces, controls will be introduced into the analysis to mitigate the impact of these factors.

An additional factor that is demonstrated in the pay scales facing nurses is the progression through the ranks of the profession. Recently graduated and licensed nurses will begin their career at the low end of the pay scale and over time they will progress to higher levels of income and wages. Age, experience and the length of time involved in employment will influence the earnings that any nurse observes. As time progresses the earnings will peak and stabilize at the maximum levels and the increases in pay seen will come from the annual increases that are bargained for by the union for the nurses. In general, nurses with higher educational credentials will see higher wages through their general experience and through their progression through the ranks. Many nurses will also see increases in earnings if they move across various employment locations such as from nursing homes to hospitals. Additionally, nurses will see increased earnings through promotion to head nurse or nurse supervisor positions as well as if they take on positions in various specialized areas of work within each institution.

This paper will be structured as follows: Section 2 will provide a brief literature review of several papers that are related to the study I plan to undertake; Section 3 will describe the data that will be used, and it will introduce the model and the empirical

specification that will be used; Section 4 will examine the summary statistics and present the regression results; and Section 5 will conclude with a discussion and implications.

2.2 Literature Review

There have been numerous studies of the labour market for nursing and this literature is mostly based on data from the United States. To date, not a lot work has been done studying the labour market for Canadian nurses and this study will fill in this gap in the literature. Also, there are numerous studies in Canada and the United States that examine the issue of wage premiums associated with varying levels of education. Most of the existing studies examine this issue from a general perspective and address the question in terms of broad generalities. This study will focus on a very specific labour market to see how it responds to the general question of wage premiums associated with various levels of education.

Spetz (2002) uses data from the National Sample Surveys of Registered Nurses to evaluate the determinants of earnings for three basic types of nursing education in the United States. She finds that registered nurses do not gain financially from obtaining a BN. Lehrer, White and Young (1991) examine the returns to education for three training programs for nurses in the United States. They conclude that a baccalaureate earns the highest returns to education and that the associated wage premium of this degree increases with experience. Botelho, Bland Jones and Kiker (1998) compare wage profiles of registered nurses in the United States across three educational

backgrounds. Their results suggest that the wage equations are sensitive to different specifications of labour market experience.

Schumacher (1997) examines the returns to education of nurses who obtain a baccalaureate and find that they earn a higher wage than those who have a diploma. Menemeyer and Gaumer (1983) examine whether higher credentials for a nurse command a premium in the marketplace in the United States. They also examine the private returns to see if a higher nursing education is a worthwhile investment for individuals. They find that there is no significant premium paid to nurses with higher educational credentials with the exception of nurses who hold a Masters degree. They conclude that neither employers nor most of the nursing profession will benefit from upgrading their education to a baccalaureate.

These studies show that there is no firm consensus as to whether obtaining a BN has a benefit for the earnings attained by nurses in the United States. The American studies use the same data set, but they consider various years of the survey, different regions and various specifications. This study will examine if there is conclusive evidence of increased earnings for nurses who obtain a BN in Canada.

2.3 Data and Methodology

2.3.1 Data Description

This study will use data from the confidential master files from 2001 Canadian Census on Individuals and it will include individuals who are between the ages of 22

and 65.³ In the Census, individuals are asked to indicate what their major field of study or predominant discipline of training was in their highest level of post secondary education. This classification structure is grouped by major and minor categories. One such group is categorized as nursing and includes general nursing as well as other specialized nursing fields such as obstetrics, critical care, medical, surgical and geriatric nursing. This question allows for a clear identification of individuals who have studied nursing.

Secondly, since I am interested in whether there is a wage benefit to obtaining a BN certification, considering only people who list their occupation as a registered nurse reduces the sample. The occupation listings in the 2001 Census on Individuals refers to the kind of work that an individual does. The 1991 Standard Occupational Classification (1991 SOC) is composed of ten broad occupational categories, which are in turn further subdivided into numerous smaller unit groups.⁴ The unit groups are classified on the basis of education or skills, and the tasks and duties required for each occupation. The group that is of concern is the registered nurse. This category allows me to clearly identify those who are currently employed as a registered nurse.

Similarly, the industry listings refer to the general nature of the business where the individual works and this information is found in the North American Industry

³ Since the community college and university nursing programs are three and four years respectively in duration, by the age of 22 many nurses in the sample should have completed their education.

⁴ The ten major occupational categories include: Management occupations, Business, finance and administrative occupations, Natural and applied sciences and related occupations, Health occupations, Occupations in social science, education, government service and religion, Occupations in art, culture, recreation and sport, Sales and service occupations, Trades, transport and equipment operators and related occupations, Occupations unique to primary industry, and Occupations unique to processing, manufacturing and utilities. The subgroups within the Health occupations include: Professional occupations in health (which includes physicians, dentists and veterinarians), Nurse supervisors and registered nurses, Technical and related occupations in health (which includes Medical technologists and technicians in medicine, dentistry and others in health care), and Assisting occupations in support of health services.

Classification System (NAICS97). The major industries of concern for this study are the various health care industries.⁵ These industries will be categorized into four groups: the first one includes Hospitals, the second one includes Nursing and Residential Care Facilities, the third group includes Offices of Physicians, Offices of Dentists, Offices of Other Health Practitioners and the final group will include the remaining health care industries. Similarly, this category allows me to ensure that my sample includes those who are trained as nurses and are working as nurses in a health care profession.

By defining my sample in this way I can ensure that I am explicitly looking at a very specific, homogeneous group and this will allow me to address very specific questions about this interesting group of individuals.

2.3.2 The Theoretical Model

The basic model often used for wage determination is the human capital model. This model suggests that individuals who invest in the accumulation of human capital through education and training should expect to attain higher lifetime earnings. Education involves an initial expenditure that will later raise an individual's productivity and therefore the earnings they can attain in the future. In terms of education, individuals incur both direct costs and indirect costs. The direct costs include tuition, books, and other instructional expenses, while the indirect costs or

⁵ The industries that will be considered for this study include: Offices of Physicians, Offices of Dentists, Offices of Other Health Practitioners, Out-Patient Care Centres, Medical and Diagnostic Laboratories, Home Health Care Services, Other Ambulatory Health Care Services, Hospitals, Nursing and Residential Care Facilities, Individual and Family Services, Emergency and Other Relief Services, and Vocational Rehabilitation Services.

opportunity costs include income that is foregone because of the time devoted to schooling.⁶ It is reasonable to expect that workers will not choose to invest in human capital unless those with better and higher levels of education receive higher pay.

There are several aspects to consider for the choice of using a human capital model for this study. The human capital model is a model of individual educational choice and this can be used to help explain the choice between obtaining an RN or a BN certification. Typically the human capital model is used to examine individual educational choices, but in the case of nursing education in Canada this will no longer entirely be the case. Policies have been designed to phase out the RN training program in favour of the BN program, so there will no longer be a choice for individuals to make regarding the two avenues to a nursing education.⁷ Before the change to having a BN requirement for entry into the profession as a registered nurse in Canada, this was a decision that had to be made by individuals considering this occupation. Each person would need to consider the costs involved in taking either the RN or BN program and compare that to the earnings that were expected from either program.

An implication of the human capital model is an equalization of returns across educational choices. If the BN program has higher returns and if individual choices are unconstrained, this should imply that people will go into this program until the return to that program falls. If, however, the returns to the program are already equalized then a higher return to the BN educational choice will not be observed.

⁶ I will not be calculating the direct and indirect costs of the various nursing education programs in this paper as they will not be directly used in any of the models that I'm using. There is a potential that this can be incorporated into later research I plan to do on this topic.

⁷ Individuals do however have a choice in deciding whether to pursue a career as a registered nurse or some other health care provider such as a licensed practical nurse, nurse's aide, nurse practitioner or a physician but the focus of this study is strictly related to registered nurses. Additionally, those who are considered in the 2001 Census will have had the choice of either two educational paths.

Other factors may have an influence on the educational choice of nurses.

Perhaps the RN/BN decision is more influenced by issues such as program availability and liquidity constraints. Historically, program availability was likely more of an issue. In the past, there were not as many programs available as there are currently and it was more difficult for many individuals to relocate from rural areas to study. Liquidity constraints are another issue that can influence an individual's educational choice. Individuals facing a tighter liquidity constraint will likely opt for the RN program, which is shorter in duration than the four year BN program. Individuals may not be able to easily borrow against future earnings and this will be expected to have an effect on individual educational choices.

The most commonly used empirical estimation for the human capital model is based on the functional form of the Mincer (1974) earnings equation:

$$\log w_i = \beta X_i + rS_i + \delta e_i + \gamma e_i^2 + u_i \quad (2.1)$$

where:

w_i is a measure of hourly wages for an individual i ,

S_i represents the measure of individual i 's schooling or educational attainment,

e_i is a measure of potential experience and this is also entered as a quadratic term to capture the concavity of the typical earnings profile,

X_i is a vector of other variables such as gender, marital status, province of residence and native language that are assumed to affect earnings, and

u_i is a disturbance term which is assumed to be independent of X_i and S_i .

A straightforward method by which the human capital framework can be used to examine the relative wages of Canadian nurses will be used. The simplest method is to include a series of dummy variables for the various educational choices in a pooled regression equation (where the different educational groupings are pooled together). Conditional on working as a nurse, those with a registered nurse designation will be the reference group against which nurses with a BN and other additional educational credentials will be compared. The level of wage advantage or disadvantage can be then measured by the coefficients on the educational dummy variables.

Ordinary least squares (OLS) regressions will be used for males and females separately using conventional variables that are expected to have an effect on the earnings that an individual attains.⁸ If the hypothesis that a nurse with a BN gains a wage premium is supported, one expects to find a statistically significant and positive coefficient on that independent variable. Since the educational requirements facing nurses have been changing over time, an additional analysis will look at various age cohorts of nurses in the sample. This will allow for an examination of nurses who entered the nursing profession at different stages of educational requirements for entry into the profession. The trend of educational requirements has changed over time and it is expected that older nurses will have a larger proportion of individuals with an RN designation and that younger nurses will have a larger proportion of individuals with a BN designation.

⁸ Men and women will be considered separately in this study since the two samples are very unbalanced in size.

A second question that will be examined in this paper will address the issue of promotion within the nursing profession. For this analysis, a binary probit model will be used to examine the question of whether a BN has a higher probability of working as a head nurse. The following equation will be estimated using maximum likelihood.

$$\text{Prob}(Y_i = 1) = \beta_1 X_i + \beta_2 S_i + u_i \quad (2.2)$$

In equation (2.2), Y_i denotes whether individual i is working as a head nurse.⁹ Included in the vector of X variables, the first component of the model, are a series of background characteristics that are assumed to influence the probability of being a head nurse. These include the four different groupings of place of employment, language, visible minority status, marital status and province of residence. The second component S_i includes the dummy variables for the various levels of education to determine if they have an influence on an individual being a head nurse. The omitted variable is the RN designation. The main question being addressed is whether a nurse with a BN designation has a higher probability of being a head nurse. If a nurse with a BN has a higher probability of being a head nurse, this indicates another benefit of increasing one's human capital.

2.3.3 The Independent Variables

The dependent variable for this study is hourly wages. In the 2001 Census on Individuals, employment income refers to total income received by persons 15 years of

⁹ $Y_i = 1$ if the individual is a head nurse and $Y_i = 0$ otherwise.

age and over during calendar year 2000 as wages and salaries. Since the standard Mincer equation uses hourly wages as the dependent variable, the total income reported in the Census is divided by the average number of weeks worked and the average number of hours per week worked for each individual to derive hourly wage.¹⁰

In order to abstract from potential gender earnings issues as much as possible, and since the sample sizes for the two groups are very different, male and female samples will be considered separately. The sample is also restricted to Canadian born nurses so that the issue of foreign educational credentials can be removed.¹¹ By doing this, the premiums associated with the various Canadian educational paths for nurses can be examined without questioning the possible differences associated with where the nursing education was received. Finally, the sample is also restricted to those who are trained as nurses and who are actively working as nurses. This includes those who are working as registered nurses and also those who are working as head nurses or nurse supervisors.

There are a variety of factors that contribute to the determination of wages that any particular individual attains. An individual's level of education is one factor that certainly influences the wages that are earned. It is expected that as education increases, wages should also increase. The highest degree, certificate or diploma obtained includes information about the basic type of training nurses have received. The following educational levels are included: non-university certificate, certificate below the Bachelors degree, a Bachelors degree, and a higher degree. The first group

¹⁰ The various exercises and regressions were also executed using annual employment earnings and the results are very similar to that which was found using the derived hourly wages.

¹¹ The issue of foreign nursing educational credentials is examined in Chapter 3 of this thesis.

includes those who have obtained a non-university certificate or diploma and these individuals will include those who have had their training either through a hospital or community college based program. These individuals are classified as RNs and they form the reference group since they are the largest group of nurses in the sample and are those against whom the other nurses will be compared. Those who have obtained a Bachelors degree are classified as BNs. Nurses who have other certification below a Bachelors degree include those who have taken additional certification courses above their first RN certification but have not completed a BN. Those with a higher degree are those who have obtained certification above the Bachelors degree, a Masters degree or a Ph.D. Each of the other educational levels is expected to have a positive impact on earnings since they are expected to increase someone's human capital.

An individual's age and potential experience are also characteristics that are expected to be related to wages in a positive manner. The standard Mincer equation is used to determine an individual's potential experience. Each person's age minus the years of schooling they have minus six is used to obtain an individual's potential work experience. Potential experience squared is also included in the regressions to capture the concavity of the typical earnings profile. One problem with this measure of experience is that it may overestimate the actual experience for people who, for various reasons, have taken time out of the labour force. This is more of an issue for the female sample who are more likely to have taken time out of the workforce to raise children. This effect will not be as noticeable in the male sample. By considering the male and female samples separately, the possible effect that experience may be overestimated will be kept separated.

In this sample the individuals are categorized into three groups based on their marital status; divorced, legally separated or widowed, legally married or in a common law relationship, and single. The individuals who are single are the reference group. Data is not available for the number of dependent children living at home. Instead the number of hours of unpaid childcare is included as a variable that is expected to have an effect on the decision to work and earnings. This is set to a dummy variable that indicates the presence of unpaid childcare or not. Childcare and the number of children present in a household are expected to have an effect on the earnings of those in the sample.

Two additional factors that may potentially have an effect on the wages that an individual earns are visible minority status and language. Numerous studies indicate that race and language influence wage differentials (Chapman and Iredale (1993), Li (2001) and Meng (1987)). Other studies (Pendakur and Pendakur (2002) and Hum and Simpson (1999)) find that visible minority status is associated with wage penalties compared to individuals who are not a visible minority.

In terms of race, this sample has two groups: those who identify themselves as a visible minority and those who do not identify themselves as a visible minority. Those who are not a visible minority form the reference group. Individuals who speak English as their mother tongue are the reference group. French speaking individuals make up the second group of people. The final group includes those who have any other languages as their mother tongue. There are not a significant number of Canadian born nurses who speak a language other than the two official languages.

Another issue that arises in the study of registered nurses is the structure of the wage agreements in the place of employment and province of residence. To allow for the differences seen in wage agreements in different regions of the country, dummy variables are included for provincial and territorial groupings and the place of employment categories to control for this aspect of the nursing labour market. Additionally, controls are included for the three largest Census Metropolitan Areas (Montreal, Toronto and Vancouver) as well as a control for individuals who live in mostly rural, small town or urban locations.¹²

2.4 Results and Analysis

2.4.1 Summary Statistics

The summary statistics for the female and male nursing samples are found in Tables 2.2 and 2.3 respectively. The female nurses tend to earn less than the male nurses. Both female and male nurses work nearly the same number of weeks per year but the men work slightly more hours per week. In the full samples, with all of the age groups combined, the proportion of men and women who have different educational credentials is quite similar. Slightly more men have an RN certification (65% of women and 66% of men) and slightly more women have a BN certification (22% of women and 21% of men). Once the nurses are separated out into the various age cohorts, there is some variation to be seen in the samples of women. We see that only 57% of the women in the less than 35 year old age bracket have an RN designation

¹² Those in rural areas are defined as having a population of less than 1,000, while towns have a population of between 1,000 and 100,000. Urban locations include those areas with a population of more than 100,000.

while 66% of the women in the 55 - 65 year old age group have an RN designation. The opposite trend is seen in the proportion of women who have a BN designation; 33% of the youngest nurses have a BN while only 15% of the oldest nurses have a BN. In terms of the various age groups, these results are expected since one anticipates seeing more nurses having a BN certification as the educational requirements for entry into profession have been changing. The changing requirements have likely begun to factor into the decisions made by the younger nurses as they decided which education path to follow. This trend, however, is not as apparent in the male sample.

Fewer women work in hospitals compared to men (72% of women compared to 81% of men), while more women work in the other three categories of industries compared to men. Again it can be seen that there are differences in the various age cohorts. 77% of the youngest female nurses work in hospitals compared to 57% of the oldest female nurses. This similar trend is seen in the male sample. 85% of the youngest male nurses work in hospitals compared to 82% of the oldest male nurses. These numbers are expected. The majority of nurses who are newly graduated will wish to work in a hospital setting where they will be able to practice the skills that they have recently learned. A hospital provides a wide variety of medical opportunities for working such as emergency room, intensive care, surgical wards and maternity wards. Fewer newly graduated nurses will choose to work in the other nursing employment industries since these do not provide as much practice for their training. We see that 9% and 7% of the youngest women and men respectively work in nursing homes compared to 19% and 9% of the oldest female and male nurses.

There is a fairly significant difference in languages spoken by female and male nurses. 70% of female registered nurses speak English compared to 51% of the men; on the other hand, 46% of the men speak French while only 26% of the female registered nurses do. These figures correspond with the distribution of registered nurses in the various provinces. The largest proportion of female registered nurses is found in Toronto and the rest of Ontario with 35% followed by 23% in Montreal and the rest of Quebec. The largest proportion of male registered nurses, however, is found in Montreal and the rest of Quebec with 41% followed by 26% in Toronto and the rest of Ontario. The remaining characteristics of this sample of registered nurses are quite similar between the genders.

2.4.2 Ordinary Least Squares Regression Results

By selecting only individuals who have made the educational choice to become a nurse, this may result in a selection bias issue, but on the other hand it also allows me to abstract from many other issues that can influence labour market outcomes. One of the implications of only studying those who have chosen nursing is that the estimated relationships between earnings and the variables that are expected to determine earnings may be biased. However, since this study is primarily interested in examining questions about those who are in the nursing labour market, the effect of a potential sample selection bias is mitigated. This choice deviates from general studies and allows for a detailed analysis of a specific group of individuals who have made certain educational selections. Randomly selecting individuals from all fields would allow for a general

analysis, but the focus in this study is on a specific set of questions regarding a specific group of people.

Allowing for the fact that the potential selection bias problem may be an issue in this study, a brief examination and basic testing will be used to determine the extent of a potential problem. There is a potential for three basic types of selection bias problems that may be of concern in this study and each will be examined to determine the magnitude of a potential selection bias issue. There are two educational selection decisions that need to be checked. The first selection choice that someone must decide on is whether to study nursing or some other occupation and the second choice, once the decision to study nursing is made, is the decision to enter the RN or the BN program. A second source of a potential selection bias problem comes from the decision of a nurse to participate in the nursing labour market or not. Several factors contribute to someone's decision to pursue a nursing education or to work in the nursing profession. Some of these factors include the presence of dependent children, home language, marital status, visible minority status and province of residence. For each of these basic selection bias problems a Heckman two-step procedure was implemented for each study and it was found that in each case the inverse Mills ratio coefficient was statistically insignificant.¹³ The instruments used to attempt to correct for a potential selection bias problem include spousal income, other household or personal income (other than employment income), presence of children, location and age. In each of the cases studied, it was also noted that the other coefficients showed very little change when the selection bias was corrected for and when it was overlooked. These two results, along

¹³ The absolute values of the test statistics for the three different Heckman two-step procedures for a potential selection bias problem were found to be 0.21, 0.74, and 0.56 respectively.

with the premise that it is the specific group of people who have selected this occupation that I am most interested in, lead to the decision to not correct for a potential selection bias issue in the labour market for registered nurses in Canada. One final issue in terms of a potential sample selection bias that needs to be pointed out is that perhaps what is driving the results obtained is the possibility that the instruments used in the Heckman two step procedure are inadequate. If this is the case then nothing can be done to correct for a potential sample selection bias and this is acknowledged as a possible problem and a shortcoming in this research.

The results of the wage equation regressions using the natural logarithm of hourly wages for the sample of female and male nurses are shown in Tables 2.4 and 2.5 respectively. The first column reports the regression results for the full sample of nurses and the next four columns report the results for each of the four age cohorts. In order to interpret the coefficients on the dummy variables one can't simply multiply the coefficient by 100 and report this value as the percentage effect that the variable has on the dependent variable. Instead one must make a modification to accurately use the values as percentages (see Gujarati (1995), Halvorsen & Palmquist (1980) and Kennedy (1981)). To get the percentage wage differential one needs to use $(e^{\beta} - 1) * 100$.¹⁴

The results answer the question that nurses who have graduated from a baccalaureate program do indeed see a wage premium. The effect of having a BN is positive and statistically significant for all of the samples of female nurses. As can be seen in table 2.4, in the full sample nurses with a BN earn around 14% more than nurses

¹⁴ Appendix A2 reports the tables and the results for all of the regressions including the reported coefficients and the robust standard errors for each of the variables. All the regression results reported in the text of this document report the coefficient, level of significance and the percentage values for each variable.

with a RN designation. The highest wage premium is seen in the youngest cohort at 18%, followed by 13% in the nurses between 45 - 54, 9% in the 35 - 44 year old nurses and 6% in the oldest nurses. It is also worth noting that increasing one's education does improve one's earnings in the labour market for registered nurses in Canada. Having another certification above the RN or BN designation is positive and statistically significant for the full sample and for both the less than 35 year old group and the 45 - 54 year age group. In the full sample this additional education yields a wage premium of 10%. The less than 35 year old group sees a premium of 13% while the 45 - 54 year old nurses see a 6% premium. Human capital theory suggests that individuals who invest in the accumulation of human capital through education and training should expect to attain higher lifetime earnings. Numerous studies show that this result is generally observed and it is interesting to see that this certainly holds for the samples of nurses that are examined in this study.

Place of employment has a negative effect on earnings when compared to nurses who work in a hospital setting. In general, this result is expected since hospitals tend to pay the highest salaries of the various nursing employment locations. One question that arises relates to the possible endogeneity of the place of employment variable. As a simple test to see if this is a significant problem all of the regressions are run excluding the place of employment variable.¹⁵ It was found that there is very little, if any, change in the remaining coefficients and it is concluded that the potential endogeneity problem is not a significant problem to be concerned with.

¹⁵ Please see Appendix B2 for all of the regression tables that were constructed excluding the place of employment variables. The regressions for all of the samples of women and men are included in this appendix as well as the probit results which exclude the place of employment variables.

The presence of children has a statistically significant negative effect on earnings for the nurses in the oldest group, but this effect is positive and statistically significant in the youngest nurses. Being a visible minority has a 13% wage penalty on earnings in the full sample. This result ranges from an 8% penalty for nurses 45 - 54 to a 25% penalty for nurses in the 55 - 65 year old cohort. Marital status has a variable effect on earnings. Being a married or in a common law relationship does not have a statistically significant effect in many of the samples except for an 8% wage penalty to woman between 55 and 65 years of age. Being a separated, widowed or divorced woman has a varying effect depending on the age group being examined. For the younger nurses this yields a positive effect of 7% for those under the age of 35 and 3% premium for those between the ages of 35 and 44. Women between 45 and 54 see a 3% wage penalty.

The results of the wage equation regressions using the natural logarithm of hourly wages for the sample of Canadian male nurses are shown in Tables 2.5. Many variables show signs that are expected but many of the explanatory variables are not statistically significant. Many of the coefficients on the variables for the oldest cohort of male nurses show the wrong signs but the sample size is very small and this group will not be analyzed.

The effect of having a BN is statistically significant in each of the regressions for the male sample of nurses. Male nurses with a BN designation earn around 9 to 14% more than RNs. Again we see an earnings benefit by those with a BN designation and also for some of those with other training beyond the RN certification. This effect is not as strong as what was seen in the sample of female nurses. Place of employment

has a statistically significant negative effect on earnings when compared to nurses who work in a hospital setting in the full sample of male nurses and those between the ages of 35 and 44 working in nursing homes. These nurses see a statistically significant wage penalty of 7 and 11% respectively.

The presence of children has a positive and statistically significant effect on earnings for all of the samples with the exception of those between 35 and 44 years of age. Being married or in a common law relationship has a negative and statistically significant effect on natural logarithm of hourly wages when compared to single males for those in the 45 - 54 year old cohort.

2.4.3 Probit Regression Results

Aside from examining the earnings benefits of increasing education, the second question of interest in this study is whether increasing one's education increases one's probability of promotion into a supervisory position. If improvements in education and human capital help to improve a person's productivity, it is plausible that this could also result in a higher likelihood of promotion to a supervisory position.

Rather than reporting the coefficients of the probit models, Tables 2.6 and 2.7 report the discrete change in the probability of working as a head nurse or supervisor for a variety of dummy variables that are expected to affect this probability. The qualitative dependent variable is the occupational position of head nurse and the question being addressed is what characteristics affect the probability of being a head nurse. The results for the female sample are found in Table 2.6. In order to take into consideration the changing educational requirements over time, various age cohorts are

also examined. The results for the male sample are found in Table 2.7. For the male sample only the full sample is examined since the sample sizes become too small when the various age cohorts of head nurses are being examined.

For the female sample it can be seen that having a BN designation results in higher probabilities of being a head nurse for each of the cohort samples. These values range from a low of 2.17% for the youngest nurses to 6.51% for the oldest nurses. An additional factor that is contributing to this changing probability relates to the individuals age. In many cases seniority has a significant influence in promotion, so it should be expected that nurses in the older age cohorts should be more often seen in the supervisory roles. Female nurses with other certification below the Bachelors level also have an increased probability of being a head nurse in all of the groups. The educational level that appears to have the most impact on a nurse's probability of promotion is that of a higher degree. With the exception of the youngest cohort, where the effect is not statistically significant, nurses with a higher degree see increased probabilities of between 7.63% for the oldest nurses to 17.45% for the nurses between the ages of 35 and 44. Nurses between the ages of 45 and 54 see a 12.81% higher probability of being a head nurse. Female nurses have a higher probability (between 3.57% for the nurses between the ages of 45 - 54 and 7.36% for the nurses between the ages of 55 - 65) of being a head nurse in a nursing home.

For the male sample it is apparent that having a BN designation results in a 4.46% higher probability of being a head nurse. Male nurses with other certification below the Bachelors level also have a 2.18% higher probability of being a head nurse.

Male nurses have a 4.52% higher probability of being a head nurse in a nursing home compared to the reference group of male nurses who work at hospitals.

2.5 Discussion, Implications and Conclusion

In general, the results of this study support the hypothesis that attaining a BN significantly increases the wages earned by nurses in Canada. This result contradicts the results of Spetz (2002) and Mennemeyer and Gaumer (1983) and this study concludes that there is convincing evidence of increased earnings for nurses in Canada who obtain a BN. This study also finds that there are systematic differences between visible minorities, place of employment and province of employment for female nurses and to a lesser extent for male nurses. Finally, this study shows that increases in education increase the probability of promotion to supervisory positions for Canadian nurses.

It appears that increasing one's human capital does improve one's marginal productivity. If nurses are paid at the point where wages are equated with their marginal productivity one would expect to see that earnings of a BN should be greater than that of an RN if a BN has a higher marginal productivity. The results of this study seem to indicate that the increase in education does have significant effects on wages in most cases and this implies that attaining a BN does increase an individual's marginal productivity plus it increases their probability of promotion to supervisory positions.

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Table 2.2: Summary Statistics for the sample of women whose major field of study was nursing and who are currently working as registered nurses

	Full sample	Less than 35	35 – 44	45 – 54	55 – 65
	N = 26458	N = 5811	N = 8710	N = 9278	N = 2659
Less than 35	0.2196				
35 – 44	0.3292				
45 – 54	0.3507				
55 – 65	0.1005				
Employment income	41268.69	35501.38	41403.9	44819.48	41039.97
Hourly wages	28.4250	26.4690	29.1101	28.6194	29.7771
Weeks	50.0730	47.7097	50.4110	51.3730	49.5946
Hours	35.1913	35.9709	34.8109	35.7013	32.9537
Potential Experience	20.7989	7.1599	17.9578	27.6083	36.1519
Non-university certification	0.6540	0.5710	0.6617	0.6980	0.6566
Other certification below Bachelors	0.1004	0.0797	0.0876	0.1062	0.1677
Bachelors degree	0.2199	0.3283	0.2242	0.1685	0.1478
Higher degree	0.0257	0.0210	0.0265	0.0274	0.0278
Head nurse	0.0374	0.0196	0.0381	0.0442	0.0504
Registered nurse	0.9626	0.9804	0.9619	0.9558	0.9496
Hospitals	0.7201	0.7687	0.7521	0.7014	0.5743
Nursing and residential care facilities	0.1107	0.0936	0.0948	0.1148	0.1862
Offices	0.0475	0.0320	0.0373	0.0551	0.0884
Other Health Care Facilities	0.1216	0.1057	0.1157	0.1287	0.1512
English	0.7030	0.6877	0.7103	0.6935	0.7458
French	0.2591	0.2688	0.2533	0.2719	0.2117
Other	0.0379	0.0435	0.0364	0.0346	0.0425
Visible Minority	0.0311	0.0582	0.0293	0.0186	0.0214
Not a Visible Minority	0.9689	0.9418	0.9707	0.9814	0.9786
Separated, divorced or widowed	0.1573	0.0520	0.1348	0.2069	0.2885
Married or common law	0.6538	0.5194	0.7061	0.6916	0.6439
Single	0.1889	0.4287	0.1591	0.1014	0.0677
No dependent children	0.4199	0.4498	0.2061	0.5123	0.7326
Dependent children	0.5801	0.5502	0.7939	0.4877	0.2674
Rural (less than 1,000)	0.2236	0.2051	0.2331	0.2323	0.2023
Town (between 1,000 and 100,000)	0.2612	0.2426	0.2730	0.2668	0.2441
City (over 100,000)	0.5152	0.5522	0.4939	0.5010	0.5536
The Atlantic Provinces	0.1083	0.1158	0.1234	0.0969	0.0824
Montreal	0.0987	0.1139	0.0916	0.0929	0.1087
Rest of Quebec	0.1318	0.1249	0.1289	0.1540	0.0786
Toronto	0.0687	0.0755	0.0660	0.0629	0.0827
Rest of Ontario	0.2807	0.2779	0.2785	0.2867	0.2730
Manitoba	0.0485	0.0434	0.0513	0.0495	0.0470
Saskatchewan	0.0424	0.0361	0.0414	0.0453	0.0496
Alberta	0.1030	0.1074	0.1022	0.0945	0.1256
Vancouver	0.0448	0.0490	0.0404	0.0410	0.0628
Rest of BC	0.0615	0.0411	0.0622	0.0676	0.0820
The Territories	0.0116	0.0148	0.0139	0.0087	0.0075

Table 2.3: Summary Statistics for the sample of men whose major field of study was nursing and who are currently working as registered nurses

	Full sample	Less than 35	35 – 44	45 – 54
	N = 1476	N = 459	N = 581	N = 383
Less than 35	0.3110			
35 – 44	0.3936			
45 – 54	0.2595			
55 – 65	0.0359			
Employment income	47543.58	41784.7	49914.32	50836.85
Hourly wages	31.9836	28.6315	28.9037	28.0372
Weeks	50.6850	49.0872	51.6162	51.7781
Hours	39.5542	40.0000	39.8709	39.4674
Potential Experience	17.2148	6.8736	17.2100	27.0522
Non-university certification	0.6640	0.6427	0.6850	0.6658
Other certification below Bachelors	0.1037	0.0850	0.1050	0.1175
Bachelors degree	0.2121	0.2614	0.1928	0.1802
Higher degree	0.0203	0.0109	0.0172	0.0366
Head nurse	0.0454	0.0196	0.0482	0.0731
Registered nurse	0.9546	0.9804	0.9518	0.9269
Hospitals	0.8056	0.8540	0.7676	0.8172
Nursing and residential care facilities	0.0840	0.0675	0.0861	0.0914
Offices	0.0149	0.0065	0.0207	0.0157
Other Health Care Facilities	0.0955	0.0719	0.1256	0.0757
English	0.5122	0.5621	0.4768	0.4909
French	0.4641	0.4139	0.4991	0.4935
Other	0.0237	0.0240	0.0241	0.0157
Visible Minority	0.0359	0.0654	0.0258	0.0209
Not a Visible Minority	0.9641	0.9346	0.9742	0.9791
Separated, divorced or widowed	0.1125	0.0458	0.1119	0.1749
Married or common law	0.5298	0.4183	0.5473	0.6214
Single	0.3577	0.5359	0.3408	0.2037
No dependent children	0.4783	0.5730	0.3752	0.4752
Dependent children	0.5217	0.4270	0.6248	0.5248
Rural (less than 1,000)	0.2005	0.1786	0.1876	0.2428
Town (between 1,000 and 100,000)	0.2636	0.2331	0.2599	0.2950
City (over 100,000)	0.5359	0.5882	0.5525	0.4621
The Atlantic Provinces	0.0705	0.0871	0.0757	0.0444
Montreal	0.1402	0.1569	0.1583	0.0992
Rest of Quebec	0.2730	0.2004	0.2823	0.3577
Toronto	0.0427	0.0458	0.0482	0.0261
Rest of Ontario	0.2127	0.2309	0.1928	0.2141
Manitoba	0.0556	0.0545	0.0516	0.0574
Saskatchewan	0.0305	0.0414	0.0258	0.0261
Alberta	0.0630	0.0806	0.0534	0.0548
Vancouver	0.0420	0.0392	0.0482	0.0366
Rest of BC	0.0535	0.0327	0.0534	0.0731
The Territories	0.0163	0.0305	0.0103	0.0104

Table 2.4: Regression results for the Mincer earnings equation including place of employment variables for the sample of Canadian women working as nurses
(Second columns for each model reports the percentage change in the coefficient from the dummy variable changing from zero to one)

	Full Sample		Less than 35		35 - 44		45 - 54		55 - 65	
Constant	2.8323 ***		2.5594 ***		3.0405 ***		3.2463 ***		3.2934 **	
Potential Experience	0.0252 ***	2.5537	0.0683 ***	7.0688	0.0246	2.4913	-0.0013	-0.1265	0.0124	1.2503
Potential Experience squared	-0.0004 ***	-0.0422	-0.0031 ***	-0.3094	-0.0008 *	-0.0792	0.0001	0.0071	-0.0003	-0.0326
Other certification below Bachelors	0.0280 **	2.8368	0.1211 ***	12.8739	-0.0142	-1.4053	0.0155	1.5583	0.0058	0.5835
Bachelors degree	0.1278 ***	13.6344	0.1626 ***	17.6529	0.0902 ***	9.4373	0.1234 ***	13.1382	0.0616 *	6.3511
Higher degree	0.0959 ***	10.0618	0.1241 *	13.2087	0.0751	7.7972	0.0626 *	6.4580	0.0199	2.0069
Childcare	0.0114	1.1468	0.0658 ***	6.8023	0.0112	1.1265	-0.0119	-1.1800	-0.0654 **	-6.3263
French	0.0336 **	3.4197	0.0916 **	9.5941	0.0054	0.5461	0.0115	1.1603	0.1071 **	11.3035
Other	0.0273	2.7695	0.0120	1.2104	-0.0417	-4.0870	0.0826 **	8.6130	0.1288 **	13.7467
Married or common law	-0.0005	-0.0453	-0.0256	-2.5320	-0.0126	-1.2517	-0.0373 **	-3.6620	-0.0794 *	-7.6332
Separated, divorced or widowed	0.0402 ***	4.0988	0.0678 ***	7.0128	0.0329 *	3.3425	-0.0275 *	-2.7133	0.0037	0.3743
Nursing Homes	-0.1473 ***	-13.6925	-0.0957 **	-9.1253	-0.1941 ***	-17.6457	-0.1404 ***	-13.0976	-0.1457 ***	-13.5581
Offices	-0.1947 ***	-17.6878	-0.0151	-1.5018	-0.1792 ***	-16.4082	-0.2220 ***	-19.9113	-0.3154 ***	-27.0511
Other health care facilities	-0.0822 ***	-7.8954	-0.0339	-3.3376	-0.0845 ***	-8.1014	-0.0986 ***	-9.3938	-0.1019 ***	-9.6919
Visible minority	-0.1421 ***	-13.2497	-0.1407 ***	-13.1230	-0.1246 **	-11.7159	-0.0857 **	-8.2149	-0.2815 ***	-24.5387
Rural	0.0012	0.1208	0.0239	2.4185	0.0072	0.7220	-0.0276 *	-2.7213	0.0050	0.5024
Town	-0.0151 *	-1.4958	-0.0205	-2.0293	-0.0361 **	-3.5503	-0.0078	-0.7771	0.0135	1.3607
The Atlantic Provinces	-0.2262 ***	-20.2416	-0.2039 ***	-18.4456	-0.2651 ***	-23.2852	-0.2139 ***	-19.2597	-0.2245 ***	-20.1061
Montreal	-0.0621 ***	-6.0178	-0.0006	-0.0602	-0.1250 ***	-11.7478	-0.0297	-2.9287	-0.1367 *	-12.7732
Rest of Quebec	-0.0819 ***	-7.8644	-0.0301	-2.9665	-0.0913 **	-8.7262	-0.0622 *	-6.0346	-0.2594 ***	-22.8458
Rest of Ontario	-0.0243 *	-2.4000	-0.0126	-1.2512	-0.0651 **	-6.3062	0.0001	0.0099	-0.0404	-3.9552
Manitoba	-0.1323 ***	-12.3898	-0.1011 *	-9.6199	-0.1780 ***	-16.3078	-0.1349 ***	-12.6181	-0.0854	-8.1844
Saskatchewan	-0.0745 ***	-7.1748	0.0462	4.7271	-0.1036 ***	-9.8370	-0.1144 ***	-10.8062	-0.0781	-7.5118
Alberta	-0.0552 ***	-5.3736	0.0095	0.9540	-0.0917 ***	-8.7588	-0.0924 ***	-8.8254	-0.0230	-2.2713
Vancouver	-0.0427 *	-4.1798	0.0625	6.4521	-0.0704 *	-6.7981	-0.0782 **	-7.5201	-0.0962 *	-9.1675
Rest of BC	-0.0426 **	-4.1682	0.0252	2.5546	-0.0736 **	-7.0997	-0.0539 *	-5.2494	-0.0760	-7.3205
The Territories	0.1938 ***	21.3893	0.3130 ***	36.7583	0.1285 **	13.7115	0.1753 ***	19.1607	0.1779 *	19.4708
N	26458		5811		8710		9278		2659	
R ²	0.0373		0.0419		0.0277		0.0309		0.0395	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table 2.5: Regression results for the Mincer earnings equation including place of employment variables for the sample of Canadian men working as nurses
(Second columns for each model reports the percentage change in the coefficient from the dummy variable changing from zero to one)

	Full Sample		Less than 35		35 - 44		45 - 54	
Constant	2.7885 ***		2.8224 ***		2.6126 ***		3.6894 **	
Potential Experience	0.0170 **	1.7185	0.0217	2.1896	0.0500	5.1237	-0.0296	-2.9194
Potential Experience squared	-0.0001	-0.0132	-0.0004	-0.0359	-0.0015 *	-0.1539	0.0005	0.0491
Other certification below Bachelors	0.0545	5.6036	0.0605	6.2371	-0.0217	-2.1462	-0.0106	-1.0557
Bachelors degree	0.1321 ***	14.1259	0.1058 *	11.1579	0.0953 **	10.0001	0.0855 *	8.9286
Higher degree	-0.0542	-5.2784	0.1118	11.8315	0.2097 ***	23.3252	-0.4663	-37.2661
Childcare	0.0778 **	8.0928	0.1261 **	13.4417	0.0261	2.6419	0.1160 **	12.2968
French	0.0493	5.0571	-0.0047	-0.4738	0.0472	4.8376	0.0518	5.3186
Other	0.0735	7.6228	-0.0212	-2.0931	0.2227 *	24.9428	-0.0587	-5.7023
Married or common law	-0.0502	-4.8929	0.0985	10.3468	0.0099	0.9958	-0.1764 **	-16.1747
Separated, divorced or widowed	-0.0251	-2.4831	0.0210	2.1239	-0.0097	-0.9657	-0.1180	-11.1346
Nursing Homes	-0.0740 **	-7.1334	-0.0870	-8.3352	-0.1113 **	-10.5292	-0.0265	-2.6120
Offices	0.0660	6.8207	-0.0350	-3.4406	0.1811	19.8564	0.0031	0.3134
Other health care facilities	0.0162	1.6305	0.0981	10.3085	-0.1519 **	-14.0904	0.0532	5.4616
Visible minority	-0.0215	-2.1312	-0.0409	-4.0104	-0.0645	-6.2428	0.1693	18.4435
Rural	0.0241	2.4402	0.0910	9.5284	0.0383	3.9049	-0.0701	-6.7679
Town	0.0227	2.2993	0.1251 *	13.3311	0.0160	1.6115	-0.0908	-8.6768
The Atlantic Provinces	-0.0678	-6.5543	-0.2788	-24.3295	-0.0619	-6.0044	0.2269	25.4660
Montreal	0.0069	0.6943	-0.1341	-12.5520	0.1773	19.3973	-0.1170	-11.0422
Rest of Quebec	-0.0172	-1.7029	-0.2304	-20.5815	0.1340	14.3429	0.0189	1.9086
Rest of Ontario	0.0438	4.4783	-0.0479	-4.6781	0.1205	12.8047	0.0339	3.4502
Manitoba	-0.0294	-2.8953	-0.2623	-23.0683	0.1297	13.8452	-0.0177	-1.7569
Saskatchewan	0.1140	12.0789	0.0860	8.9790	0.2620 *	29.9511	-0.2316	-20.6706
Alberta	0.0351	3.5730	0.0630	6.5017	0.1355	14.5117	-0.2302	-20.5632
Vancouver	0.0044	0.4403	-0.0542	-5.2715	0.1659	18.0480	-0.1778	-16.2863
Rest of BC	0.0227	2.2954	0.0798	8.3065	0.1633	17.7392	-0.1138	-10.7530
The Territories	0.1666	18.1313	0.0185	1.8653	0.0789	8.2047	0.3288	38.9320
N	1476		459		581		383	
R ²	0.0434		0.0545		0.0531		0.0854	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table 2.6: Probit Results examining the probability of working as a head nurse or supervisor for the Female Samples including place of employment variables (Standard errors in parenthesis)

	Full Sample	< 35	35-44	45-54	55-65
	dF/dx	dF/dx	dF/dx	dF/dx	dF/dx
Potential Experience	0.0031 *** (0.0004)	0.0047 *** (0.0017)	-0.0001 (0.0040)	-0.0109 * (0.0070)	0.0197 (0.0240)
Potential Experience squared	0.0000 *** (0.0000)	-0.0002 ** (0.0001)	0.0000 (0.0001)	0.0002 ** (0.0001)	-0.0003 (0.0003)
Other certification below Bachelors	0.0177 *** (0.0044)	0.0098 * (0.0076)	0.0192 *** (0.0087)	0.0272 *** (0.0083)	0.0091 (0.0117)
Bachelors degree	0.0476 *** (0.0042)	0.0217 *** (0.0048)	0.0540 *** (0.0077)	0.0527 *** (0.0089)	0.0651 *** (0.0187)
Higher degree	0.1191 *** (0.0153)	0.0114 (0.0172)	0.1745 *** (0.0307)	0.1281 *** (0.0270)	0.0763 *** (0.0424)
Nursing Homes	0.0433 *** (0.0050)	0.0382 *** (0.0100)	0.0410 *** (0.0092)	0.0357 *** (0.0082)	0.0736 *** (0.0153)
Offices	-0.0024 *** (0.0050)	0.0082 (0.0109)	0.0085 (0.0120)	-0.0121 * (0.0079)	-0.0039 (0.0146)
Other health care facilities	-0.0024 (0.0030)	-0.0005 (0.0045)	-0.0072 * (0.0047)	-0.0010 (0.0059)	0.0089 (0.0122)
French	0.0002 (0.0055)	0.0188 ** (0.0114)	-0.0077 (0.0081)	-0.0009 (0.0098)	-0.0176 (0.0156)
Other	0.0066 * (0.0056)	0.0015 (0.0061)	0.0071 (0.0096)	0.0092 (0.0117)	-0.0006 (0.0180)
Visible minority	-0.0084 * (0.0053)	-0.0106 * (0.0035)	-0.0002 (0.0105)	-0.0019 (0.0136)	-0.0260 (0.0145)
Married or common law	0.0033 (0.0038)	-0.0003 (0.0065)	0.0007 (0.0061)	0.0017 (0.0072)	0.0057 (0.0158)
Separated, divorced or widowed	0.0013 (0.0029)	0.0064 ** (0.0030)	-0.0043 (0.0049)	0.0039 (0.0059)	-0.0077 (0.0154)
Rural	-0.0001 (0.0028)	-0.0013 (0.0036)	-0.0029 (0.0046)	0.0023 (0.0054)	0.0004 (0.0102)
Town	0.0028 (0.0027)	-0.0024 (0.0032)	0.0055 (0.0047)	0.0005 (0.0051)	0.0137 * (0.0103)
The Atlantic Provinces	0.0149 *** (0.0069)	0.0102 (0.0107)	0.0116 (0.0112)	0.0143 (0.0127)	0.0420 ** (0.0313)
Montreal	0.0406 *** (0.0125)	0.0075 (0.0122)	0.0601 *** (0.0257)	0.0408 *** (0.0216)	0.0820 ** (0.0519)
Rest of Quebec	0.0272 *** (0.0109)	0.0021 (0.0101)	0.0500 *** (0.0238)	0.0243 * (0.0179)	0.0398 (0.0461)
Rest of Ontario	-0.0008 (0.0047)	0.0040 (0.0071)	-0.0032 (0.0080)	-0.0084 (0.0082)	0.0166 (0.0198)
Manitoba	-0.0027 (0.0060)	0.0082 (0.0126)	-0.0025 (0.0105)	-0.0091 (0.0101)	0.0014 (0.0247)
Saskatchewan	0.0160 ** (0.0087)	0.0043 (0.0112)	0.0205 * (0.0161)	0.0071 (0.0137)	0.0553 ** (0.0400)
Alberta	0.0075 * (0.0062)	0.0065 (0.0094)	0.0139 * (0.0119)	0.0021 (0.0106)	0.0042 (0.0205)
Vancouver	-0.0084 * (0.0056)	0.0017 (0.0103)	-0.0156 * (0.0078)	-0.0140 (0.0095)	0.0052 (0.0252)
Rest of BC	0.0012 (0.0062)	-0.0089 (0.0050)	0.0099 (0.0127)	-0.0065 (0.0101)	0.0125 (0.0250)
The Territories	0.0228 ** (0.0154)	0.0058 (0.0200)	0.0136 (0.0224)	0.0657 *** (0.0391)	
Observed P	0.0374	0.0196	0.0381	0.0442	0.0508
Predicted P	0.0287	0.0124	0.0284	0.0363	0.0389

N	26458	5811	8710	9278	2639
Pseudo R ²	0.0777	0.0988	0.0887	0.0643	0.0873

Significance indicated by * for 1%, ** for 5% and *** for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table 2.7: Probit Results examining the probability of working as a head nurse or supervisor for the Full Sample of Canadian male nurses (Standard errors in parenthesis)

	dF/dx	dF/dx	dF/dx
Potential Experience	0.0032 *** (0.0013)	0.0035 *** (0.0014)	0.0031 *** (0.0012)
Potential Experience squared	-0.0001 ** (0.0000)	-0.0001 ** (0.0000)	-0.0001 ** (0.0000)
Other certification below Bachelors	0.0218 ** (0.0147)	0.0257 ** (0.0162)	0.0167 * (0.0151)
Bachelors degree	0.0446 *** (0.0139)	0.0432 *** (0.0137)	0.0467 *** (0.0155)
Higher degree	0.0325 (0.0379)	0.0356 (0.0405)	0.0511 * (0.0500)
Nursing Homes	0.0452 *** (0.0199)		0.0397 *** (0.0248)
Offices	0.0143 (0.0399)		0.0977 * (0.1169)
Other health care facilities	-0.0142 ** (0.0047)		-0.0146 * (0.0065)
Other certification below Bachelors * Nursing Homes			0.0167 (0.0367)
Other certification below Bachelors * Other health care facilities			0.0737 (0.1099)
Bachelors degree * Nursing Homes			0.0043 (0.0213)
Bachelors degree * Other health care facilities			-0.0075 (0.0152)
French	-0.0168 * (0.0118)	-0.0212 * (0.0139)	-0.0189 ** (0.0116)
Other	0.0076 (0.0169)	0.0004 (0.0150)	0.0028 (0.0133)
Visible minority	0.0113 (0.0230)	0.0078 (0.0226)	0.0132 (0.0236)
Married or common law	0.0074 (0.0113)	0.0113 (0.0134)	0.0065 (0.0107)
Separated, divorced or widowed	0.0105 * (0.0066)	0.0111 * (0.0073)	0.0104 * (0.0065)
Rural	0.0080 (0.0093)	0.0046 (0.0094)	0.0095 (0.0096)
Town	0.0085 (0.0082)	0.0077 (0.0088)	0.0091 (0.0081)
The Atlantic Provinces	0.9778 *** (0.0138)	0.9739 *** (0.0149)	0.9846 *** (0.0081)
Montreal	0.9945 *** (0.0039)	0.9923 *** (0.0027)	0.9968 *** (0.0011)
Rest of Quebec	0.9697 *** (0.0207)	0.9636 *** (0.0057)	0.9812 *** (0.0034)
Rest of Ontario	0.9168 *** (0.0445)	0.9012 *** (0.0430)	0.9399 *** (0.0286)
Manitoba	0.9675 *** (0.0243)	0.9666 *** (0.0217)	0.9771 *** (0.0154)
Saskatchewan	0.9854 *** (0.0034)	0.9820 *** (0.0054)	0.9875 *** (0.0029)
Alberta	0.9806 *** (0.0104)	0.9773 *** (0.0119)	0.9861 *** (0.0064)
Vancouver	0.9865 *** (0.0045)	0.9811 *** (0.0083)	0.9887 *** (0.0032)
Rest of BC	0.9793 *** (0.0110)	0.9734 *** (0.0146)	0.9847 *** (0.0073)
Observed P	0.0461	0.0461	0.0466
Predicted P	0.0177	0.0206	0.0171
N	1452	1452	1437
Pseudo R ²	0.1377	0.1096	0.1468

Significance indicated by * for 1%, ** for 5% and *** for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Appendix A2

For each of the tables listed in this appendix the reference groups are RN certification, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table A2.1: Regression results for the Mincer earnings equation including place of employment variables for the sample of Canadian women working as nurses (robust standard errors in parenthesis)

	Full Sample	Less than 35	35 - 44	45 - 54	55 - 65
Constant	2.8323 *** (0.0251)	2.5594 *** (0.0531)	3.0405 *** (0.1895)	3.2463 *** (0.3435)	3.2934 ** (1.8060)
Potential Experience	0.0252 *** (0.0019)	0.0683 *** (0.0116)	0.0246 (0.0210)	-0.0013 (0.0250)	0.0124 (0.0984)
Potential Experience squared	-0.0004 *** (0.0000)	-0.0031 *** (0.0008)	-0.0008 * (0.0006)	0.0001 (0.0005)	-0.0003 (0.0013)
Other certification below Bachelors	0.0280 ** (0.0142)	0.1211 *** (0.0380)	-0.0142 (0.0270)	0.0155 (0.0199)	0.0058 (0.0415)
Bachelors degree	0.1278 *** (0.0106)	0.1626 *** (0.0233)	0.0902 *** (0.0188)	0.1234 *** (0.0186)	0.0616 * (0.0440)
Higher degree	0.0959 *** (0.0324)	0.1241 * (0.0878)	0.0751 (0.0653)	0.0626 * (0.0452)	0.0199 (0.0705)
Childcare	0.0114 (0.0096)	0.0658 *** (0.0257)	0.0112 (0.0184)	-0.0119 (0.0129)	-0.0654 ** (0.0332)
French	0.0336 ** (0.0179)	0.0916 ** (0.0422)	0.0054 (0.0295)	0.0115 (0.0279)	0.1071 ** (0.0611)
Other	0.0273 (0.0243)	0.0120 (0.0512)	-0.0417 (0.0464)	0.0826 ** (0.0400)	0.1288 ** (0.0594)
Married or common law	-0.0005 (0.0159)	-0.0256 (0.0519)	-0.0126 (0.0292)	-0.0373 ** (0.0223)	-0.0794 * (0.0605)
Separated, divorced or widowed	0.0402 *** (0.0134)	0.0678 *** (0.0277)	0.0329 * (0.0225)	-0.0275 * (0.0211)	0.0037 (0.0575)
Nursing Homes	-0.1473 *** (0.0150)	-0.0957 ** (0.0417)	-0.1941 *** (0.0296)	-0.1404 *** (0.0211)	-0.1457 *** (0.0362)
Offices	-0.1947 *** (0.0208)	-0.0151 (0.0523)	-0.1792 *** (0.0375)	-0.2220 *** (0.0336)	-0.3154 *** (0.0509)
Other health care facilities	-0.0822 *** (0.0129)	-0.0339 (0.0305)	-0.0845 *** (0.0244)	-0.0986 *** (0.0189)	-0.1019 *** (0.0412)
Visible minority	-0.1421 *** (0.0304)	-0.1407 *** (0.0542)	-0.1246 ** (0.0575)	-0.0857 ** (0.0472)	-0.2815 *** (0.1104)
Rural	0.0012 (0.0115)	0.0239 (0.0303)	0.0072 (0.0189)	-0.0276 * (0.0176)	0.0050 (0.0369)
Town	-0.0151 * (0.0109)	-0.0205 (0.0292)	-0.0361 ** (0.0186)	-0.0078 (0.0159)	0.0135 (0.0366)
The Atlantic Provinces	-0.2262 *** (0.0210)	-0.2039 *** (0.0478)	-0.2651 *** (0.0366)	-0.2139 *** (0.0338)	-0.2245 *** (0.0726)
Montreal	-0.0621 *** (0.0261)	-0.0006 (0.0547)	-0.1250 *** (0.0473)	-0.0297 (0.0409)	-0.1367 * (0.0890)
Rest of Quebec	-0.0819 *** (0.0268)	-0.0301 (0.0627)	-0.0913 ** (0.0455)	-0.0622 * (0.0431)	-0.2594 *** (0.0913)
Rest of Ontario	-0.0243 * (0.0186)	-0.0126 (0.0436)	-0.0651 ** (0.0334)	0.0001 (0.0294)	-0.0404 (0.0535)
Manitoba	-0.1323 *** (0.0260)	-0.1011 * (0.0788)	-0.1780 *** (0.0401)	-0.1349 *** (0.0387)	-0.0854 (0.0692)
Saskatchewan	-0.0745 *** (0.0243)	0.0462 (0.0563)	-0.1036 *** (0.0411)	-0.1144 *** (0.0399)	-0.0781 (0.0755)
Alberta	-0.0552 *** (0.0217)	0.0095 (0.0525)	-0.0917 *** (0.0388)	-0.0924 *** (0.0338)	-0.0230 (0.0593)
Vancouver	-0.0427 * (0.0258)	0.0625 (0.0491)	-0.0704 * (0.0481)	-0.0782 ** (0.0461)	-0.0962 * (0.0732)
Rest of BC	-0.0426 ** (0.0239)	0.0252 (0.0648)	-0.0736 ** (0.0429)	-0.0539 * (0.0359)	-0.0760 (0.0681)
The Territories	0.1938 *** (0.0365)	0.3130 *** (0.0825)	0.1285 ** (0.0602)	0.1753 *** (0.0549)	0.1779 * (0.1187)
N	26458	5811	8710	9278	2659
R ²	0.0373	0.0419	0.0277	0.0309	0.0395

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table A2.2: Regression results for the Mincer earnings equation including place of employment variables for the sample of Canadian men working as nurses (robust standard errors in parenthesis)

	Full Sample		Less than 35		35 - 44		45 - 54	
Constant	2.7885 ***	(0.1073)	2.8224 ***	(0.2157)	2.6126 ***	(0.3391)	3.6894 **	(1.6063)
Potential Experience	0.0170 **	(0.0075)	0.0217	(0.0431)	0.0500	(0.0404)	-0.0296	(0.1154)
Potential Experience squared	-0.0001	(0.0002)	-0.0004	(0.0035)	-0.0015 *	(0.0012)	0.0005	(0.0021)
Other certification below Bachelors	0.0545	(0.0499)	0.0605	(0.1019)	-0.0217	(0.0550)	-0.0106	(0.0812)
Bachelors degree	0.1321 ***	(0.0390)	0.1058 *	(0.0791)	0.0953 **	(0.0569)	0.0855 *	(0.0658)
Higher degree	-0.0542	(0.1983)	0.1118	(0.1345)	0.2097 ***	(0.0682)	-0.4663	(0.4315)
Childcare	0.0778 **	(0.0351)	0.1261 **	(0.0709)	0.0261	(0.0620)	0.1160 **	(0.0613)
French	0.0493	(0.0449)	-0.0047	(0.0836)	0.0472	(0.0693)	0.0518	(0.0944)
Other	0.0735	(0.0917)	-0.0212	(0.1954)	0.2227 *	(0.1356)	-0.0587	(0.1074)
Married or common law	-0.0502	(0.0503)	0.0985	(0.1301)	0.0099	(0.0599)	-0.1764 **	(0.1108)
Separated, divorced or widowed	-0.0251	(0.0424)	0.0210	(0.0700)	-0.0097	(0.0642)	-0.1180	(0.1003)
Nursing Homes	-0.0740 **	(0.0399)	-0.0870	(0.0894)	-0.1113 **	(0.0519)	-0.0265	(0.0976)
Offices	0.0660	(0.1098)	-0.0350	(0.1652)	0.1811	(0.1464)	0.0031	(0.1463)
Other health care facilities	0.0162	(0.0684)	0.0981	(0.0940)	-0.1519 **	(0.0913)	0.0532	(0.1207)
Visible minority	-0.0215	(0.0887)	-0.0409	(0.1501)	-0.0645	(0.1020)	0.1693	(0.1715)
Rural	0.0241	(0.0442)	0.0910	(0.1040)	0.0383	(0.0591)	-0.0701	(0.0699)
Town	0.0227	(0.0398)	0.1251 *	(0.0920)	0.0160	(0.0452)	-0.0908	(0.0754)
The Atlantic Provinces	-0.0678	(0.1003)	-0.2788	(0.2193)	-0.0619	(0.1359)	0.2269	(0.1868)
Montreal	0.0069	(0.1079)	-0.1341	(0.2198)	0.1773	(0.1536)	-0.1170	(0.1924)
Rest of Quebec	-0.0172	(0.1053)	-0.2304	(0.2474)	0.1340	(0.1556)	0.0189	(0.1638)
Rest of Ontario	0.0438	(0.0958)	-0.0479	(0.2018)	0.1205	(0.1393)	0.0339	(0.1443)
Manitoba	-0.0294	(0.1042)	-0.2623	(0.2230)	0.1297	(0.1378)	-0.0177	(0.1632)
Saskatchewan	0.1140	(0.1595)	0.0860	(0.3331)	0.2620 *	(0.1945)	-0.2316	(0.2763)
Alberta	0.0351	(0.1071)	0.0630	(0.2158)	0.1355	(0.1597)	-0.2302	(0.1849)
Vancouver	0.0044	(0.1062)	-0.0542	(0.2451)	0.1659	(0.1388)	-0.1778	(0.2206)
Rest of BC	0.0227	(0.1115)	0.0798	(0.2626)	0.1633	(0.1437)	-0.1138	(0.1805)
The Territories	0.1666	(0.1458)	0.0185	(0.2611)	0.0789	(0.2047)	0.3288	(0.3176)
N	1476		459		581		383	
R ²	0.0434		0.0545		0.0531		0.0854	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Appendix B2

Table B2.1a: Regression results for the Mincer earnings equation excluding place of employment variables for the sample of Canadian women working as nurses (robust standard errors in parenthesis)

	Full Sample		Less than 35		35 - 44		45 - 54		55 - 65	
Constant	2.8025 ***	(0.0249)	2.5499 ***	(0.0530)	3.0088 ***	(0.1896)	3.2057 ***	(0.3440)	3.3295 **	(1.8220)
Potential Experience	0.0262 ***	(0.0019)	0.0665 ***	(0.0114)	0.0258	(0.0210)	0.0007	(0.0251)	0.0096	(0.0994)
Potential Experience squared	-0.0005 ***	(0.0000)	-0.0030 ***	(0.0008)	-0.0008 *	(0.0006)	0.0000	(0.0005)	-0.0003	(0.0014)
Other certification below Bachelors	0.0227 *	(0.0142)	0.1226 ***	(0.0380)	-0.0168	(0.0269)	0.0036	(0.0200)	0.0007	(0.0414)
Bachelors degree	0.1204 ***	(0.0103)	0.1655 ***	(0.0232)	0.0791 ***	(0.0181)	0.1055 ***	(0.0179)	0.0610 *	(0.0443)
Higher degree	0.0855 ***	(0.0322)	0.1209 *	(0.0868)	0.0691	(0.0650)	0.0472	(0.0444)	0.0068	(0.0721)
Childcare	0.0102	(0.0096)	0.0644 ***	(0.0257)	0.0132	(0.0184)	-0.0135	(0.0130)	-0.0638 **	(0.0335)
French	0.0318 **	(0.0180)	0.0926 **	(0.0421)	0.0001	(0.0298)	0.0088	(0.0282)	0.1096 **	(0.0617)
Other	0.0277	(0.0243)	0.0146	(0.0512)	-0.0472	(0.0466)	0.0809 **	(0.0402)	0.1371 **	(0.0594)
Married or common law	-0.0049	(0.0159)	-0.0274	(0.0520)	-0.0199	(0.0293)	-0.0457 ***	(0.0223)	-0.0733	(0.0610)
Separated, divorced or widowed	0.0346 ***	(0.0134)	0.0669 ***	(0.0277)	0.0286	(0.0226)	-0.0398 **	(0.0211)	-0.0009	(0.0580)
Visible minority	-0.1462 ***	(0.0303)	-0.1411 ***	(0.0541)	-0.1301 **	(0.0575)	-0.0921 **	(0.0474)	-0.2878 ***	(0.1115)
Rural	-0.0096	(0.0115)	0.0158	(0.0302)	-0.0075	(0.0188)	-0.0368 **	(0.0176)	0.0058	(0.0369)
Town	-0.0219 **	(0.0110)	-0.0260	(0.0292)	-0.0434 **	(0.0188)	-0.0153	(0.0161)	0.0095	(0.0369)
The Atlantic Provinces	-0.2098 ***	(0.0210)	-0.1953 ***	(0.0472)	-0.2540 ***	(0.0367)	-0.1921 ***	(0.0340)	-0.2103 ***	(0.0727)
Montreal	-0.0517 **	(0.0262)	0.0019	(0.0544)	-0.1150 ***	(0.0475)	-0.0097	(0.0413)	-0.1460 *	(0.0891)
Rest of Quebec	-0.0660 ***	(0.0269)	-0.0249	(0.0625)	-0.0807 **	(0.0458)	-0.0345	(0.0434)	-0.2662 ***	(0.0914)
Rest of Ontario	-0.0228	(0.0187)	-0.0121	(0.0435)	-0.0653 **	(0.0337)	0.0065	(0.0297)	-0.0491	(0.0540)
Manitoba	-0.1221 ***	(0.0259)	-0.0975	(0.0785)	-0.1731 ***	(0.0403)	-0.1177 ***	(0.0386)	-0.0718	(0.0688)
Saskatchewan	-0.0725 ***	(0.0242)	0.0436	(0.0560)	-0.1061 ***	(0.0412)	-0.1108 ***	(0.0397)	-0.0705	(0.0761)
Alberta	-0.0420 **	(0.0217)	0.0132	(0.0522)	-0.0800 **	(0.0390)	-0.0726 **	(0.0341)	-0.0082	(0.0601)
Vancouver	-0.0257	(0.0259)	0.0676 *	(0.0488)	-0.0541	(0.0483)	-0.0600 *	(0.0462)	-0.0654	(0.0742)
Rest of BC	-0.0273	(0.0239)	0.0317	(0.0644)	-0.0608 *	(0.0431)	-0.0359	(0.0360)	-0.0543	(0.0695)
The Territories	0.2124 ***	(0.0365)	0.3276 ***	(0.0818)	0.1408 **	(0.0610)	0.1927 ***	(0.0546)	0.1928 **	(0.1154)
N	26458		5811		8710		9278		2659	
R ²	0.0297		0.0407		0.0184		0.0188		0.0213	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table B2.1b: Regression results for the Mincer earnings equation excluding place of employment variables for the sample of Canadian women working as nurses (Second columns for each model reports the percentage change in the coefficient from the dummy variable changing from zero to one)

	Full Sample		Less than 35		35 - 44		45 - 54		55 - 65	
Constant	2.8025 ***		2.5499 ***		3.0088 ***		3.2057 ***		3.3295 **	
Potential Experience	0.0262 ***	2.6513	0.0665 ***	6.8771	0.0258	2.6139	0.0007	0.0662	0.0096	0.9686
Potential Experience squared	-0.0005 ***	-0.0464	-0.0030 ***	-0.2957	-0.0008 *	-0.0848	0.0000	0.0009	-0.0003	-0.0332
Other certification below Bachelors	0.0227 *	2.2977	0.1226 ***	13.0456	-0.0168	-1.6699	0.0036	0.3604	0.0007	0.0732
Bachelors degree	0.1204 ***	12.8000	0.1655 ***	18.0010	0.0791 ***	8.2277	0.1055 ***	11.1278	0.0610 *	6.2901
Higher degree	0.0855 ***	8.9249	0.1209 *	12.8516	0.0691	7.1555	0.0472	4.8375	0.0068	0.6795
Childcare	0.0102	1.0226	0.0644 ***	6.6486	0.0132	1.3308	-0.0135	-1.3390	-0.0638 **	-6.1791
French	0.0318 **	3.2311	0.0926 **	9.7038	0.0001	0.0053	0.0088	0.8795	0.1096 **	11.5847
Other	0.0277	2.8138	0.0146	1.4752	-0.0472	-4.6110	0.0809 **	8.4219	0.1371 **	14.6999
Married or common law	-0.0049	-0.4845	-0.0274	-2.6984	-0.0199	-1.9701	-0.0457 ***	-4.4710	-0.0733	-7.0687
Separated, divorced or widowed	0.0346 ***	3.5176	0.0669 ***	6.9223	0.0286	2.8995	-0.0398 **	-3.9047	-0.0009	-0.0899
Visible minority	-0.1462 ***	-13.6020	-0.1411 ***	-13.1610	-0.1301 **	-12.1988	-0.0921 **	-8.7990	-0.2878 ***	-25.0068
Rural	-0.0096	-0.9573	0.0158	1.5893	-0.0075	-0.7452	-0.0368 **	-3.6112	0.0058	0.5850
Town	-0.0219 **	-2.1691	-0.0260	-2.5663	-0.0434 **	-4.2479	-0.0153	-1.5193	0.0095	0.9571
The Atlantic Provinces	-0.2098 ***	-18.9244	-0.1953 ***	-17.7418	-0.2540 ***	-22.4296	-0.1921 ***	-17.4741	-0.2103 ***	-18.9669
Montreal	-0.0517 **	-5.0368	0.0019	0.1949	-0.1150 ***	-10.8676	-0.0097	-0.9639	-0.1460 *	-13.5848
Rest of Quebec	-0.0660 ***	-6.3906	-0.0249	-2.4618	-0.0807 **	-7.7564	-0.0345	-3.3884	-0.2662 ***	-23.3716
Rest of Ontario	-0.0228	-2.2500	-0.0121	-1.2034	-0.0653 **	-6.3220	0.0065	0.6501	-0.0491	-4.7961
Manitoba	-0.1221 ***	-11.4956	-0.0975	-9.2904	-0.1731 ***	-15.8919	-0.1177 ***	-11.1072	-0.0718	-6.9298
Saskatchewan	-0.0725 ***	-6.9912	0.0436	4.4582	-0.1061 ***	-10.0630	-0.1108 ***	-10.4862	-0.0705	-6.8057
Alberta	-0.0420 **	-4.1107	0.0132	1.3328	-0.0800 **	-7.6910	-0.0726 **	-7.0019	-0.0082	-0.8119
Vancouver	-0.0257	-2.5418	0.0676 *	6.9973	-0.0541	-5.2689	-0.0600 *	-5.8271	-0.0654	-6.3300
Rest of BC	-0.0273	-2.6905	0.0317	3.2257	-0.0608 *	-5.8949	-0.0359	-3.5286	-0.0543	-5.2854
The Territories	0.2124 ***	23.6622	0.3276 ***	38.7649	0.1408 **	15.1213	0.1927 ***	21.2525	0.1928 **	21.2658
N	26458		5811		8710		9278		2659	
R ²	0.0297		0.0407		0.0184		0.0188		0.0213	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table B2.2a: Regression results for the Mincer earnings equation excluding place of employment variables for the sample of Canadian men working as nurses (robust standard errors in parenthesis)

	Full Sample		Less than 35		35 - 44		45 - 54	
Constant	2.7905 ***	(0.1073)	2.8140 ***	(0.2120)	2.6205 ***	(0.3412)	3.6181 ***	(1.5851)
Potential Experience	0.0171 **	(0.0075)	0.0212	(0.0431)	0.0471	(0.0405)	-0.0244	(0.1138)
Potential Experience squared	-0.0001	(0.0002)	-0.0003	(0.0035)	-0.0015	(0.0012)	0.0004	(0.0020)
Other certification below Bachelors	0.0559	(0.0497)	0.0722	(0.1008)	-0.0116	(0.0561)	-0.0113	(0.0807)
Bachelors degree	0.1353 ***	(0.0399)	0.1116 *	(0.0787)	0.0824 *	(0.0581)	0.0850 *	(0.0660)
Higher degree	-0.0531	(0.1979)	0.1213	(0.1325)	0.2073 ***	(0.0688)	-0.4641	(0.4300)
Childcare	0.0766 **	(0.0349)	0.1236 **	(0.0705)	0.0353	(0.0629)	0.1166 **	(0.0616)
French	0.0482	(0.0451)	-0.0126	(0.0836)	0.0479	(0.0660)	0.0497	(0.0945)
Other	0.0793	(0.0937)	-0.0076	(0.1936)	0.2577 **	(0.1539)	-0.0601	(0.1060)
Married or common law	-0.0512	(0.0497)	0.1019	(0.1292)	0.0001	(0.0602)	-0.1788 *	(0.1104)
Separated, divorced or widowed	-0.0238	(0.0422)	0.0275	(0.0693)	-0.0169	(0.0656)	-0.1204	(0.0996)
Visible minority	-0.0223	(0.0886)	-0.0385	(0.1486)	-0.0913	(0.0969)	0.1706	(0.1679)
Rural	0.0264	(0.0437)	0.1015	(0.1024)	0.0202	(0.0595)	-0.0708	(0.0686)
Town	0.0240	(0.0397)	0.1287 *	(0.0916)	0.0153	(0.0455)	-0.0935	(0.0756)
The Atlantic Provinces	-0.0778	(0.1009)	-0.2834 *	(0.2174)	-0.0475	(0.1436)	0.2315	(0.1858)
Montreal	0.0029	(0.1082)	-0.1117	(0.2156)	0.1639	(0.1539)	-0.1106	(0.1903)
Rest of Quebec	-0.0213	(0.1056)	-0.2227	(0.2428)	0.1239	(0.1556)	0.0293	(0.1652)
Rest of Ontario	0.0392	(0.0959)	-0.0432	(0.1990)	0.1217	(0.1419)	0.0412	(0.1470)
Manitoba	-0.0447	(0.1043)	-0.2575	(0.2201)	0.1077	(0.1415)	-0.0169	(0.1590)
Saskatchewan	0.1009	(0.1577)	0.0882	(0.3110)	0.2242	(0.1934)	-0.2266	(0.2824)
Alberta	0.0228	(0.1071)	0.0574	(0.2123)	0.1324	(0.1657)	-0.2274	(0.1817)
Vancouver	-0.0002	(0.1061)	-0.0443	(0.2416)	0.1458	(0.1436)	-0.1682	(0.2162)
Rest of BC	0.0102	(0.1116)	0.0789	(0.2590)	0.1527	(0.1497)	-0.1124	(0.1775)
The Territories	0.1616	(0.1459)	0.0382	(0.2604)	0.0759	(0.2104)	0.3284	(0.3147)
N	1476		459		581		383	
R ²	0.0421		0.0524		0.036		0.0846	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table B2.2b: Regression results for the Mincer earnings equation excluding place of employment variables for the sample of Canadian men working as nurses (Second columns for each model reports the percentage change in the coefficient from the dummy variable changing from zero to one)

	Full Sample		Less than 35		35 - 44		45 - 54	
Constant	2.7905 ***		2.8140 ***		2.6205 ***		3.6181 ***	
Potential Experience	0.0171 **	1.7278	0.0212	2.1386	0.0471	4.8275	-0.0244	-2.4104
Potential Experience squared	-0.0001	-0.0137	-0.0003	-0.0328	-0.0015	-0.1452	0.0004	0.0395
Other certification below Bachelors	0.0559	5.7540	0.0722	7.4849	-0.0116	-1.1504	-0.0113	-1.1242
Bachelors degree	0.1353 ***	14.4846	0.1116 *	11.8050	0.0824 *	8.5898	0.0850 *	8.8669
Higher degree	-0.0531	-5.1762	0.1213	12.9017	0.2073 ***	23.0347	-0.4641	-37.1325
Childcare	0.0766 **	7.9583	0.1236 **	13.1524	0.0353	3.5896	0.1166 **	12.3694
French	0.0482	4.9363	-0.0126	-1.2493	0.0479	4.9079	0.0497	5.0962
Other	0.0793	8.2513	-0.0076	-0.7584	0.2577 **	29.3926	-0.0601	-5.8355
Married or common law	-0.0512	-4.9921	0.1019	10.7309	0.0001	0.0116	-0.1788 *	-16.3700
Separated, divorced or widowed	-0.0238	-2.3533	0.0275	2.7899	-0.0169	-1.6800	-0.1204	-11.3406
Visible minority	-0.0223	-2.2025	-0.0385	-3.7727	-0.0913	-8.7259	0.1706	18.6020
Rural	0.0264	2.6713	0.1015	10.6789	0.0202	2.0427	-0.0708	-6.8316
Town	0.0240	2.4243	0.1287 *	13.7362	0.0153	1.5453	-0.0935	-8.9277
The Atlantic Provinces	-0.0778	-7.4879	-0.2834 *	-24.6797	-0.0475	-4.6410	0.2315	26.0442
Montreal	0.0029	0.2918	-0.1117	-10.5656	0.1639	17.8078	-0.1106	-10.4699
Rest of Quebec	-0.0213	-2.1116	-0.2227	-19.9638	0.1239	13.1930	0.0293	2.9772
Rest of Ontario	0.0392	4.0013	-0.0432	-4.2313	0.1217	12.9467	0.0412	4.2023
Manitoba	-0.0447	-4.3706	-0.2575	-22.6999	0.1077	11.3745	-0.0169	-1.6737
Saskatchewan	0.1009	10.6221	0.0882	9.2224	0.2242	25.1280	-0.2266	-20.2786
Alberta	0.0228	2.3078	0.0574	5.9132	0.1324	14.1589	-0.2274	-20.3410
Vancouver	-0.0002	-0.0171	-0.0443	-4.3371	0.1458	15.6930	-0.1682	-15.4844
Rest of BC	0.0102	1.0237	0.0789	8.2089	0.1527	16.4956	-0.1124	-10.6327
The Territories	0.1616	17.5424	0.0382	3.8891	0.0759	7.8882	0.3284	38.8749
N	1476		459		581		383	
R ²	0.0421		0.0524		0.036		0.0846	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table B2.3: Probit Results examining the probability of working as a head nurse or supervisor for the Female Samples excluding place of employment variables (Standard errors in parenthesis)

	Full Sample	< 35	35-44	45-54	55-65
	dF/dx	dF/dx	dF/dx	dF/dx	dF/dx
Potential Experience	0.0029 *** (0.0005)	0.0058 *** (0.0018)	-0.0003 (0.0042)	-0.0112 * (0.0071)	0.0206 (0.0257)
Potential Experience squared	0.0000 *** (0.0000)	-0.0003 *** (0.0001)	0.0000 (0.0001)	0.0002 ** (0.0001)	-0.0003 (0.0004)
Other certification below Bachelors	0.0182 *** (0.0045)	0.0086 * (0.0075)	0.0188 *** (0.0087)	0.0285 *** (0.0085)	0.0092 (0.0123)
Bachelors degree	0.0452 *** (0.0039)	0.0188 *** (0.0045)	0.0502 *** (0.0073)	0.0511 *** (0.0084)	0.0636 *** (0.0186)
Higher degree	0.1171 *** (0.0150)	0.0075 (0.0152)	0.1677 *** (0.0297)	0.1286 *** (0.0268)	0.0823 *** (0.0446)
French	0.0020 (0.0058)	0.0199 ** (0.0116)	-0.0069 (0.0086)	0.0024 (0.0104)	-0.0151 (0.0170)
Other	0.0075 * (0.0058)	0.0005 (0.0063)	0.0077 (0.0099)	0.0104 (0.0122)	0.0007 (0.0194)
Visible minority	-0.0091 * (0.0054)	-0.0121 ** (0.0037)	-0.0003 (0.0107)	-0.0013 (0.0143)	-0.0303 (0.0151)
Married or common law	0.0044 (0.0040)	0.0008 (0.0077)	0.0020 (0.0065)	0.0018 (0.0073)	0.0087 (0.0173)
Separated, divorced or widowed	0.0020 (0.0030)	0.0082 *** (0.0034)	-0.0044 (0.0051)	0.0043 (0.0060)	-0.0069 (0.0163)
Rural	0.0013 (0.0029)	0.0001 (0.0040)	-0.0025 (0.0048)	0.0039 (0.0056)	0.0046 (0.0115)
Town	0.0037 * (0.0028)	-0.0017 (0.0036)	0.0058 (0.0049)	0.0017 (0.0052)	0.0147 * (0.0111)
The Atlantic Provinces	0.0162 *** (0.0072)	0.0070 (0.0100)	0.0130 (0.0117)	0.0155 * (0.0130)	0.0574 ** (0.0359)
Montreal	0.0398 *** (0.0125)	0.0062 (0.0122)	0.0585 *** (0.0257)	0.0380 ** (0.0211)	0.0971 *** (0.0542)
Rest of Quebec	0.0254 *** (0.0108)	0.0001 (0.0098)	0.0496 *** (0.0242)	0.0204 * (0.0174)	0.0458 (0.0478)
Rest of Ontario	-0.0005 (0.0049)	0.0033 (0.0076)	-0.0029 (0.0083)	-0.0088 (0.0084)	0.0243 (0.0221)
Manitoba	-0.0007 (0.0066)	0.0068 (0.0125)	-0.0009 (0.0113)	-0.0070 (0.0108)	0.0129 (0.0304)
Saskatchewan	0.0201 *** (0.0093)	0.0042 (0.0119)	0.0247 ** (0.0172)	0.0106 (0.0146)	0.0708 ** (0.0441)
Alberta	0.0072 (0.0063)	0.0044 (0.0093)	0.0133 * (0.0120)	0.0020 (0.0108)	0.0065 (0.0225)
Vancouver	-0.0094 * (0.0056)	-0.0010 (0.0096)	-0.0166 * (0.0080)	-0.0139 (0.0098)	0.0047 (0.0264)
Rest of BC	0.0007 (0.0064)	-0.0108 (0.0049)	0.0097 (0.0129)	-0.0066 (0.0103)	0.0166 (0.0269)
The Territories	0.0216 ** (0.0153)	0.0002 (0.0159)	0.0111 (0.0215)	0.0655 *** (0.0392)	
Observed P	0.0374	0.0196	0.0381	0.0442	0.0508
Predicted P	0.0303	0.0140	0.0299	0.0374	0.0437
N	26458	5811	8710	9278	2639
Pseudo R ²	0.0619	0.0695	0.0751	0.0551	0.0505

Significance indicated by * for 1%, ** for 5% and *** for 10%. dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0. Reference groups are RN certification, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Appendix C2

In addition to reporting the various results for the OLS and Probit regressions, a series of interactions were examined to see if the relationship between various variables together have a significant influence on the earnings seen by nurses in Canada. The results of these regressions are mixed and they are not always robust across various specifications.

Tables C2.1b and C2.2b report the regression results for the female and male sample of nurses respectively when the various places of employment and levels of education are interacted together. Compared to a nurse who has an RN certification and who is working in a hospital, having a higher certification yields a wage benefit. This result is not as frequently significant in those who have other certification below the BN, but it is frequently seen to be beneficial for those with a BN or a higher certification. The interaction effects for the male sample of nurses are not as conclusive. For the most part the effects are not significant. In a few cases the results are significant, but the numbers are very large and the relatively small number of male nurses who have the two overlapping characteristics mostly drives this result.

Various interaction effects between place of employment and levels of education are also examined to see how the interaction between these two variables influences the probability of being a head nurse. Table C2.3 reports the results for the female sample and the third column of Table 2.7 reports the interaction results for the male sample. For the female sample it can be seen that the interaction between education and place of employment has a negative effect on the probability of working as a head nurse. Nurses working in hospitals have the highest probabilities of working as head nurses compared

to the other places of employment. This effect is somewhat to be expected since the majority of nurses work in hospitals and the highest opportunities for opportunities to work as head nurses will also arise in this location. There is only a small negative effect in the male sample that is seen in those who have a certification below the BN and are working in a nursing home. These men are 1.46% less likely to be working as s head nurse than a male RN working in a hospital.

Table C2.1a: Regression results for the Mincer earnings equation with various interactions for the sample of Canadian women working as nurses (robust standard errors in parenthesis)

	Full Sample		Less than 35		35 - 44		45 - 54		55 - 65	
Constant	2.8454 ***	(0.0252)	2.5662 ***	(0.0534)	3.0478 ***	(0.1899)	3.3379 ***	(0.3426)	3.2928 **	(1.8218)
Potential Experience	0.0246 ***	(0.0019)	0.0686 ***	(0.0116)	0.0246	(0.0210)	-0.0073	(0.0250)	0.0127	(0.0992)
Potential Experience squared	-0.0004 ***	(0.0000)	-0.0031 ***	(0.0008)	-0.0008 *	(0.0006)	0.0002	(0.0005)	-0.0003	(0.0014)
Other certification below Bachelors	0.0179	(0.0169)	0.1095 ***	(0.0445)	-0.0364	(0.0307)	0.0109	(0.0224)	-0.0123	(0.0580)
Bachelors degree	0.0966 ***	(0.0125)	0.1379 ***	(0.0263)	0.0636 ***	(0.0216)	0.0743 ***	(0.0226)	0.0620	(0.0557)
Higher degree	0.0430	(0.0443)	0.0813	(0.1385)	0.0160	(0.0788)	-0.0129	(0.0620)	0.0337	(0.0854)
Nursing Homes	-0.1688 ***	(0.0184)	-0.1251 **	(0.0542)	-0.2274 ***	(0.0366)	-0.1635 ***	(0.0250)	-0.1390 ***	(0.0441)
Offices	-0.2348 ***	(0.0241)	0.0119	(0.0660)	-0.2512 ***	(0.0427)	-0.2649 ***	(0.0380)	-0.3429 ***	(0.0585)
Other health care facilities	-0.1292 ***	(0.0200)	-0.1393 ***	(0.0511)	-0.1188 ***	(0.0382)	-0.1428 ***	(0.0291)	-0.1107 **	(0.0572)
Other certification below Bachelors * Nursing Homes	0.0385	(0.0424)	0.0449	(0.1142)	0.1850 *	(0.0787)	-0.0096	(0.0686)	-0.0164	(0.0963)
Other certification below Bachelors * Offices	0.0607	(0.0776)	-0.2379 *	(0.1591)	0.1382	(0.2010)	0.1304	(0.1200)	0.1119	(0.1535)
Other certification below Bachelors * Other health care facilities	0.0371	(0.0410)	0.1602 *	(0.1013)	0.0119	(0.0907)	0.0079	(0.0539)	0.0565	(0.1075)
Bachelors degree * Nursing Homes	0.0817 **	(0.0368)	0.1169 *	(0.0823)	0.0807	(0.0704)	0.1139 **	(0.0562)	-0.0156	(0.1113)
Bachelors degree * Offices	0.1838 ***	(0.0551)	-0.0779	(0.1184)	0.2835 ***	(0.0904)	0.1693 **	(0.0987)	0.1305	(0.1635)
Bachelors degree * Other health care facilities	0.1056 ***	(0.0279)	0.1755 ***	(0.0664)	0.0684 *	(0.0509)	0.1365 ***	(0.0409)	-0.0158	(0.1027)
Higher degree * Nursing Homes	0.1724 **	(0.0942)	0.0721	(0.2041)	0.1125	(0.2463)	0.4070 ***	(0.0938)	-0.0848	(0.2374)
Higher degree * Offices	0.2348 **	(0.1240)	-0.0172	(0.2460)	0.4127 *	(0.2534)	0.3242 **	(0.1903)	-0.0461	(0.2914)
Higher degree * Other health care facilities	0.1464 **	(0.0699)	0.2195 *	(0.1566)	0.2259*	(0.1662)	0.1118	(0.0942)	0.0196	(0.1359)
Childcare	0.0108	(0.0096)	0.0641 ***	(0.0257)	0.0119	(0.0184)	-0.0135	(0.0129)	-0.0646 **	(0.0334)
French	0.0329 **	(0.0179)	0.0896 **	(0.0424)	0.0048	(0.0297)	0.0128	(0.0280)	0.1062 **	(0.0613)
Other	0.0283	(0.0243)	0.0134	(0.0517)	-0.0428	(0.0464)	0.0862 **	(0.0401)	0.1290 **	(0.0596)
Married or common law	-0.0003	(0.0159)	-0.0230	(0.0521)	-0.0128	(0.0292)	-0.0372 **	(0.0223)	-0.0793 *	(0.0609)
Separated, divorced or widowed	0.0398 ***	(0.0134)	0.0670 ***	(0.0278)	0.0323 *	(0.0225)	-0.0279 *	(0.0211)	0.0029	(0.0577)
Visible minority	-0.1409 ***	(0.0304)	-0.1391 ***	(0.0542)	-0.1232 **	(0.0575)	-0.0860 **	(0.0472)	-0.2820 ***	(0.1108)
Rural	0.0013	(0.0115)	0.0227	(0.0303)	0.0081	(0.0189)	-0.0282 *	(0.0176)	0.0034	(0.0371)

Town	-0.0154 *	(0.0109)	-0.0215	(0.0293)	-0.0348 **	(0.0186)	-0.0089	(0.0159)	0.0143	(0.0366)
The Atlantic Provinces	-0.2243 ***	(0.0210)	-0.2003 ***	(0.0478)	-0.2650 ***	(0.0366)	-0.2098 ***	(0.0338)	-0.2239 ***	(0.0730)
Montreal	-0.0613 **	(0.0261)	0.0040	(0.0548)	-0.1246 ***	(0.0474)	-0.0280	(0.0409)	-0.1384 *	(0.0897)
Rest of Quebec	-0.0814 ***	(0.0268)	-0.0258	(0.0629)	-0.0930 **	(0.0456)	-0.0603 *	(0.0431)	-0.2593 ***	(0.0918)
Rest of Ontario	-0.0232	(0.0186)	-0.0075	(0.0437)	-0.0656 **	(0.0334)	0.0037	(0.0294)	-0.0410	(0.0539)
Manitoba	-0.1300 ***	(0.0260)	-0.0985	(0.0790)	-0.1767 ***	(0.0402)	-0.1303 ***	(0.0387)	-0.0859	(0.0699)
Saskatchewan	-0.0720 ***	(0.0242)	0.0491	(0.0565)	-0.1018 ***	(0.0411)	-0.1093 ***	(0.0397)	-0.0767	(0.0759)
Alberta	-0.0531 ***	(0.0216)	0.0136	(0.0526)	-0.0914 ***	(0.0387)	-0.0873 ***	(0.0338)	-0.0232	(0.0597)
Vancouver	-0.0412 *	(0.0258)	0.0645 *	(0.0492)	-0.0680 *	(0.0481)	-0.0747 *	(0.0458)	-0.0972 *	(0.0735)
Rest of BC	-0.0422 **	(0.0239)	0.0299	(0.0649)	-0.0768 **	(0.0429)	-0.0491 *	(0.0359)	-0.0746	(0.0684)
The Territories	0.1966 ***	(0.0364)	0.3226 ***	(0.0825)	0.1299 **	(0.0604)	0.1815 ***	(0.0548)	0.1814 *	(0.1195)
N	26458		5811		8710		9278		2659	
R ²	0.0384		0.0434		0.0298		0.0337		0.0402	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Hospitals* RN certification, Non-visible minority status, Urban and Toronto.

Table C2.1b: Regression results for the Mincer earnings equation with various interactions for the sample of Canadian women working as nurses (Second columns for each model reports the percentage change in the coefficient from the dummy variable changing from zero to one)

	Full Sample		Less than 35		35 - 44		45 - 54		55 - 65	
Constant	2.8454 ***		2.5662 ***		3.0478 ***		3.3379 ***		3.2928 **	
Potential Experience	0.0246 ***	2.4955	0.0686 ***	7.0996	0.0246	2.4874	-0.0073	-0.7302	0.0127	1.2803
Potential Experience squared	-0.0004 ***	-0.0409	-0.0031 ***	-0.3109	-0.0008 *	-0.0787	0.0002	0.0179	-0.0003	-0.0332
Other certification below Bachelors	0.0179	1.8085	0.1095 ***	11.5704	-0.0364	-3.5778	0.0109	1.0932	-0.0123	-1.2195
Bachelors degree	0.0966 ***	10.1381	0.1379 ***	14.7901	0.0636 ***	6.5628	0.0743 ***	7.7107	0.0620	6.3973
Higher degree	0.0430	4.3950	0.0813	8.4704	0.0160	1.6128	-0.0129	-1.2806	0.0337	3.4237
Nursing Homes	-0.1688 ***	-15.5303	-0.1251 **	-11.7589	-0.2274 ***	-20.3431	-0.1635 ***	-15.0829	-0.1390 ***	-12.9778
Offices	-0.2348 ***	-20.9238	0.0119	1.1956	-0.2512 ***	-22.2154	-0.2649 ***	-23.2687	-0.3429 ***	-29.0256
Other health care facilities	-0.1292 ***	-12.1215	-0.1393 ***	-12.9999	-0.1188 ***	-11.2050	-0.1428 ***	-13.3049	-0.1107 **	-10.4778
Other certification below Bachelors * Nursing Homes	0.0385	3.9206	0.0449	4.5937	0.1850 *	20.3215	-0.0096	-0.9505	-0.0164	-1.6227
Other certification below Bachelors * Offices	0.0607	6.2630	-0.2379 *	-21.1693	0.1382	14.8211	0.1304	13.9334	0.1119	11.8364
Other certification below Bachelors * Other health care facilities	0.0371	3.7785	0.1602 *	17.3761	0.0119	1.1961	0.0079	0.7919	0.0565	5.8170
Bachelors degree * Nursing Homes	0.0817 **	8.5167	0.1169 *	12.4029	0.0807	8.4075	0.1139 **	12.0625	-0.0156	-1.5512
Bachelors degree * Offices	0.1838 ***	20.1775	-0.0779	-7.4971	0.2835 ***	32.7833	0.1693 **	18.4510	0.1305	13.9404
Bachelors degree * Other health care facilities	0.1056 ***	11.1365	0.1755 ***	19.1879	0.0684 *	7.0828	0.1365 ***	14.6234	-0.0158	-1.5669
Higher degree * Nursing Homes	0.1724 **	18.8152	0.0721	7.4746	0.1125	11.9097	0.4070 ***	50.2355	-0.0848	-8.1330
Higher degree * Offices	0.2348 **	26.4657	-0.0172	-1.7059	0.4127 *	51.0879	0.3242 **	38.2941	-0.0461	-4.5096
Higher degree * Other health care facilities	0.1464 **	15.7619	0.2195 *	24.5402	0.2259*	25.3509	0.1118	11.8322	0.0196	1.9756
Childcare	0.0108	1.0812	0.0641 ***	6.6187	0.0119	1.1986	-0.0135	-1.3436	-0.0646 **	-6.2517
French	0.0329 **	3.3453	0.0896 **	9.3764	0.0048	0.4852	0.0128	1.2836	0.1062 **	11.2035
Other	0.0283	2.8706	0.0134	1.3511	-0.0428	-4.1851	0.0862 **	9.0040	0.1290 **	13.7694
Married or common law	-0.0003	-0.0326	-0.0230	-2.2740	-0.0128	-1.2726	-0.0372 **	-3.6503	-0.0793 *	-7.6222
Separated, divorced or widowed	0.0398 ***	4.0599	0.0670 ***	6.9277	0.0323 *	3.2783	-0.0279 *	-2.7482	0.0029	0.2937
Visible minority	-0.1409 ***	-13.1428	-0.1391 ***	-12.9821	-0.1232 **	-11.5949	-0.0860 **	-8.2401	-0.2820 ***	-24.5733
Rural	0.0013	0.1343	0.0227	2.2987	0.0081	0.8093	-0.0282 *	-2.7816	0.0034	0.3427

Town	-0.0154 *	-1.5275	-0.0215	-2.1240	-0.0348 **	-3.4180	-0.0089	-0.8883	0.0143	1.4437
The Atlantic Provinces	-0.2243 ***	-20.0916	-0.2003 ***	-18.1480	-0.2650 ***	-23.2798	-0.2098 ***	-18.9285	-0.2239 ***	-20.0620
Montreal	-0.0613 **	-5.9438	0.0040	0.4049	-0.1246 ***	-11.7131	-0.0280	-2.7629	-0.1384 *	-12.9221
Rest of Quebec	-0.0814 ***	-7.8136	-0.0258	-2.5433	-0.0930 **	-8.8772	-0.0603 *	-5.8498	-0.2593 ***	-22.8379
Rest of Ontario	-0.0232	-2.2913	-0.0075	-0.7509	-0.0656 **	-6.3501	0.0037	0.3673	-0.0410	-4.0164
Manitoba	-0.1300 ***	-12.1948	-0.0985	-9.3770	-0.1767 ***	-16.1943	-0.1303 ***	-12.2133	-0.0859	-8.2326
Saskatchewan	-0.0720 ***	-6.9478	0.0491	5.0331	-0.1018 ***	-9.6748	-0.1093 ***	-10.3554	-0.0767	-7.3848
Alberta	-0.0531 ***	-5.1758	0.0136	1.3701	-0.0914 ***	-8.7353	-0.0873 ***	-8.3572	-0.0232	-2.2965
Vancouver	-0.0412 *	-4.0391	0.0645 *	6.6678	-0.0680 *	-6.5729	-0.0747 *	-7.1969	-0.0972 *	-9.2586
Rest of BC	-0.0422 **	-4.1278	0.0299	3.0364	-0.0768 **	-7.3913	-0.0491 *	-4.7921	-0.0746	-7.1884
The Territories	0.1966 ***	21.7265	0.3226 ***	38.0708	0.1299 **	13.8723	0.1815 ***	19.9023	0.1814 *	19.8846
N	26458		5811		8710		9278		2659	
R ²	0.0384		0.0434		0.0298		0.0337		0.0402	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Hospitals* RN certification, Non-visible minority status, Urban and Toronto.

Table C2.2a: Regression results for the Mincer earnings equation with various interactions for the sample of Canadian men working as nurses (robust standard errors in parenthesis)

	Full Sample		Less than 35		35 - 44		45 - 54	
Constant	2.7956 ***	(0.1065)	2.8347 ***	(0.2168)	2.5223 ***	(0.3491)	3.3390 **	(1.8283)
Potential Experience	0.0167 ***	(0.0075)	0.0207	(0.0444)	0.0564 *	(0.0415)	-0.0020	(0.1309)
Potential Experience squared	-0.0001	(0.0002)	-0.0003	(0.0037)	-0.0017 *	(0.0012)	0.0000	(0.0023)
Other certification below Bachelors	0.0644	(0.0595)	0.0552	(0.1230)	0.0179	(0.0561)	-0.0499	(0.1013)
Bachelors degree	0.1057 ***	(0.0399)	0.1022	(0.0911)	0.0767 **	(0.0461)	0.0854	(0.0789)
Higher degree	-0.1424	(0.2430)	0.1102	(0.1373)	0.1555 **	(0.0790)	-0.5285	(0.4800)
Nursing Homes	-0.0737 *	(0.0520)	-0.0499	(0.1139)	-0.0642	(0.0661)	-0.0696	(0.1371)
Offices	-0.0271	(0.0774)	-0.1933 *	(0.1499)	0.0075	(0.1084)	0.0149	(0.2087)
Other health care facilities	-0.0368	(0.0794)	0.0440	(0.1225)	-0.1582 *	(0.1151)	0.0144	(0.1639)
Other certification below Bachelors * Nursing Homes	-0.0317	(0.1001)	-0.1159	(0.2419)	-0.2263 **	(0.1244)	0.2348	(0.1877)
Other certification below Bachelors * Offices	0.0746	(0.1369)	0.4741 **	(0.2553)	0.0001	(0.2037)	0.1473	(0.2542)
Other certification below Bachelors * Other health care facilities	-0.1066	(0.1568)	0.0515	(0.2125)	-0.2872	(0.3455)	0.1482	(0.2206)
Bachelors degree * Nursing Homes	-0.0424	(0.0905)	-0.1441	(0.1572)	-0.1251	(0.1389)	-0.0346	(0.1945)
Bachelors degree * Offices	0.2096	(0.4326)			0.6352	(0.5142)	-0.2238	(0.2387)
Bachelors degree * Other health care facilities	0.2152	(0.1758)	0.1625	(0.1792)	0.0792	(0.2263)	0.0432	(0.2511)
Higher degree * Nursing Homes	0.3691 *	(0.2472)			-0.0341	(0.1584)	0.5694 *	(0.4363)
Higher degree * Offices	0.7784 ***	(0.2550)			0.3400 **	(0.1614)		
Higher degree * Other health care facilities	0.3667 *	(0.2735)			0.3587 **	(0.2075)	0.4386	(0.5182)
Childcare	0.0761 **	(0.0353)	0.1238 **	(0.0732)	0.0231	(0.0645)	0.1192 **	(0.0643)
French	0.0489	(0.0457)	-0.0055	(0.0843)	0.0447	(0.0703)	0.0558	(0.0962)
Other	0.0671	(0.0868)	-0.0392	(0.1990)	0.1802 *	(0.1118)	-0.0643	(0.1078)
Married or common law	-0.0487	(0.0504)	0.0995	(0.1310)	0.0215	(0.0634)	-0.1831 *	(0.1142)
Separated, divorced or widowed	-0.0243	(0.0427)	0.0187	(0.0709)	-0.0030	(0.0657)	-0.1156	(0.1038)
Visible minority	-0.0269	(0.0894)	-0.0489	(0.1548)	-0.0790	(0.1027)	0.1763	(0.1775)
Rural	0.0169	(0.0445)	0.0938	(0.1051)	0.0280	(0.0610)	-0.0746	(0.0704)

Town	0.0204	(0.0402)	0.1345 *	(0.0940)	0.0100	(0.0458)	-0.0983	(0.0784)
The Atlantic Provinces	-0.0569	(0.1000)	-0.2950 *	(0.2241)	-0.0187	(0.1386)	0.2085	(0.1875)
Montreal	0.0081	(0.1061)	-0.1430	(0.2225)	0.2164	(0.1546)	-0.1247	(0.1969)
Rest of Quebec	-0.0118	(0.1049)	-0.2420	(0.2497)	0.1704	(0.1558)	0.0115	(0.1695)
Rest of Ontario	0.0473	(0.0947)	-0.0555	(0.2026)	0.1574	(0.1402)	0.0265	(0.1503)
Manitoba	-0.0213	(0.1032)	-0.2676	(0.2254)	0.1726	(0.1394)	-0.0229	(0.1710)
Saskatchewan	0.1074	(0.1607)	0.0653	(0.3387)	0.2769 *	(0.2036)	-0.2317	(0.2720)
Alberta	0.0413	(0.1058)	0.0548	(0.2178)	0.1907	(0.1563)	-0.2254	(0.1949)
Vancouver	0.0087	(0.1059)	-0.0570	(0.2476)	0.2079 *	(0.1404)	-0.1670	(0.2291)
Rest of BC	0.0326	(0.1112)	0.0803	(0.2674)	0.1965 *	(0.1464)	-0.1089	(0.1903)
The Territories	0.1792	(0.1445)	0.0004	(0.2609)	0.1702	(0.2216)	0.3481	(0.3138)
N	1476		459		581		383	
R ²	0.0478		0.0561		0.0647		0.0905	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Hospitals* RN certification, Non-visible minority status, Urban and Toronto.

Table C2.2b: Regression results for the Mincer earnings equation with various interactions for the sample of Canadian men working as nurses (Second columns for each model reports the percentage change in the coefficient from the dummy variable changing from zero to one)

	Full Sample		Less than 35		35 - 44		45 - 54	
Constant	2.7956 ***		2.8347 ***		2.5223 ***		3.3390 **	
Potential Experience	0.0167 ***	1.6826	0.0207	2.0946	0.0564 *	5.8007	-0.0020	-0.1976
Potential Experience squared	-0.0001	-0.0123	-0.0003	-0.0277	-0.0017 *	-0.1717	0.0000	-0.0028
Other certification below Bachelors	0.0644	6.6561	0.0552	5.6786	0.0179	1.8083	-0.0499	-4.8661
Bachelors degree	0.1057 ***	11.1451	0.1022	10.7642	0.0767 **	7.9683	0.0854	8.9132
Higher degree	-0.1424	-13.2731	0.1102	11.6523	0.1555 **	16.8193	-0.5285	-41.0528
Nursing Homes	-0.0737 *	-7.1016	-0.0499	-4.8652	-0.0642	-6.2170	-0.0696	-6.7201
Offices	-0.0271	-2.6766	-0.1933 *	-17.5785	0.0075	0.7496	0.0149	1.5011
Other health care facilities	-0.0368	-3.6117	0.0440	4.4934	-0.1582 *	-14.6312	0.0144	1.4508
Other certification below Bachelors * Nursing Homes	-0.0317	-3.1201	-0.1159	-10.9413	-0.2263 **	-20.2490	0.2348	26.4613
Other certification below Bachelors * Offices	0.0746	7.7452	0.4741 **	60.6611	0.0001	0.0064	0.1473	15.8663
Other certification below Bachelors * Other health care facilities	-0.1066	-10.1089	0.0515	5.2800	-0.2872	-24.9604	0.1482	15.9744
Bachelors degree * Nursing Homes	-0.0424	-4.1502	-0.1441	-13.4188	-0.1251	-11.7634	-0.0346	-3.3983
Bachelors degree * Offices	0.2096	23.3206			0.6352	88.7362	-0.2238	-20.0520
Bachelors degree * Other health care facilities	0.2152	24.0108	0.1625	17.6397	0.0792	8.2472	0.0432	4.4199
Higher degree * Nursing Homes	0.3691 *	44.6450			-0.0341	-3.3507	0.5694 *	76.7218
Higher degree * Offices	0.7784 ***	117.7886			0.3400 **	40.4990		
Higher degree * Other health care facilities	0.3667 *	44.2922			0.3587 **	43.1480	0.4386	55.0533
Childcare	0.0761 **	7.9091	0.1238 **	13.1809	0.0231	2.3373	0.1192 **	12.6552
French	0.0489	5.0089	-0.0055	-0.5464	0.0447	4.5700	0.0558	5.7438
Other	0.0671	6.9360	-0.0392	-3.8466	0.1802 *	19.7471	-0.0643	-6.2277
Married or common law	-0.0487	-4.7554	0.0995	10.4586	0.0215	2.1702	-0.1831 *	-16.7336
Separated, divorced or widowed	-0.0243	-2.4038	0.0187	1.8835	-0.0030	-0.2968	-0.1156	-10.9208
Visible minority	-0.0269	-2.6525	-0.0489	-4.7694	-0.0790	-7.5980	0.1763	19.2749
Rural	0.0169	1.7035	0.0938	9.8391	0.0280	2.8429	-0.0746	-7.1919

Town	0.0204	2.0643	0.1345 *	14.4006	0.0100	1.0074	-0.0983	-9.3650
The Atlantic Provinces	-0.0569	-5.5297	-0.2950 *	-25.5472	-0.0187	-1.8559	0.2085	23.1815
Montreal	0.0081	0.8126	-0.1430	-13.3283	0.2164	24.1595	-0.1247	-11.7255
Rest of Quebec	-0.0118	-1.1682	-0.2420	-21.4927	0.1704	18.5828	0.0115	1.1521
Rest of Ontario	0.0473	4.8436	-0.0555	-5.3982	0.1574	17.0476	0.0265	2.6855
Manitoba	-0.0213	-2.1044	-0.2676	-23.4823	0.1726	18.8352	-0.0229	-2.2674
Saskatchewan	0.1074	11.3352	0.0653	6.7448	0.2769 *	31.9072	-0.2317	-20.6832
Alberta	0.0413	4.2193	0.0548	5.6298	0.1907	21.0037	-0.2254	-20.1805
Vancouver	0.0087	0.8700	-0.0570	-5.5399	0.2079 *	23.1108	-0.1670	-15.3817
Rest of BC	0.0326	3.3128	0.0803	8.3586	0.1965 *	21.7140	-0.1089	-10.3215
The Territories	0.1792	19.6294	0.0004	0.0384	0.1702	18.5542	0.3481	41.6351
N	1476		459		581		383	
R ²	0.0478		0.0561		0.0647		0.0905	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Hospitals* RN certification, Non-visible minority status, Urban and Toronto.

Table C2.3: Probit Results examining the probability of working as a head nurse or supervisor for the Female Samples using interaction effects between education and place of employment (Standard errors in parenthesis)

	Full Sample	< 35	35-44	45-54	55-65
	dF/dx	dF/dx	dF/dx	dF/dx	dF/dx
Potential Experience	0.0032 *** (0.0004)	0.0045 *** (0.0016)	0.0000 (0.0040)	-0.0095 * (0.0070)	0.0205 (0.0228)
Potential Experience squared	-0.0001 *** (0.0000)	-0.0002 ** (0.0001)	0.0000 (0.0001)	0.0002 * (0.0001)	-0.0003 (0.0003)
Other certification below Bachelors	0.0180 *** (0.0057)	0.0058 (0.0085)	0.0248 *** (0.0109)	0.0287 *** (0.0107)	-0.0096 (0.0152)
Bachelors degree	0.0628 *** (0.0054)	0.0277 *** (0.0059)	0.0601 *** (0.0091)	0.0808 *** (0.0120)	0.1115 *** (0.0291)
Higher degree	0.1526 *** (0.0208)	0.0403 ** (0.0345)	0.2005 *** (0.0370)	0.1705 *** (0.0374)	0.0416 (0.0516)
Nursing Homes	0.0506 *** (0.0068)	0.0482 *** (0.0147)	0.0461 *** (0.0124)	0.0434 *** (0.0111)	0.0745 *** (0.0196)
Offices	0.0036 (0.0073)	0.0032 (0.0138)	0.0137 (0.0170)	0.0023 (0.0123)	-0.0052 (0.0181)
Other health care facilities	0.0270 *** (0.0070)	0.0225 *** (0.0140)	0.0129 (0.0120)	0.0372 *** (0.0126)	0.0401 ** (0.0221)
Other certification below Bachelors * Nursing Homes	0.0114 * (0.0100)	0.0020 (0.0132)	-0.0007 (0.0150)	0.0220 * (0.0204)	0.0627 ** (0.0504)
Other certification below Bachelors * Offices	0.0022 (0.0164)	0.0575 (0.0854)	0.0109 (0.0464)	-0.0090 (0.0224)	0.0429 (0.0783)
Other certification below Bachelors * Other health care facilities	-0.0191 *** (0.0040)	0.0019 (0.0152)	-0.0256 ** (0.0042)	-0.0273 *** (0.0058)	-0.0014 (0.0276)
Bachelors degree * Nursing Homes	-0.0131 *** (0.0040)	-0.0059 (0.0039)	-0.0047 (0.0097)	-0.0241 *** (0.0058)	-0.0262 ** (0.0085)
Bachelors degree * Offices	-0.0122 (0.0080)	0.0036 (0.0198)	-0.0046 (0.0178)	-0.0314 ** (0.0057)	-0.0190 (0.0247)
Bachelors degree * Other health care facilities	-0.0242 *** (0.0020)	-0.0121 *** (0.0019)	-0.0181 ** (0.0059)	-0.0317 *** (0.0034)	-0.0361 *** (0.0051)
Higher degree * Nursing Homes	-0.0181 ** (0.0057)		-0.0187 (0.0102)	-0.0206 (0.0126)	0.0271 (0.0680)
Higher degree * Offices	-0.0229 * (0.0069)				0.1178 (0.1797)
Higher degree * Other health care facilities	-0.0214 *** (0.0035)		-0.0160 (0.0102)	-0.0283 *** (0.0056)	0.0098 (0.0534)
French	0.0003 (0.0054)	0.0187 ** (0.0113)	-0.0078 (0.0079)	-0.0010 (0.0094)	-0.0182 (0.0144)
Other	0.0059 (0.0054)	0.0020 (0.0060)	0.0068 (0.0094)	0.0069 (0.0112)	-0.0047 (0.0159)
Visible minority	-0.0082 * (0.0051)	-0.0104 ** (0.0029)	0.0001 (0.0104)	-0.0019 (0.0133)	-0.0234 (0.0151)
Married or common law	0.0032 (0.0037)	-0.0016 (0.0055)	0.0008 (0.0061)	0.0020 (0.0071)	0.0054 (0.0151)
Separated, divorced or widowed	0.0013 (0.0028)	0.0059 ** (0.0028)	-0.0044 (0.0049)	0.0043 (0.0058)	-0.0082 (0.0147)
Rural	0.0001 (0.0027)	-0.0013 (0.0034)	-0.0031 (0.0045)	0.0029 (0.0053)	-0.0004 (0.0097)
Town	0.0031 (0.0027)	-0.0020 (0.0030)	0.0054 (0.0047)	0.0012 (0.0050)	0.0134 * (0.0100)

The Atlantic Provinces	0.0133 *	(0.0067)	0.0086	(0.0096)	0.0112	(0.0110)	0.0121	(0.0121)	0.0404 **	(0.0305)
Montreal	0.0390 ***	(0.0122)	0.0061	(0.0112)	0.0611 ***	(0.0259)	0.0390 ***	(0.0209)	0.0820 ***	(0.0511)
Rest of Quebec	0.0261 ***	(0.0107)	0.0012	(0.0092)	0.0519 ***	(0.0241)	0.0229 *	(0.0173)	0.0457	(0.0479)
Rest of Ontario	-0.0014	(0.0045)	0.0031	(0.0066)	-0.0029	(0.0079)	-0.0094	(0.0079)	0.0197	(0.0195)
Manitoba	-0.0035	(0.0057)	0.0072	(0.0117)	-0.0027	(0.0103)	-0.0106	(0.0093)	0.0050	(0.0252)
Saskatchewan	0.0140 **	(0.0083)	0.0033	(0.0102)	0.0207 *	(0.0159)	0.0046	(0.0129)	0.0546 **	(0.0393)
Alberta	0.0063	(0.0059)	0.0052	(0.0085)	0.0141 *	(0.0118)	0.0003	(0.0101)	0.0046	(0.0200)
Vancouver	-0.0087 *	(0.0054)	0.0009	(0.0093)	-0.0152 *	(0.0078)	-0.0148 *	(0.0089)	0.0104	(0.0264)
Rest of BC	0.0003	(0.0060)	-0.0086	(0.0044)	0.0100	(0.0126)	-0.0079	(0.0095)	0.0168	(0.0255)
The Territories	0.0199 **	(0.0146)	0.0045	(0.0181)	0.0130	(0.0220)	0.0577 **	(0.0366)		
Observed P	0.0374		0.0198		0.0382		0.0442		0.0508	
Predicted P	0.0279		0.0115		0.0280		0.0351		0.0367	
N	26458		5763		8702		9269		2639	
Pseudo R ²	0.0841		0.1115		0.0924		0.0754		0.1037	

Significance indicated by * for 1%, ** for 5% and *** for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Hospitals* RN certification, Non-visible minority status, Urban and Toronto.

Chapter 3

An Analysis of the Labour Market for Immigrant Nurses in Canada

An Analysis of the Labour Market for Immigrant Nurses in Canada

3.1 Introduction and Motivation

The purpose of this paper is to analyze the labour market for immigrant nurses in Canada and to address two questions. Firstly, is there an earnings penalty associated with being a foreign born and educated nurse? If there is a difference in the recognition or market valuation of educational credentials for nurses trained in Canada and in other countries, then it is hypothesized that individuals with foreign nursing degrees will attain lower earnings than those with a Canadian nursing degree. If the educational credentials are equivalent, then there should be no wage differential seen between a Canadian and a foreign nursing degree. Secondly, is a foreign born and educated nurse equally likely or less likely to be employed in the nursing profession as a Canadian born nurse? If the educational credentials are equivalent and readily transferable, we should not see a difference in the probability of working as a nurse between those with foreign and domestic nursing credentials.

Educational credential recognition is a very important determinant of the occupations held by people with nursing training. In Canada, nursing is a regulated profession, meaning that no one can practice the profession without a valid Canadian license. Nurse licensing is done by the various provincial and territorial nursing associations that are organized under the umbrella association of the Canadian Nurses Association. Registered nurses are those individuals who have successfully completed an approved program for professional nursing, have passed a written Canadian nurse registration examination, have demonstrated a competence in nursing and have

demonstrated a competence in one or both of the official languages. Canadian and immigrant nurses alike must all have a valid license to practice nursing in Canada. However, it is frequently seen that foreign trained nurses have much lower rates of passing the exams. The number of internationally trained nurses who have attempted to write the licensing exam has been increasing significantly over the past several years as more people with nursing education immigrate to Canada (CNA, 2004). An internationally trained nurse who wishes to work as a nurse in Canada must apply to the Canadian provincial regulatory bodies. The regulatory bodies assess each applicant's professional qualifications, educational credentials, and language proficiency to determine a candidate's eligibility to write the Canadian nursing license exam. This can take up to 18 months to process (CNA, 2004). Of those who apply to write the licensing exam, about 35% met the educational and language requirements to be eligible to write the Canadian Registered Nurse Examination. Between 1998 and 2003, the average passing rate, given that the individual was eligible to write the exam, for foreign applicants was 58% as compared to 93% for Canadian applicants (CNA, 2004).

There is an extensive literature surrounding wages and education for nurses.¹⁶ Most of these studies focus on the returns to education for the various educational paths that can be selected by nurses and do not specifically examine foreign educational credentials. The conclusions that have been made regarding the labour market for nurses in the United States vary. Schumacher (1997) examines the returns to education for nurses who obtain a baccalaureate and find that they earn a higher wage than those who have a diploma. Menemeyer and Gaumer (1983) examine whether higher

¹⁶ See, for example, Botelho, Bland Jones and Kiker (1998), Menemeyer and Gaumer (1983), Nowak and Preston (2001) and Schumacher (1997).

credentials for a nurse command a premium in the marketplace in the United States and they find that there is no significant premium paid to nurses with higher educational credentials (with the exception of nurses who hold a Masters degree). Botelho, Bland Jones and Kiker (1998) compare wage profiles of registered nurses in the United States across three educational backgrounds. Their results suggest that the wage equations are sensitive to different specifications of labour market experience.

There is a large Canadian labour economics literature relating to immigrant and native born earnings differentials and credential recognition; this existing literature shows that immigrants in both Canada, and in other countries, initially have lower employment incomes than native born and native educated individuals.¹⁷ Studies by Frenette and Morissette (2003) and Aydemir and Skuterud (2004) examine the deterioration of entry earnings of immigrants in Canada. Aydemir and Skuterud (2004) find that declining returns to foreign education are not fully responsible for the decline in entry earnings of immigrants. They find that declining entry earnings of immigrants are explained by declining wage returns to foreign labour market experience. They also attribute this change to the shift away from the traditional European source countries to non-traditional sources and the resulting difference in the two official Canadian language abilities of new immigrants.

Li (2001) uses the 1996 Census Public Use Microdata File (PUMF) to compare earnings for a variety of groups of individuals based on where their education was received. He finds that immigrants' educational credentials carry a penalty when

¹⁷ See, for example, Alboim, Finnie and Meng (2005), Basran and Zong (1998), Boyd and Thomas (2001, 2002), Bratsberg and Ragan (2002), Ferrer and Riddell (2004), Friedberg (2000), McDade (1988), Reitz (2001) and Sweetman (2004).

compared to Canadians. Chapman and Iredale (1993) find that immigrants from non-English-speaking countries receive lower wage increments as a consequence of their foreign qualifications when compared to those with Australian qualifications. Ferrer and Riddell (2004) however find that the credentials of immigrants are valued in the Canadian labour market.

Credential recognition associated with specific professions is often described as a form of discrimination where restricted access to a trade or profession is frequently seen among those who are foreign born (Basran and Zong (1998) and McDade (1988)). It must be mentioned however that certification requirements are not necessarily discriminatory since certain restrictions can be viewed as essential. For example, in the nursing profession literacy and speaking ability in the official languages of Canada is necessary since their absence can endanger the health and safety of a patient.

This paper will be structured as follows: Section 2 will describe the data that will be used and it will introduce the theoretical model and the empirical specification that will be used; Section 3 will examine the summary statistics and present the regression results; and Section 4 will conclude with a discussion and implications.

3.2 Data and Methodology

3.2.1 The Data

This study uses data from the confidential master files of the 2001 Canadian Census on Individuals and, as described in Chapter 2, will examine those whose major field of study was nursing. Using a basic human capital model of wage determination, this paper examines the wages of those with a Canadian and those with a foreign

nursing degree. Using Census data inferences can be made regarding where an individual likely attained her education.¹⁸ It will be assumed that individuals who are born in Canada will have been educated in Canada. There may be a few cases of people who were born in Canada and attained their nursing education outside Canada but it is anticipated that this will be a very small number. It will also be assumed that people who immigrate to Canada before the age of 19 will have received their nursing education in Canada and these individuals will be treated as “native educated”. Individuals who immigrated to Canada after the age of 30 and hold at least one degree will be assumed to have received their nursing education in a country other than Canada and will be considered to be “foreign educated”.¹⁹ Those who immigrated to Canada between the ages of 19 and 30 and have at least one degree are considered to have a mixed education since it can not be as easily inferred where they received their education. These individuals may have received some of their education in Canada and some in their country of origin so it is not possible to infer where their education was received. Since their source of education cannot be determined it will be interesting to examine whether these nurses more closely resemble the Canadian or the foreign educated immigrant groups.

For the purposes of this study immigrants will be grouped into five general groups of origin: the United States, Australia and Western and Northern Europe (which will form the reference group when those not born in Canada are examined); Eastern

¹⁸ Only women will be examined in this paper as the sample of male immigrant nurses is relatively small.

¹⁹ The ages of 25 and 30 were both considered as a cutoff age for foreign educated registered nurses. Individuals who immigrate after the age of 30 are less likely to pursue further education compared to those who are under 25 years of age. An additional issue that was raised was the suggestion that people under the age of 25 will potentially have an easier time in finding employment compared to someone over 30. The regression results were examined using both 25 and 30 as the cutoff age and the results were found to be more conclusive using the cutoff age of 30 therefore age of 30 was used for this study.

and Southern Europe; Central and South America; Africa and the Caribbean; and Asia and India. Within this sample of foreign educated nurses, 66% of them list themselves as a visible minority and just over half of them (51%) list languages other than English or French as the language used at home. The results from Chapter 2 show that these two variables have a negative effect on the earnings of Canadian nurses and it is expected that this will have an effect on immigrant nurses as well. It is plausible that nurses who are fluent in English or French may be more likely to be promoted and therefore will have higher earnings, because individuals holding supervisory positions in particular may be called on to write reports or performance evaluations. Racial discrimination in hiring could possibly result in people who are of United States, Western or Northern European, or Australian descent being more likely to be promoted and therefore to earn higher wages and to have better outcomes than other visible minority groups. Coefficients on visible minority status, which remain statistically significant after controlling for language, education and other explanatory variables, can be interpreted as a measure of the extent of discrimination in the labour market.

Within a unionized environment, which has set pay scales for earnings, one should not expect to see a significant variation in these variables. Any variation that is seen can be partially driven by the locations where these nurses are employed. Those employed at nursing homes will see earnings lower than those in hospitals. Similarly, there will be some variation in pay seen amongst different nurses working within a hospital. There is expected to be a difference in pay seen by those who are working in various jobs within the same institution. Other factors can also underlie differences in pay seen by various individuals. Potential experience is another variable that can be

underestimated since it is derived from someone's age and years of schooling. There is a potential that this value can be overestimated for individuals who may not have been able to enter the nursing labour market as quickly or easily as others. Canadian experience, not foreign experience, is recognized under union agreements so the structure of wage determination in the nursing profession would lead us to expect a lower return to potential experience for foreign born or educated individuals.

It is anticipated that individuals who are educated in the United States, Australia and Western and Northern Europe will see wages closer to that which is seen in a nurse who is educated in Canada. This result is expected since immigrants from these regions have more similarities to Canadian nurses in terms of language and/or race. 38% of nurses who have emigrated from the United States, Western and Northern Europe and Australia speak languages other than English or French as the language used at home and only 2% report being a visible minority. Educational quality is deemed to be closely related to that which is seen in Canada and this should allow for easier credential recognition for immigrants from these regions. Until recently in Canada, nurses have had two main paths to human capital acquisition; these are the baccalaureate nurse (the BN designation) and community college based diploma nurse (the RN designation). The education of nurses in the United States, Australia and Western and Northern Europe is similar to that seen in Canada. Nurses in the United States have three basic paths for human capital accumulation; these include the two-year associate degree program, the three-year diploma program (equivalent to the Canadian RN designation), and the four-year baccalaureate program (equivalent to the

Canadian BN designation). The nursing training programs vary across Europe but mostly they involve either a diploma or baccalaureate nurse-training program.

Individuals from these regions are also similar in terms of broad racial categories as perceived by employees and employers. These countries are also similar in language with English and French being commonly used languages. Finally, there are historical and cultural ties between Canada and these countries that are also expected to have an influence on perceptions of employees and employers.

It is anticipated that nurses who are educated in Africa and the Caribbean will see somewhat lower wages compared to Canadian educated nurses. In these cases it is expected that language will not be a factor in cases where English or French are commonly spoken, but that self identified visible minority status will have a negative effect on the wages that will be earned by nurses from these areas of the world. Only 28% of nurses who have emigrated from Africa and the Caribbean speak languages other than English or French as their home language and 92% of these immigrants report being a visible minority.

Nurses who are educated in Central and South America and Asia or India are also expected to face wage discrimination, since language and self identified visible minority status will both potentially have potentially negative effects on the earnings of these individuals. 92% of nurses who have emigrated from these regions speak languages other than English or French as their home language and 97% report being a visible minority. Nurses educated in the Philippines currently must have a baccalaureate certification but in the past they also had the option of taking a diploma

program. Nurses in China can train through an associate degree program, a diploma program or a baccalaureate program

3.2.2 The Theoretical Model

The most common framework in economic literature for the study of wage determination is the human capital model.²⁰ The human capital earnings function will form the basis for this study. The most commonly used empirical estimation for the human capital model is based on the functional form of the Mincer (1974) earnings equation:

$$\log w_i = \beta X_i + rS_i + \delta e_i + \gamma e_i^2 + u_i \quad (3.1)$$

where:

w_i is a measure of hourly wages for an individual i ,

S_i represents the measure of the individual i 's schooling or educational attainment,

e_i is a measure of potential experience and this is also entered as a quadratic term to capture the concavity of the typical earnings profile,

X_i is a vector of other variables such as gender, marital status, province of residence and native language each of which are assumed to affect earnings, and

u_i is a disturbance term which is assumed to be independent of X_i and S_i .

²⁰ A more detailed description of the basis of using the human capital framework for analyzing earnings and wage determination is found in Chapter 2 of this thesis and will not be described again in this section to avoid repetition.

A straightforward method utilizing the human capital framework can be used to examine the relative earnings of Canadian born and educated nurses compared to nurses who have been trained in countries other than Canada. To answer the question about relative earnings of nurses in Canada, those who are trained as nurses and who are actively working as registered nurses will be included in the sample.²¹ This allows me to focus explicitly on a very specific group of individuals to determine if there is any variation in the relative earnings of people with differing educational credentials who are working in the same profession. Much of the literature related to immigrant labour market outcomes show that immigrants face wage penalties compared to domestic workers. This study will test if this general result holds for individuals with nursing credentials.

The simplest method and the first exercise in this paper will look at two specifications. The first will include four dummy variables: one for the reference group of Canadian born and educated nurses, one for the foreign born and educated nurses, a third for those who have a mixed education and a final group for those who are foreign born but Canadian educated. This will be done within a pooled regression equation including all individuals in the data set who trained as nurses who are working as nurses in Canada. The second specification will include a series of dummy variables for the various country groups of origin (those from the United States, Western and Northern Europe and Australia, those from Eastern and Southern Europe, those from Central and South America, those from the Caribbean and Africa and those from Asia and India), with those born in Canada being the reference group. The level of wage

²¹ See Chapter 2 for the exact details of how this nursing sample is identified.

advantage or disadvantage can then be measured by the coefficients on these dummy variables. These specifications will allow me to easily identify if there is a wage penalty associated with having a foreign nursing credential and for the identification of which specific regions of origin may be facing wage penalties compared to Canadians. If the hypothesis that foreign educated nurses suffer wage penalties is supported, one expects to find a statistically significant and negative coefficient on that independent variable.

The second exercise in regards to earnings and educational credentials will consider each of the four main educational groups separately. For each immigrant sample two regressions will be analyzed: one where the region of birth is controlled for and one where it is not. This will allow for an analysis of which specific groups face and do not face wage penalties.

A final question that will be examined in this paper will be the issue of whether or not a foreign trained nurse actually works in the nursing profession once in Canada. To answer this question, the sample is expanded to include all of those who trained as a nurse, but may or may not be currently employed as a nurse. For this analysis, probit will be used to examine the question of whether a foreign trained nurse has the same, or different, probability of working as a registered nurse as a Canadian born and educated nurse. The following equation will be estimated using maximum likelihood.

$$\text{Prob}(Y_i = 1) = \beta_1 X_i + u_i \quad (3.2)$$

In equation (3.2), Y_i denotes whether individual i is working as a registered nurse or not.²² Included in the vector of X variables are a series of background characteristics that are assumed to influence the probability of working as a registered nurse. These include education, language, marital status and province of residence. The main question being addressed is whether an immigrant who was trained as a nurse has the same or a different probability of working as a registered nurse in Canada as compared to a nurse who was trained in Canada. If they have the same or a higher probability of working as a registered nurse in Canada, this is an indication that their educational credentials are being recognized.

3.2.3 The Variables of Interest

As described in Chapter 2, the dependent variable for this study is hourly wages. The majority of the independent variables were also defined and described in Chapter 2. Since the same basic model will be used to examine the wages of immigrant nurses, it is not necessary to identify each explanatory variable being used in this analysis.

An individual's age and potential experience are also characteristics that are, in general, expected to be positively related to wages. The standard Mincer equation using each person's age minus the years of schooling they have minus six is used to obtain an individual's potential work experience. Potential experience squared is also included in the regressions to capture the concavity of the typical earnings profile. One problem with this measure of potential experience is that it may overestimate the actual experience for people who have taken time out of the labour force for various reasons

²² $Y_i = 1$ if the individual is working as a registered nurse and $Y_i = 0$ otherwise.

and lead to a bias in the results but due to the nature of the sample being used this cannot be eliminated easily. For the foreign educated nurses their experience is composed of two aspects: their foreign and their Canadian work experience. Numerous existing studies including, for example, Reitz (2001), Frenette and Morissette (2003), Aydemir and Skuterud (2004) and Alboim, Finnie and Meng (2005), show that an immigrant's foreign experience is penalized and not fully recognized once the immigrant begins working in Canada. This study will examine if this result holds for the specific occupation of nursing.

Finally, numerous other individuals are omitted from the sample. Nurses who reported zero income or zero hours of work in the reference year are removed from the sample. Nurses who immigrated to Canada in 2000 or 2001 are also removed from the sample since there is a potential for these people to have arrived and begun work, but not have worked a full year yet. This number of people is quite small.

3.3 Data Description

3.3.1 Summary Statistics

The summary statistics for those who trained as registered nurses are found in Tables 3.1 and 3.2. Table 3.1 reports the summary statistics for those who trained as nurses and are currently working as registered nurses while Table 3.2 reports the summary statistics for those who are not currently working as nurses. Earnings are quite similar for each sample, although it can be noted that each of the groups who are working as nurses see higher earnings. Those who are working as nurses and have a mixed education see the highest earnings while in the samples of those who are not

working as nurses those who are Canadian born see the highest earnings. All of the nursing samples work nearly the same number of weeks per year, but those with a mixed education and the foreign educated nurses work somewhat longer hours per week. At the same time those who are working as nurses work more weeks and longer hours.

The proportion of nurses who have different educational credentials shows some variation, but of those who are working as nurses it can be noted that the mixed education and foreign education groups show some similarities. 66% of Canadian born and 63% of the Canadian educated immigrant nurses have an RN designation while only 55% of those mixed education and 54% of the foreign educated nurses have the same designation. A somewhat higher proportion of the foreign born and educated nurses and the mixed education group (27% for each group) have a BN designation compared to the Canadian born nurses (21%) and Canadian educated immigrants (24%). It is also to be noted that those who are working as nurses have a higher proportion in each group who have a BN designation.

In terms of place of employment the individuals with a mixed education appear to be more like the two Canadian educated groups. More Canadian born nurses (72%), Canadian educated immigrants (74%) and mixed education (72%) work in hospitals compared to only 63% of the immigrant nurses, while 20% of the immigrant nurses work in nursing homes compared to only 11% of Canadian nurses, 12% of the Canadian educated immigrants and 15% of the mixed education nurses. It can also be seen that many individuals who are not working as nurses are still working in hospitals, nursing

homes and other health care industries. In many cases these are individuals who are potentially working as nursing assistants or other jobs such as those within health care.

When the language spoken at home is considered there is some variation seen across the different samples and again we see that the foreign educated and mixed education immigrant nurses are similar. 73% of the Canadian born nurses, 72% of the Canadian educated immigrant nurses, while only 50% of the mixed education nurses and 47% of the foreign educated nurses have English as their language spoken at home. Similarly, 22% of the Canadian born nurses speak French at home, while only around 2% of each of the other groups of nurses speaks French at home. Finally, the three samples show a lot of variation in the proportion speaking languages other than English or French at home (only 5% of the Canadian born nurses, 25% of the Canadian educated immigrant nurses, 47% of the mixed education nurses and 51% of the foreign educated nurses).

One other area that shows a difference in the three samples is in visible minority status. Only 3% of Canadian born nurses report that they are a visible minority. In the Canadian educated immigrant group this rises to 40% and in both the mixed educated and foreign educated group this increases to 65% and 66% respectively reporting that they are a visible minority.

One final interesting difference to be seen in the three samples relates to where these nurses live. 51% of Canadian nurses live in cities with a population over 100,000, while 77% of Canadian educated immigrant nurses, 85% of the mixed educated nurses and 87% of foreign educated nurses live in cities. A larger proportion of Canadian nurses live in either a rural area or small town (22% and 26% respectively), while fewer

of the immigrant nurses live in rural areas or towns (10%, and 13% for Canadian educated immigrants, 6% and 9% for the mixed educated nurses and 5% and 8% for foreign educated nurses respectively). There is also a distinction between the samples when one considers the three largest Census Metropolitan Areas of Montreal, Toronto and Vancouver. 41% of foreign educated nurses, 36% of mixed education nurses and 30% of Canadian educated immigrant nurses live in Toronto while only 7% of the Canadian born nurses live there. Similarly, more immigrant nurses live in Vancouver (11% of Canadian educated immigrant nurses, 13% of mixed education nurses and 16% of foreign educated nurses compared to only 5% of Canadian nurses).

Table 3.3 reports information about which various occupations the different individuals who trained as nurses are working in. In terms of occupations, it can be seen that those who are Canadian born and the immigrants who are Canadian educated show nearly the same proportion (close to 65% for each group) of those who trained as nurses actually working as registered nurses. In contrast, 55% and 45% of those with a mixed education and foreign education respectively are working as registered nurses. It can also be noted that there is a relatively large proportion of those with foreign and mixed educations who are working in other health care occupations (around 14% and 17% respectively) compared to 9% for those born in Canada. The next largest group of occupations where those trained as nurses are found are in sales and service occupations. Here we see 5% of the mixed education nurses and 14% of the foreign trained nurses working, compared to only about 5% of the other two groups.

Table 3.4 reports information about which various industries the different individuals who trained as nurses are working in. As was seen with the different

occupations where those trained as nurses are found, the same trend is seen in the various industries as well. Both Canadian born women and immigrants who trained as nurses in Canada show very similar outcomes, but a difference can be seen between these two groups and those educated outside Canada. Around 55-56% of those born in Canada and immigrants educated in Canada work in hospitals, while about 11-12% work in nursing homes. Alternatively, only 34% of those educated outside of Canada work in hospitals but a larger proportion tend to work in nursing homes (19%).

3.3.2 Regression Results

In the first set of regression results the focus is only on individuals who have qualified to work as a nurse in Canada. As in the previous chapter, there exists the possibility that a sample selection bias problem may be present, in that the sample includes only those immigrant nurses who qualified to write, and have passed the licensing exam to enter the nursing profession in Canada. These individuals may be more able, and this will tend to bias the results towards the finding of no penalty to foreign birth/education. To the extent that a penalty is associated with foreign education, suggests a significant underlying problem. In the second part of the chapter, I eliminate the issue of selection through qualification by broadening the sample to include all those educated as nurses, whether in Canada or elsewhere.

The regression results for the first exercise, which examines earnings of women who trained as nurses and who are working as a registered nurse, are found in Table 3.3. The first column controls for the four basic educational groupings which include the reference group of Canadian born, Canadian educated immigrant, mixed educated

nurses and foreign educated nurses. The second column controls for the various general country regions and the third column controls for both together. Table 3.5 reports the percentage changes in the dummy variables along with the OLS coefficients and significance levels. As discussed in the previous chapter, in order to interpret the coefficients on the dummy variables, one can't simply multiply the coefficient by 100 and report this value as the percentage effect that the variable has on the dependent variable. Instead one must make a modification to accurately use the values as percentages (see Gujarati (1995), Halvorsen & Palmquist (1980) and Kennedy (1981)). To get the percentage wage differential one needs to use $(e^{\beta} - 1) * 100$.²³

The interesting thing to notice is that the coefficient on foreign education is negative and statistically significant. This supports the hypothesis that nurses who obtain their education in a country other than Canada face a wage penalty given that they are working as a nurse in Canada. Nurses who were educated outside of Canada face nearly 9% lower wages compared to Canadian born nurses. Canadian educated immigrant nurses and the group of nurses who have a mixed education see wage penalties as well, but only in the first specification. When region of origin is controlled for it is seen that nurses from the United States, Western and Northern Europe and Australia see a 3% wage penalty while nurses from Eastern and Southern Europe see nearly a 9% penalty. Those from Africa and the Caribbean see an 8% wage penalty. The effect is not statistically significant for those from Asia and India or from Central and South America. It was anticipated that nurses from Africa and the Caribbean would

²³ As was the case in the previous chapter, Appendix A3 includes all of the regression results with the OLS coefficients, levels of significance and robust standard errors. The tables included in the text and the ones that will be used in the analysis include the adjusted percentage values for interpretation purposes.

see larger wage penalties compared to nurses from the United States, Western and Northern Europe and Australia.

There are several other variables that are of interest. In this sample, being a self identified visible minority results in a significant earnings penalty of roughly 11 to 12% depending on which variables are controlled for. This result is also expected and it is consistent with numerous existing studies that examine earnings for immigrants. The various levels of education have statistically significant effects for most of the regressions. Having a Bachelors degree results in an earnings benefit of around 13% compared to an RN certification. A higher degree has a significant wage benefit of around 9% for this nursing sample. Similarly, the premiums associated with the various educational levels for nurses are consistent with the results found in the previous chapter where only Canadian nurses were examined.

Since foreign education and countries of origin both show a statistically significant effect in the initial regressions, the second exercise allows for a closer examination of this. The second exercise will consider each of the four origins of nursing education, Canadian born, Canadian educated immigrants, mixed educated immigrants and foreign educated immigrants, separately. The results are presented in Tables 3.6 and 3.7. For each of the immigrant samples two regressions will be analyzed. In the first regression a dummy variable will be included for visible minority status in Table 3.6 and in the second regression for each sample, the country of origin groupings will be controlled for in Table 3.7.

The first distinction that becomes apparent when the nurses are separated by the educational source groupings relates to potential experience. We see that there is a

penalty associated with potential experience for the foreign born and trained nurses. Both their foreign and Canadian potential experience is penalized. The low or negative returns to potential Canadian experience for those who are foreign born and educated indicates that a difference between actual experience in the Canadian labour market and potential experience may be particularly significant for foreign educated nurses.

Another distinction that becomes apparent when the nurses are separated by their educational groupings is the varying benefits to the different levels of nursing education. Looking at these samples we see that having a Bachelors degree results in a higher wage premium for Canadian born nurses. Canadian educated immigrants and foreign educated immigrants see a wage premium of roughly 9 to 12%, while immigrants with a mixed education see a 9% premium when they have a BN certification. The benefit seen by Canadian born nurses with a Bachelors degree is seen as a wage premium of nearly 14%. Having a higher degree is seen to be beneficial for all of the nurses, with the largest benefit being seen by those with a mixed education or a foreign education with a benefit of around 15%.

Other variables of interest include place of employment. All of the nurses show an earnings penalty compared to those working in a hospital setting.²⁴ In nearly every case both groups of immigrant nurses see a larger penalty compared to Canadian nurses. This result is potentially driven by the unionization that is common in the nursing profession in Canada. Hospitals employ the largest proportion of nurses in Canada and they also follow a structured pay scale. Nurses who work in nursing homes are also

²⁴ Similarly as was done in the previous chapter, all of these regressions were also examined excluding the place of employment variables and there is very little difference to be seen in the remaining coefficients. All of the results excluding the place of employment variables are presented in Appendix B3.

unionized but are covered by different collective bargaining units and see lower earnings than those in hospitals. Nurses working in offices and other health care facilities are less frequently unionized.

Language is not particularly a significant variable in determining wages for nurses. Speaking French at home is beneficial for Canadian born nurses. It is also seen that speaking French at home is highly beneficial for foreign educated nurses, but this result is driven by the small sample size of nurses who have this characteristic.

Being a visible minority yields some interesting results. Canadian born nurses see a 13% earnings penalty, those with a mixed education see a 17% penalty and Canadian educated immigrant nurses see a 6% penalty to being a visible minority. This result is not statistically significant for the nurses who are foreign born and educated. It is interesting to note that Canadian educated nurses and nurses with a mixed education from Africa and the Caribbean see a 19% earnings penalty respectively compared to nurses from the US, Western and Northern Europe and Australia. The effect of being from Asia and India is not statistically significant for the foreign born samples of nurses.

3.3.3 Probit Regression Results

Rather than reporting the coefficients of the probit models, Tables 3.8 and 3.9 each report the marginal effects or the change in the probability of working as a nurse for a very small change in each continuous variable and report the discrete change in the probability for dummy variables. The marginal effects that are reported are at the means of the other right hand side variables. The qualitative dependent variable is the

occupational position of a registered nurse. The question being addressed is whether immigrants, whose major field of study was nursing, have the same probability of working as a registered nurse when compared to Canadian nurses. For this part of the study, the sample is expanded to include all employed women who trained as nurses.

Table 3.8 presents the marginal effects for the probit regression results for all of those whose major field of study was nursing and the variables of interest are the various educational backgrounds and regions of birth. The first column controls for the various educational groupings and the key result shows that a foreign educated immigrant is 9% less likely to be working as a nurse compared to a Canadian woman trained as a nurse. Similarly those with a mixed education are 4% less likely to be working as a nurse compared to a Canadian born nurse. This result is very interesting since it shows that the labour market for nurses shows the same trend in lack of recognition of educational credentials.

Column two controls for region of birth and here it is interesting to note the different results based on the region of birth. The result is not statistically significant for the group of nurses from Africa and the Caribbean, but the results are significant for the rest of the nurses. The nurses from the remaining countries all see a lower likelihood of being employed as a nurse compared to a Canadian born nurse. These values range from a high of 12% less likely for those from Central and South America to a low of nearly 3% for those from the US, Western and Northern Europe and Australia.

Since the initial probit regressions show variation between the different educational and region of birth groupings, Table 3.9 reports the results of probit regressions where the various educational groupings are separated. First, looking at the

group of immigrant nurses with foreign credentials it can be seen that those from Central and South America are around 15% less likely than those from the US, Western and Northern Europe and Australia to be working as a registered nurse in Canada. Canadian educated immigrants from Eastern and Southern Europe are 8% more likely to be working as a nurse. A Canadian born nurse who has a Bachelors degree is 2% more likely than one with an RN designation to be working as a nurse. Canadian nurses with a higher degree are 13% less likely to be working as a nurse. Potentially these nurses are voluntarily pursuing other occupations instead of actively working as a registered nurse. The foreign educated immigrants and mixed educated immigrants with a bachelors degree are 11 or 12% more likely to be working as a nurse as someone with an RN designation.

3.4 Discussion, Implications and Conclusion

The results of this study support the hypothesis that immigrant registered nurses suffer wage penalties in Canada. These results are consistent with findings in the literature regarding immigrant earning outcomes. It is also interesting to note that the same results hold for the specific labour market of nurses. Wage penalties are seen by both the immigrant nurses who arrived in Canada at a young age and the immigrant nurses who come to Canada at a later age with nursing credentials. Once the various regions of birth are controlled for it is seen that there is a wage penalty to all of them except for those from Asia and India and from Central and South America where the results are not statistically significant. The penalty is the smallest for those from the US, Western and Northern Europe and Australia. It was hypothesized that immigrants

from these regions should see the smallest earnings penalty because of the broad similarities to Canadian born nurses. The groups from Eastern and Southern Europe as well as those from Africa and the Caribbean see the largest penalty. However, it was also anticipated that those from Asia and India should see penalties as well.

Secondly, the results of this study show that there are differing probabilities of attaining nursing employment in Canada for the groups with different nursing educational credentials. Nurses with foreign credentials are less likely than a Canadian nurse to be employed as registered nurses in Canada. This again implies that their credentials are not being recognized and valued.

The nursing shortage in Canada is an important policy area that needs to be examined. Many nurses immigrating to Canada from other countries are bringing their educational skills and experience to the employment market for registered nurses in Canada. This brain gain is beneficial to the labour market for nurses in Canada since recently there have been shortages of qualified nurses in Canada. The shortage of nurses will likely grow over time as the demographics in Canada shift and as some individuals begin to require additional medical and nursing care as they grow older. The recognition of foreign nursing educational credentials can be an avenue to attempt to alleviate the shortage of nurses in Canada.

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Table 3.1: Summary Statistics for the sample of all women whose major field of study was nursing and who are currently working as registered nurses

	Canadian Born & Educated	Foreign Born & Canadian Educated	Mixed education	Foreign Born & Educated
	N = 26905	N = 1758	N = 2236	N = 982
Age	42.5663	40.8544	47.4812	48.7546
Employment income	41281.91	41843.66	44277.74	41568.86
Hourly wages	28.62	27.95	29.92	30.53
Weeks	50.0488	49.4226	49.6418	49.0560
Hours	35.1974	37.1200	37.6132	37.8340
Potential Experience	20.8310	18.9283	25.0729	26.3198
Potential Canadian Experience				10.4919
Potential Foreign Experience				16.4471
Non-university certification	0.6529	0.6206	0.5456	0.5346
Other certification below Bachelors	0.0995	0.0910	0.1400	0.1365
Bachelors degree	0.2217	0.2520	0.2728	0.2770
Higher degree	0.0259	0.0364	0.0416	0.0519
English	0.7014	0.5199	0.4231	0.4012
French	0.2610	0.0301	0.0300	0.0224
Other	0.0376	0.4499	0.5470	0.5764
Hospitals	0.6946	0.7133	0.7035	0.5947
Nursing and residential care facilities	0.1053	0.1143	0.1453	0.1986
Offices	0.0148	0.0193	0.0161	0.0316
Other Health Care Facilities	0.1149	0.0956	0.0733	0.0957
Non Health Care jobs	0.0703	0.0575	0.0617	0.0794
Separated, divorced or widowed	0.1574	0.1507	0.1637	0.1864
Married or common law	0.6542	0.6257	0.7017	0.6792
Single	0.1883	0.2235	0.1346	0.1344
No dependent children	0.4205	0.4135	0.4852	0.4929
Dependent children	0.5795	0.5865	0.5148	0.5071
Visible Minority	0.0311	0.4022	0.6453	0.6660
Not a Visible Minority	0.9689	0.5978	0.3547	0.3340
United States, Western & Northern				
Europe and Australia		0.4681	0.2648	0.2179
Eastern & Southern Europe		0.1212	0.0742	0.0906
Central & South America		0.0478	0.0344	0.0458
Caribbean and Africa		0.1735	0.2428	0.2342
Asia and India		0.1894	0.3828	0.4084
Rural (less than 1,000)	0.2219	0.1064	0.0604	0.0540
Town (between 1,000 and 100,000)	0.2594	0.1268	0.0868	0.0743
City (over 100,000)	0.5186	0.7668	0.8529	0.8717
The Atlantic Provinces	0.1088	0.0233	0.0174	0.0285
Montreal	0.0997	0.0870	0.1199	0.0733
Rest of Quebec	0.1324	0.0108	0.0112	0.0092
Toronto	0.0716	0.3032	0.3640	0.4145
Rest of Ontario	0.2842	0.2776	0.1749	0.1344
Manitoba	0.0472	0.0370	0.0264	0.0214
Saskatchewan	0.0405	0.0119	0.0121	0.0143
Alberta	0.1018	0.0796	0.0966	0.1059

Vancouver	0.0426	0.1069	0.1234	0.1517
Rest of BC	0.0596	0.0557	0.0470	0.0377
The Territories	0.0116	0.0068	0.0072	0.0092

Table 3.2: Summary Statistics for the sample of all women whose major field of study was nursing and who are not currently working as registered nurses

	Canadian Born & Educated	Foreign Born & Canadian Educated	Mixed education	Foreign Born & Educated
	N = 13073	N = 905	N = 1132	N = 1699
Age	44.4369	41.6641	47.8993	45.0983
Employment income	32672.29	31640.71	25525.72	29437.68
Hourly wages	29.21	31.03	30.52	25.41
Weeks	48.2934	46.8519	46.2792	47.5468
Hours	34.7070	35.3680	36.1405	35.7157
Potential Experience	23.0784	20.3017	25.9488	23.3508
Potential Canadian Experience				5.6716
Potential Foreign Experience				19.7440
Non-university certification	0.6813	0.6674	0.5822	0.6133
Other certification below Bachelors	0.0822	0.0873	0.1352	0.1242
Bachelors degree	0.1849	0.1967	0.2261	0.2166
Higher degree	0.0516	0.0486	0.0565	0.0459
English	0.7704	0.4895	0.2898	0.4044
French	0.1784	0.0110	0.0133	0.0200
Other	0.0512	0.4994	0.6970	0.5756
Hospitals	0.2366	0.2586	0.1263	0.1848
Nursing and residential care facilities	0.1161	0.1392	0.1890	0.1677
Offices	0.0270	0.0276	0.0300	0.0277
Other Health Care Facilities	0.0969	0.0884	0.0883	0.0836
Non Health Care jobs	0.5234	0.4862	0.5663	0.5362
Separated, divorced or widowed	0.1627	0.1657	0.1546	0.1413
Married or common law	0.6626	0.6155	0.7482	0.7404
Single	0.1747	0.2188	0.0972	0.1183
No dependent children	0.4801	0.4442	0.4982	0.4838
Dependent children	0.5199	0.5558	0.5018	0.5162
Visible Minority	0.0449	0.3856	0.6440	0.5486
Not a Visible Minority	0.9551	0.6144	0.3560	0.4514
United States, Western & Northern				
Europe and Australia		0.5138	0.2076	0.3384
Eastern & Southern Europe		0.0862	0.1237	0.0977
Central & South America		0.0431	0.0601	0.0400
Caribbean and Africa		0.1370	0.1272	0.1424
Asia and India		0.2188	0.4814	0.3802
Rural (less than 1,000)	0.2568	0.1238	0.0786	0.0954
Town (between 1,000 and 100,000)	0.2545	0.1536	0.0751	0.1101
City (over 100,000)	0.4887	0.7227	0.8463	0.7946
The Atlantic Provinces	0.0874	0.0232	0.0062	0.0224
Montreal	0.0625	0.0541	0.0751	0.0677
Rest of Quebec	0.0788	0.0022	0.0053	0.0047
Toronto	0.0844	0.2552	0.3560	0.3014
Rest of Ontario	0.3238	0.2696	0.1413	0.1913
Manitoba	0.0488	0.0398	0.0336	0.0359
Saskatchewan	0.0454	0.0199	0.0150	0.0106
Alberta	0.1212	0.1006	0.1307	0.1301

Vancouver	0.0549	0.1315	0.1705	0.1624
Rest of BC	0.0801	0.0939	0.0557	0.0636
The Territories	0.0129	0.0099	0.0106	0.0100

Table 3.3: Detailed description of the various occupational groupings where those who trained as nurses are working and separated by the different educational source locations

	All nurses		Canadian Born & Canadian Educated		Foreign Born & Canadian Educated		Foreign Born & Foreign Educated		Mixed Education	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Working as a nurse										
Head Nurse	1134	2.33	1017	2.54	41	1.54	26	1.23	50	1.27
Registered Nurse	30747	63.15	25888	64.76	1717	64.48	956	45.22	2186	55.55
Not working as a nurse										
Management Occupations	2314	4.74	1903	4.8	120	4.53	112	5.32	179	4.57
Business, Finance & Administrative Occupations	3548	7.24	2834	7.17	175	6.64	181	8.56	358	9.15
Natural & Applied Sciences and Related Occupations	260	0.48	203	0.49	16	0.61	15	0.71	26	0.68
Other Health Occupations	5009	10.27	3757	9.44	334	12.57	365	17.25	553	14.08
Occupations in Social Science, Education, Government Service & Religion	1779	3.67	1540	3.88	81	3.07	51	2.39	107	2.74
Occupations in Art, Culture, Recreation & Sport	255	0.49	207	0.53	14	0.54	16	0.78	18	0.5
Sales & Service Occupations	2885	5.91	2075	5.27	140	5.28	304	14.39	365	9.34
Trades, Transport & Equipment Operators & Related Occupations	138	0.25	117	0.32	2	0.08	9	0.45	10	0.27
Occupations Unique to Primary Industry	379	0.77	319	0.79	12	0.46	17	0.81	31	0.79
Occupations Unique to Processing, Manufacturing & Utilities	243	0.45	118	0.3	11	0.44	62	2.94	52	1.37
Total	48691	100	39978	100	2663	100	2114	100	3935	100

Table 3.4: Detailed description of the various industry groupings where those who trained as nurses are working and separated by the different educational source locations

	All nurses		Canadian Born & Canadian Educated		Foreign Born & Canadian Educated		Foreign Born & Foreign Educated		Mixed Education	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Offices	2606	5.35	2082	5.21	140	5.26	155	7.33	229	5.82
Hospitals	25884	53.16	21782	54.48	1488	55.88	727	34.39	1887	47.95
Nursing homes	5697	11.7	4351	10.88	327	12.28	409	19.35	610	15.5
Other health Industries	5514	11.31	4683	11.73	264	9.92	234	11.08	332	8.43
Agriculture, Forestry, Fishing and Hunting	445	0.91	385	0.95	9	0.34	20	0.95	31	0.79
Mining and Oil and Gas Extraction	43	0.09	39	0.09	0	0	0	0	4	0.1
Utilities	31	0.06	28	0.07	1	0.04	1	0.05	1	0.03
Construction	193	0.38	158	0.41	6	0.24	4	0.19	25	0.65
Manufacturing	633	1.3	430	1.16	28	1.1	87	4.11	88	2.36
Wholesale Trade	347	0.7	278	0.7	18	0.7	20	0.95	31	0.82
Retail Trade	1103	2.27	851	2.16	50	1.91	75	3.55	127	3.25
Transportation and Warehousing	210	0.41	161	0.42	11	0.42	16	0.76	22	0.58
Information and Cultural Industries	145	0.31	108	0.27	11	0.42	11	0.52	15	0.39
Finance and Insurance	490	1.01	384	0.97	28	1.05	28	1.31	50	1.28
Real Estate and Rental and Leasing	248	0.51	191	0.49	12	0.45	8	0.38	37	0.95
Professional, Scientific and Technical Services	748	1.54	589	1.48	50	1.89	45	2.12	64	1.63
Management of Companies and Enterprises	16	0.03	12	0.03	2	0.08	1	0.05	1	0.03
Administrative and Support, Waste Management and Remediation Services	427	0.88	304	0.78	30	1.13	49	2.32	44	1.13
Educational Services	1485	3.05	1266	3.17	70	2.64	44	2.09	98	2.5
Arts, Entertainment and Recreation	149	0.31	119	0.29	10	0.38	8	0.38	12	0.31
Accommodation and Food Services	472	0.96	311	0.78	31	1.18	61	2.9	69	1.76
Other Services (except Public Administration)	923	1.91	691	1.76	43	1.63	88	4.16	101	2.58
Public Administration	882	1.81	775	1.94	34	1.27	23	1.08	50	1.28
Total	48691	100	39978	100	2663	100	2114	100	3935	100

Table 3.5: Regression results for the Mincer earnings equation including place of employment variables for the sample of all women working as nurses (The first column in each of models 1 and 2 give the coefficients while the second column for each reports the percentage changes in the dummy variable changing from zero to one)

	(1)		(2)	
Constant	2.8334 ***		2.8409 ***	
Potential Experience	0.0247 ***	2.5023	0.0245 ***	2.4800
Potential Experience squared	-0.0004 ***	-0.0396	-0.0004 ***	-0.0393
Other certification below Bachelors	0.0202 *	2.0434	0.0174 *	1.7579
Bachelors degree	0.1229 ***	13.0722	0.1191 ***	12.6436
Higher degree	0.0912 ***	9.5516	0.0876 ***	9.1574
Canadian educated Immigrant	-0.0446 **	-4.3642		
Foreign educated Immigrant	-0.0916 ***	-8.7544		
Mixed education	-0.0328 *	-3.2292		
United States, Western & Northern				
Europe and Australia			-0.0354 **	-3.4799
Eastern & Southern Europe			-0.0903 **	-8.6368
Central & South America			-0.0229	-2.2599
Caribbean and Africa			-0.0874 ***	-8.3690
Asia and India			0.0314	3.1898
Dependent children	0.0076	0.7621	0.0087	0.8691
French	0.0468 ***	4.7892	0.0414 ***	4.2298
Other language	0.0473 ***	4.8413	0.0286 *	2.9033
Separated, divorced or widowed	-0.0169	-1.6738	-0.0150	-1.4911
Married or common law	0.0449 ***	4.5947	0.0437 ***	4.4682
Nursing and residential care facilities	-0.1614 ***	-14.9017	-0.1619 ***	-14.9498
Offices	-0.1848 ***	-16.8762	-0.1859 ***	-16.9641
Other Health Care Facilities	-0.0913 ***	-8.7296	-0.0907 ***	-8.6717
Visible minority	-0.1110 ***	-10.5095	-0.1284 ***	-12.0487
Rural	-0.0035	-0.3536	-0.0028	-0.2819
Town	-0.0135 *	-1.3401	-0.0135 *	-1.3422
The Atlantic Provinces	-0.2267 ***	-20.2869	-0.2294 ***	-20.5029
Montreal	-0.0728 ***	-7.0254	-0.0670 ***	-6.4818
Rest of Quebec	-0.0857 ***	-8.2143	-0.0840 ***	-8.0540
Rest of Ontario	-0.0258 **	-2.5434	-0.0271 **	-2.6747
Manitoba	-0.1350 ***	-12.6254	-0.1346 ***	-12.5953
Saskatchewan	-0.0799 ***	-7.6819	-0.0811 ***	-7.7878
Alberta	-0.0583 ***	-5.6597	-0.0616 ***	-5.9758
Vancouver	-0.0023	-0.2309	-0.0121	-1.2008
Rest of BC	-0.0401 **	-3.9337	-0.0429 **	-4.1949
The Territories	0.1994 ***	22.0699	0.1975 ***	21.8401
N	33207		33207	
R ²	0.0370		0.0375	

Dependent variable is the natural log of hourly wages.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, Canadian Born & educated, Canadian born, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table 3.6: Regression results for the Mincer earnings equation for the sample of all women working as nurses using distinction between Canadian and foreign experience and including place of employment variables (Second columns for each model reports the percentage change in the coefficient from the dummy variable changing from zero to one)

	Canadian Born & Canadian Educated		Foreign Born & Canadian Educated		Mixed Education		Foreign Born & Foreign Educated		Foreign Born & Foreign Educated	
Constant	2.8318 ***		2.6751 ***		2.7475 ***		2.6603 ***		3.9373 ***	
Potential Canadian Experience	0.0250 ***	2.5337	0.0329 ***	3.3455	0.0304 ***	3.0851	0.0356 *	3.6225	-0.0444 **	-4.3422
Potential Canadian Experience squared	-0.0004 ***	-0.0416	-0.0006 ***	-0.0644	-0.0004 ***	-0.0422	-0.0005	-0.0541	-0.0001	-0.0093
Foreign Potential Experience									-0.0179 *	-1.7778
Foreign Potential experience squared									0.0000	0.0024
Other certification below Bachelors	0.0287 **	2.9154	-0.0786	-7.5564	0.0492	5.0467	-0.1133	-10.7150	-0.1089	-10.3208
Bachelors degree	0.1276 ***	13.6065	0.1113 ***	11.7739	0.0817 **	8.5114	0.0901 *	9.4338	0.0954 *	10.0102
Higher degree	0.0894 ***	9.3571	0.0522	5.3575	0.1410 **	15.1432	0.1149 *	12.1760	0.1394 **	14.9544
Childcare	0.0145 *	1.4605	-0.0289	-2.8478	-0.0101	-1.0011	-0.1111 **	-10.5185	-0.1160 **	-10.9555
French	0.0358 **	3.6402	0.0918	9.6094	-0.0509	-4.9625	0.3636 ***	43.8467	0.3010 **	35.1260
Other language	0.0280	2.8417	0.1108 ***	11.7126	0.0558 *	5.7356	0.0542	5.5669	0.0655	6.7690
Married or common law	-0.0046	-0.4588	-0.0422	-4.1309	-0.0847	-8.1211	-0.1109	-10.4949	-0.1052	-9.9833
Separated, divorced or widowed	0.0358 ***	3.6417	0.1411 **	15.1499	0.0854 *	8.9160	-0.0206	-2.0421	-0.0183	-1.8135
Nursing Homes	-0.1446 ***	-13.4590	-0.2964 ***	-25.6495	-0.2000 ***	-18.1237	-0.2091 ***	-18.8696	-0.1889 ***	-17.2111
Offices	-0.1906 ***	-17.3533	-0.3537 ***	-29.7906	0.0380	3.8782	-0.2191 **	-19.6782	-0.1802 *	-16.4873
Other health care facilities	-0.0787 ***	-7.5710	-0.0721	-6.9546	-0.2529 ***	-22.3446	-0.2151 ***	-19.3519	-0.2001 ***	-18.1325
Visible minority	-0.1350 ****	-12.6322	-0.0653 *	-6.3248	-0.1843 ***	-16.8274	-0.0059	-0.5836	0.0035	0.3552
Rural	0.0021	0.2092	-0.0872	-8.3527	-0.1093 *	-10.3540	-0.0265	-2.6106	0.0117	1.1766
Town	-0.0129	-1.2799	0.0041	0.4147	-0.0875 *	-8.3790	0.0771	8.0193	0.0762	7.9205
The Atlantic Provinces	-0.2217 ***	-19.8853	-0.2231 *	-19.9964	-0.3193 ***	-27.3345	-0.4154 **	-33.9941	-0.4461 ***	-35.9858
Montreal	-0.0602 ***	-5.8433	-0.2074 ***	-18.7339	-0.0272	-2.6816	-0.0951	-9.0745	-0.0979	-9.3234
Rest of Quebec	-0.0788 ***	-7.5750	-0.0071	-0.7077	-0.0543	-5.2815	-0.0177	-1.7499	0.0352	3.5777
Rest of Ontario	-0.0218	-2.1548	0.0234	2.3712	-0.0586	-5.6928	-0.0532	-5.1790	-0.0642	-6.2200
Manitoba	-0.1267 ***	-11.8999	-0.1765 *	-16.1813	-0.2263 *	-20.2514	0.0350	3.5657	0.0034	0.3425
Saskatchewan	-0.0674 ***	-6.5215	-0.3438	-29.0932	-0.1254	-11.7844	-0.5251 *	-40.8518	-0.5755 **	-43.7569
Alberta	-0.0526 ***	-5.1223	-0.0405	-3.9658	-0.1052 **	-9.9840	-0.0582	-5.6499	-0.0792	-7.6186
Vancouver	-0.0414 *	-4.0531	0.2270 ***	25.4790	-0.0020	-0.2020	0.0053	0.5327	0.0068	0.6842
Rest of BC	-0.0405 **	-3.9667	0.0583	6.0035	-0.0415	-4.0640	-0.0185	-1.8332	-0.0463	-4.5253

The Territories	0.1908 *** 21.0168	0.3340 *** 39.6489	0.3582 ** 43.0787	0.2010 22.2622	0.1740 19.0065
N	27934	1831	2368	1074	1074
R ²	0.0368	0.0758	0.0546	0.0505	0.0720

Dependent variable is the natural log of hourly wages.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table 3.7: Regression results for the Mincer earnings equation for the sample of all women working as nurses using distinction between Canadian and foreign experience and expanded country of origin groupings and including place of employment variables (Second columns for each model reports the percentage change in the coefficient from the dummy variable changing from zero to one)

	Foreign born and Canadian educated		Mixed education		Foreign born and educated		Foreign born and educated	
Constant	2.7076 ***		2.7669 ***		2.6428 ***		3.9589 ***	
Potential Canadian Experience	0.0342 ***	3.4802	0.0299 ***	3.0356	0.0372 *	3.7894	-0.0455 **	-4.4525
Potential Canadian Experience squared	-0.0007 ***	-0.0671	-0.0004 ***	-0.0427	-0.0006 *	-0.0568	-0.0001	-0.0068
Foreign Potential experience							-0.0174 *	-1.7253
Foreign Potential experience squared							0.0000	0.0004
Other certification below Bachelors	-0.0774	-7.4487	0.0211	2.1275	-0.1139	-10.7669	-0.1140	-10.7713
Bachelors degree	0.1023 ***	10.7766	0.0545 *	5.6051	0.0900 *	9.4211	0.0868 *	9.0705
Higher degree	0.0432	4.4185	0.1167 *	12.3729	0.1198 *	12.7264	0.1393 **	14.9462
Childcare	-0.0240	-2.3678	-0.0071	-0.7072	-0.1093 **	-10.3567	-0.1141 **	-10.7830
French	0.1110	11.7417	-0.0510	-4.9749	0.3520 ***	42.1933	0.2877 **	33.3380
Other language	0.0760 *	7.8945	0.0096	0.9657	0.0692	7.1662	0.0590	6.0794
Married or common law	-0.0413	-4.0462	-0.0659	-6.3784	-0.1144	-10.8096	-0.1062	-10.0712
Separated, divorced or widowed	0.1352 **	14.4795	0.0830 *	8.6595	-0.0247	-2.4412	-0.0240	-2.3726
Nursing Homes	-0.2956 ***	-25.5908	-0.1949 ***	-17.7061	-0.2052 ***	-18.5525	-0.1856 ***	-16.9421
Offices	-0.3548 ***	-29.8661	0.0522	5.3547	-0.2174 **	-19.5431	-0.1777 *	-16.2812
Other health care facilities	-0.0708	-6.8360	-0.2463 ***	-21.8324	-0.2159 ***	-19.4180	-0.1988 ***	-18.0265
Eastern & Southern Europe	-0.0272	-2.6850	-0.0466	-4.5486	-0.0383	-3.7550	-0.0352	-3.4631
Central & South America	0.0256	2.5942	-0.0976	-9.2960	-0.1244	-11.6977	-0.1208	-11.3812
Caribbean and Africa	-0.2052 ***	-18.5513	-0.2134 ***	-19.2128	0.0100	1.0015	-0.0015	-0.1479
Asia and India	-0.0172	-1.7034	-0.0910 **	-8.6955	-0.0195	-1.9300	0.0203	2.0483
Rural	-0.0898	-8.5925	-0.0963	-9.1764	-0.0310	-3.0538	0.0101	1.0198
Town	-0.0030	-0.2968	-0.0756	-7.2815	0.0747	7.7581	0.0734	7.6160
The Atlantic Provinces	-0.2647 **	-23.2588	-0.3118 ***	-26.7896	-0.4151 **	-33.9750	-0.4464 ***	-36.0043
Montreal	-0.1847 **	-16.8660	0.0027	0.2673	-0.0970	-9.2433	-0.0918	-8.7755
Rest of Quebec	-0.0482	-4.7039	-0.0522	-5.0903	-0.0046	-0.4542	0.0510	5.2285
Rest of Ontario	0.0049	0.4956	-0.0510	-4.9680	-0.0499	-4.8705	-0.0588	-5.7136
Manitoba	-0.1929 *	-17.5398	-0.2181 *	-19.5936	0.0362	3.6843	0.0060	0.6025

Saskatchewan	-0.3603	-30.2519	-0.1204	-11.3469	-0.5166 *	-40.3473	-0.5682 **	-43.3481
Alberta	-0.0529	-5.1492	-0.1089 **	-10.3155	-0.0589	-5.7166	-0.0849	-8.1440
Vancouver	0.1897 ***	20.8879	-0.0192	-1.8989	0.0026	0.2599	-0.0019	-0.1900
Rest of BC	0.0312	3.1739	-0.0372	-3.6515	-0.0222	-2.1937	-0.0563	-5.4725
The Territories	0.3196 ***	37.6583	0.3400 **	40.4992	0.1966	21.7270	0.1648	17.9158
N	1831		2368		1074		1074	
R ²	0.0815		0.053		0.0516		0.0733	

Dependent variable is the natural log of hourly wages.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, Born in the United States, Western or Northern Europe, or Australia, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table 3.8: Probit results examining the probability of being employed as a registered nurse for the full sample of all women whose major field of study was nursing including place of employment variables (Robust standard errors in parenthesis)

	(1)		(2)	
	dF/dx		dF/dx	
Potential Experience	0.0099 ***	(0.0010)	0.0095 ***	(0.0010)
Potential Experience squared	-0.0003 ***	(0.0000)	-0.0002 ***	(0.0000)
Other certification below Bachelors	0.0664 ***	(0.0076)	0.0656 ***	(0.0076)
Bachelors degree	0.0336 ***	(0.0061)	0.0330 ***	(0.0062)
Higher degree	-0.0955 ***	(0.0142)	-0.0970 ***	(0.0142)
Canadian educated Immigrant	0.0116	(0.0112)		
Foreign educated Immigrant	-0.0944 ***	(0.0143)		
Mixed education	-0.0437 ***	(0.0111)		
United States, Western & Northern				
Europe and Australia			-0.0276 ***	(0.0102)
Eastern & Southern Europe			-0.0547 ***	(0.0205)
Central & South America			-0.1204 ***	(0.0297)
Caribbean and Africa			-0.0043	(0.0180)
Asia and India			-0.0473 ***	(0.0174)
Nursing and residential care facilities	-0.2658 ***	(0.0077)	-0.2677 ***	(0.0077)
Offices	-0.3843 ***	(0.0148)	-0.3853 ***	(0.0148)
Other Health Care Facilities	-0.2222 ***	(0.0084)	-0.2227 ***	(0.0084)
Non health employment	-0.6550 ***	(0.0043)	-0.6557 ***	(0.0043)
French	-0.0046	(0.0102)	-0.0046	(0.0102)
Other language	-0.0627 ***	(0.0090)	-0.0546 ***	(0.0102)
Visible minority	-0.0331 ***	(0.0094)	-0.0435 ***	(0.0129)
Separated, divorced or widowed	0.0313 ***	(0.0086)	0.0310 ***	(0.0086)
Married or common law	0.0511 ***	(0.0072)	0.0507 ***	(0.0072)
Rural	-0.0348 ***	(0.0069)	-0.0342 ***	(0.0069)
Town	-0.0229 ***	(0.0066)	-0.0222 ***	(0.0067)
The Atlantic Provinces	-0.0241 **	(0.0120)	-0.0234 **	(0.0120)
Montreal	0.0410 ***	(0.0124)	0.0411 ***	(0.0124)
Rest of Quebec	0.0646 ***	(0.0134)	0.0652 ***	(0.0134)
Rest of Ontario	-0.0395 ***	(0.0091)	-0.0374 ***	(0.0091)
Manitoba	-0.0782 ***	(0.0143)	-0.0760 ***	(0.0143)
Saskatchewan	-0.0714 ***	(0.0156)	-0.0698 ***	(0.0156)
Alberta	-0.0846 ***	(0.0110)	-0.0839 ***	(0.0110)
Vancouver	-0.1220 ***	(0.0125)	-0.1204 ***	(0.0125)
Rest of BC	-0.1369 ***	(0.0133)	-0.1351 ***	(0.0134)
The Territories	-0.0428 ***	(0.0234)	-0.0425 **	(0.0234)
Observed P	0.6548		0.6548	
Predicted P	0.6807		0.6808	
Number of observations	48691		48691	
Pseudo R ²	0.2575		0.2571	

Dependent variable is $Y_i = 1$ if the individual is working as a registered nurse and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Reference groups are RN certification, Canadian born & educated, Canadian born, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table 3.9: Probit results examining the probability of being employed as a registered nurse for the full sample of all women whose major field of study was nursing using distinction between Canadian and foreign education and expanded country of origin groupings (Robust standard errors in parenthesis)

	Canadian Born & Canadian Educated	Foreign Born & Canadian Educated	Mixed Education	Foreign Born & Foreign Educated	Foreign Born & Foreign Educated
	dF/dx	dF/dx	dF/dx	dF/dx	dF/dx
Potential Experience	0.0094 *** (0.0010)	0.0128 *** (0.0042)	0.0132 *** (0.0044)	0.0233 *** (0.0099)	-0.0197 * (0.0122)
Potential Experience squared	-0.0003 *** (0.0000)	-0.0003 *** (0.0001)	-0.0002 ** (0.0001)	-0.0004 *** (0.0002)	0.0003 (0.0004)
Potential foreign Experience					0.0036 (0.0048)
Potential foreign Experience squared					-0.0003 ** (0.0001)
Other certification below Bachelors	0.0676 *** (0.0083)	0.0478 * (0.0349)	0.0938 *** (0.0268)	0.0589 * (0.0388)	0.0641 * (0.0391)
Bachelors degree	0.0184 *** (0.0067)	0.0788 *** (0.0250)	0.1197 *** (0.0233)	0.1105 *** (0.0333)	0.1215 *** (0.0337)
Higher degree	-0.1298 *** (0.0160)	-0.0193 (0.0536)	0.0379 (0.0486)	0.0764 * (0.0589)	0.0906 * (0.0586)
Eastern & Southern Europe		0.0847 *** (0.0345)	-0.0181 (0.0436)	-0.0613 (0.0567)	-0.0590 (0.0568)
Central & South America		-0.0400 (0.0567)	-0.0603 (0.0635)	-0.1502 ** (0.0816)	-0.1435 ** (0.0814)
Caribbean and Africa		-0.0272 (0.0475)	0.0349 (0.0574)	0.0621 (0.0780)	0.0700 (0.0775)
Asia and India		-0.0146 (0.0468)	0.0158 (0.0575)	-0.0541 (0.0794)	-0.0354 (0.0791)
Nursing and residential care facilities	-0.2489 *** (0.0088)	-0.2701 *** (0.0321)	-0.3228 *** (0.0222)	-0.3129 *** (0.0259)	-0.3073 *** (0.0262)
Offices	-0.3793 *** (0.0173)	-0.3342 *** (0.0634)	-0.4188 *** (0.0357)	-0.3032 *** (0.0398)	-0.2932 *** (0.0411)
Other Health Care Facilities	-0.1979 *** (0.0092)	-0.2348 *** (0.0373)	-0.3423 *** (0.0273)	-0.3079 *** (0.0286)	-0.3009 *** (0.0291)
Non health employment	-0.6442 *** (0.0050)	-0.6705 *** (0.0180)	-0.6885 *** (0.0125)	-0.6560 *** (0.0173)	-0.6515 *** (0.0176)
French	-0.0104 (0.0108)	0.0835 (0.0800)	0.0238 (0.0632)	0.0377 (0.1073)	0.0316 (0.1074)
Other language	-0.0459 *** (0.0134)	-0.0708 *** (0.0253)	-0.0236 (0.0274)	-0.0586 * (0.0387)	-0.0570 * (0.0388)
Visible minority	-0.0459 *** (0.0145)	-0.0253 (0.0428)	-0.0549 (0.0530)	-0.0572 (0.0729)	-0.0639 (0.0721)
Separated, divorced or widowed	0.0450 *** (0.0090)	0.0035 (0.0369)	-0.0515 * (0.0369)	-0.0547 (0.0474)	-0.0541 (0.0474)
Married or common law	0.0680 *** (0.0078)	0.0421 * (0.0288)	-0.0468 * (0.0291)	-0.0871 ** (0.0401)	-0.0861 ** (0.0401)
Rural	-0.0391 *** (0.0070)	0.0103 (0.0361)	-0.0272 (0.0394)	-0.0987 ** (0.0561)	-0.0880 * (0.0567)
Town	-0.0245 *** (0.0068)	-0.0217 (0.0337)	-0.0463 * (0.0348)	-0.0162 (0.0531)	-0.0182 (0.0532)
The Atlantic Provinces	-0.0049 (0.0130)	-0.1272 * (0.0831)	-0.1206 ** (0.0709)	0.2878 ** (0.1157)	0.2863 ** (0.1177)
Montreal	0.0686 *** (0.0142)	-0.0205 (0.0461)	-0.0004 (0.0378)	-0.1148 ** (0.0492)	-0.1156 ** (0.0494)
Rest of Quebec	0.0828 *** (0.0142)	0.1717 (0.1119)	0.1208 (0.0972)	0.2760 ** (0.1433)	0.2958 ** (0.1408)
Rest of Ontario	-0.0229 ** (0.0109)	-0.0701 ** (0.0317)	-0.0461 * (0.0292)	-0.0464 (0.0397)	-0.0478 (0.0397)
Manitoba	-0.0455 *** (0.0158)	-0.1323 ** (0.0605)	-0.2492 *** (0.0482)	-0.1817 *** (0.0671)	-0.1852 *** (0.0665)

Saskatchewan	-0.0511 *** (0.0166)	-0.2416 *** (0.0909)	0.0361 (0.0856)	-0.1195 (0.1028)	-0.1209 (0.1027)
Alberta	-0.0581 *** (0.0130)	-0.1434 *** (0.0438)	-0.1437 *** (0.0330)	-0.1174 *** (0.0405)	-0.1192 *** (0.0404)
Vancouver	-0.0947 *** (0.0163)	-0.1704 *** (0.0389)	-0.1577 *** (0.0296)	-0.1309 *** (0.0350)	-0.1329 *** (0.0351)
Rest of BC	-0.1095 *** (0.0153)	-0.2572 *** (0.0507)	-0.1445 *** (0.0469)	-0.1520 *** (0.0570)	-0.1575 *** (0.0571)
The Territories	-0.0165 (0.0245)	-0.2065 * (0.1210)	-0.0714 (0.0987)	-0.0015 (0.1363)	-0.0046 (0.1365)
Observed P	0.6730	0.6602	0.5682	0.4645	0.4645
Predicted P	0.7018	0.6853	0.5738	0.4393	0.4384
Number of observations	39978	2663	3935	2114	2114
Pseudo R ²	0.2487	0.2555	0.3015	0.3001	0.3029

Dependent variable is $Y_i = 1$ if the individual is a registered nurse and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Reference groups are RN certification, Born in the United States, Western or Northern Europe, or Australia, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Appendix A3

Table A3.1: Regression results for the Mincer earnings equation including place of employment variables for the sample of all women working as nurses (Robust standard errors in parenthesis)

	(1)		(2)	
Constant	2.8334 ***	(0.0217)	2.8409 ***	(0.0217)
Potential Experience	0.0247 ***	(0.0018)	0.0245 ***	(0.0018)
Potential Experience squared	-0.0004 ***	(0.0000)	-0.0004 ***	(0.0000)
Other certification below Bachelors	0.0202 *	(0.0132)	0.0174 *	(0.0132)
Bachelors degree	0.1229 ***	(0.0095)	0.1191 ***	(0.0095)
Higher degree	0.0912 ***	(0.0267)	0.0876 ***	(0.0267)
Canadian educated Immigrant	-0.0446 **	(0.0207)		
Foreign educated Immigrant	-0.0916 ***	(0.0286)		
Mixed education	-0.0328 *	(0.0202)		
United States, Western & Northern				
Europe and Australia			-0.0354 **	(0.0178)
Eastern & Southern Europe			-0.0903 **	(0.0386)
Central & South America			-0.0229	(0.0458)
Caribbean and Africa			-0.0874 ***	(0.0360)
Asia and India			0.0314	(0.0332)
Dependent children	0.0076	(0.0087)	0.0087	(0.0087)
French	0.0468 ***	(0.0159)	0.0414 ***	(0.0160)
Other language	0.0473 ***	(0.0168)	0.0286 *	(0.0187)
Separated, divorced or widowed	-0.0169	(0.0150)	-0.0150	(0.0149)
Married or common law	0.0449 ***	(0.0122)	0.0437 ***	(0.0122)
Nursing and residential care facilities	-0.1614 ***	(0.0136)	-0.1619 ***	(0.0135)
Offices	-0.1848 ***	(0.0199)	-0.1859 ***	(0.0199)
Other Health Care Facilities	-0.0913 ***	(0.0121)	-0.0907 ***	(0.0121)
Visible minority	-0.1110 ***	(0.0184)	-0.1284 ***	(0.0250)
Rural	-0.0035	(0.0109)	-0.0028	(0.0109)
Town	-0.0135 *	(0.0102)	-0.0135 *	(0.0102)
The Atlantic Provinces	-0.2267 ***	(0.0184)	-0.2294 ***	(0.0184)
Montreal	-0.0728 ***	(0.0218)	-0.0670 ***	(0.0218)
Rest of Quebec	-0.0857 ***	(0.0231)	-0.0840 ***	(0.0231)
Rest of Ontario	-0.0258 **	(0.0154)	-0.0271 **	(0.0155)
Manitoba	-0.1350 ***	(0.0236)	-0.1346 ***	(0.0236)
Saskatchewan	-0.0799 ***	(0.0233)	-0.0811 ***	(0.0233)
Alberta	-0.0583 ***	(0.0182)	-0.0616 ***	(0.0181)
Vancouver	-0.0023	(0.0201)	-0.0121	(0.0201)
Rest of BC	-0.0401 **	(0.0204)	-0.0429 **	(0.0205)
The Territories	0.1994 ***	(0.0322)	0.1975 ***	(0.0322)
N	33207		33207	
R ²	0.037		0.0375	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%. Reference groups are RN certification, Canadian born & educated, Canadian born, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table A3.2: Regression results for the Mincer earnings equation for the sample of all women working as nurses using distinction between Canadian and foreign experience and including place of employment variables (Robust standard errors in parenthesis)

	Canadian Born & Canadian Educated		Foreign Born & Canadian Educated		Mixed Education		Foreign Born & Foreign Educated		Foreign Born & Foreign Educated	
Constant	2.8318 ***	(0.0243)	2.6751 ***	(0.0970)	2.7475 ***	(0.0994)	2.6603 ***	(0.3373)	3.9373 ***	(0.2743)
Potential Canadian Experience	0.0250 ***	(0.0018)	0.0329 ***	(0.0103)	0.0304 ***	(0.0086)	0.0356 *	(0.0249)	-0.0444 **	(0.0251)
Potential Canadian Experience squared	-0.0004 ***	(0.0000)	-0.0006 ***	(0.0003)	-0.0004 ***	(0.0002)	-0.0005	(0.0004)	-0.0001	(0.0010)
Foreign Potential Experience									-0.0179 *	(0.0125)
Foreign Potential experience squared									0.0000	(0.0003)
Other certification below Bachelors	0.0287 **	(0.0137)	-0.0786	(0.0824)	0.0492	(0.0459)	-0.1133	(0.0923)	-0.1089	(0.0915)
Bachelors degree	0.1276 ***	(0.0102)	0.1113 ***	(0.0411)	0.0817 **	(0.0385)	0.0901 *	(0.0607)	0.0954 *	(0.0616)
Higher degree	0.0894 ***	(0.0321)	0.0522	(0.0752)	0.1410 **	(0.0762)	0.1149 *	(0.0814)	0.1394 **	(0.0795)
Childcare	0.0145 *	(0.0093)	-0.0289	(0.0406)	-0.0101	(0.0357)	-0.1111 **	(0.0545)	-0.1160 **	(0.0546)
French	0.0358 **	(0.0170)	0.0918	(0.1028)	-0.0509	(0.1099)	0.3636 ***	(0.1424)	0.3010 **	(0.1412)
Other language	0.0280	(0.0236)	0.1108 ***	(0.0431)	0.0558 *	(0.0365)	0.0542	(0.0600)	0.0655	(0.0603)
Married or common law	-0.0046	(0.0152)	-0.0422	(0.0863)	-0.0847	(0.0671)	-0.1109	(0.1113)	-0.1052	(0.1098)
Separated, divorced or widowed	0.0358 ***	(0.0128)	0.1411 **	(0.0640)	0.0854 *	(0.0525)	-0.0206	(0.0743)	-0.0183	(0.0726)
Nursing Homes	-0.1446 ***	(0.0144)	-0.2964 ***	(0.0758)	-0.2000 ***	(0.0492)	-0.2091 ***	(0.0674)	-0.1889 ***	(0.0667)
Offices	-0.1906 ***	(0.0205)	-0.3537 ***	(0.1197)	0.0380	(0.0798)	-0.2191 **	(0.1127)	-0.1802 *	(0.1144)
Other health care facilities	-0.0787 ***	(0.0127)	-0.0721	(0.0592)	-0.2529 ***	(0.0689)	-0.2151 ***	(0.0712)	-0.2001 ***	(0.0691)
Visible minority	-0.1350 ****	(0.0291)	-0.0653 *	(0.0494)	-0.1843 ***	(0.0385)	-0.0059	(0.0597)	0.0035	(0.0584)
Rural	0.0021	(0.0111)	-0.0872	(0.0714)	-0.1093 *	(0.0857)	-0.0265	(0.1041)	0.0117	(0.1085)
Town	-0.0129	(0.0106)	0.0041	(0.0631)	-0.0875 *	(0.0602)	0.0771	(0.0891)	0.0762	(0.0841)
The Atlantic Provinces	-0.2217 ***	(0.0206)	-0.2231 *	(0.1399)	-0.3193 ***	(0.1024)	-0.4154 **	(0.1887)	-0.4461 ***	(0.1847)
Montreal	-0.0602 ***	(0.0253)	-0.2074 ***	(0.0911)	-0.0272	(0.0565)	-0.0951	(0.0830)	-0.0979	(0.0807)
Rest of Quebec	-0.0788 ***	(0.0258)	-0.0071	(0.2334)	-0.0543	(0.1251)	-0.0177	(0.1594)	0.0352	(0.1442)
Rest of Ontario	-0.0218	(0.0182)	0.0234	(0.0575)	-0.0586	(0.0471)	-0.0532	(0.0856)	-0.0642	(0.0844)
Manitoba	-0.1267 ***	(0.0251)	-0.1765 *	(0.1324)	-0.2263 *	(0.1417)	0.0350	(0.1761)	0.0034	(0.1813)
Saskatchewan	-0.0674 ***	(0.0241)	-0.3438	(0.3194)	-0.1254	(0.1372)	-0.5251 *	(0.3226)	-0.5755 **	(0.3216)
Alberta	-0.0526 ***	(0.0212)	-0.0405	(0.0634)	-0.1052 **	(0.0563)	-0.0582	(0.0748)	-0.0792	(0.0751)
Vancouver	-0.0414 *	(0.0251)	0.2270 ***	(0.0570)	-0.0020	(0.0501)	0.0053	(0.0660)	0.0068	(0.0654)
Rest of BC	-0.0405 **	(0.0233)	0.0583	(0.0883)	-0.0415	(0.0633)	-0.0185	(0.1320)	-0.0463	(0.1303)

The Territories	0.1908 *** (0.0352)	0.3340 *** (0.1180)	0.3582 ** (0.1714)	0.2010 (0.1597)	0.1740 (0.1459)
N	27934	1831	2368	1074	1074
R ²	0.0368	0.0758	0.0546	0.0505	0.0720

Dependent variable is the natural log of hourly wages.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table A3.3: Regression results for the Mincer earnings equation for the sample of all women working as nurses using distinction between Canadian and foreign experience with the expanded country of origin groupings and including place of employment variables (Robust standard errors in parenthesis)

	Foreign born and Canadian educated		Mixed education		Foreign born and educated		Foreign born and educated	
Constant	2.7076 ***	(0.0940)	2.7669 ***	(0.1031)	2.6428 ***	(0.3373)	3.9589 ***	(0.2831)
Potential Canadian Experience	0.0342 ***	(0.0104)	0.0299 ***	(0.0086)	0.0372 *	(0.0248)	-0.0455 **	(0.0255)
Potential Canadian Experience squared	-0.0007 ***	(0.0003)	-0.0004 ***	(0.0002)	-0.0006 *	(0.0004)	-0.0001	(0.0010)
Foreign Potential experience							-0.0174 *	(0.0125)
Foreign Potential experience squared							0.0000	(0.0003)
Other certification below Bachelors	-0.0774	(0.0825)	0.0211	(0.0462)	-0.1139	(0.0928)	-0.1140	(0.0921)
Bachelors degree	0.1023 ***	(0.0414)	0.0545 *	(0.0384)	0.0900 *	(0.0592)	0.0868 *	(0.0600)
Higher degree	0.0432	(0.0734)	0.1167 *	(0.0754)	0.1198 *	(0.0816)	0.1393 **	(0.0795)
Childcare	-0.0240	(0.0407)	-0.0071	(0.0356)	-0.1093 **	(0.0548)	-0.1141 **	(0.0548)
French	0.1110	(0.1035)	-0.0510	(0.1137)	0.3520 ***	(0.1441)	0.2877 **	(0.1430)
Other language	0.0760 *	(0.0513)	0.0096	(0.0474)	0.0692	(0.0815)	0.0590	(0.0810)
Married or common law	-0.0413	(0.0857)	-0.0659	(0.0669)	-0.1144	(0.1097)	-0.1062	(0.1083)
Separated, divorced or widowed	0.1352 **	(0.0637)	0.0830 *	(0.0522)	-0.0247	(0.0743)	-0.0240	(0.0725)
Nursing Homes	-0.2956 ***	(0.0756)	-0.1949 ***	(0.0495)	-0.2052 ***	(0.0679)	-0.1856 ***	(0.0669)
Offices	-0.3548 ***	(0.1221)	0.0522	(0.0806)	-0.2174 **	(0.1129)	-0.1777 *	(0.1147)
Other health care facilities	-0.0708	(0.0590)	-0.2463 ***	(0.0692)	-0.2159 ***	(0.0721)	-0.1988 ***	(0.0701)
Eastern & Southern Europe	-0.0272	(0.0659)	-0.0466	(0.0781)	-0.0383	(0.1174)	-0.0352	(0.1154)
Central & South America	0.0256	(0.0713)	-0.0976	(0.0792)	-0.1244	(0.1177)	-0.1208	(0.1177)
Caribbean and Africa	-0.2052 ***	(0.0638)	-0.2134 ***	(0.0524)	0.0100	(0.0877)	-0.0015	(0.0877)
Asia and India	-0.0172	(0.0692)	-0.0910 **	(0.0545)	-0.0195	(0.0889)	0.0203	(0.0894)
Rural	-0.0898	(0.0715)	-0.0963	(0.0864)	-0.0310	(0.1054)	0.0101	(0.1103)
Town	-0.0030	(0.0624)	-0.0756	(0.0607)	0.0747	(0.0902)	0.0734	(0.0852)
The Atlantic Provinces	-0.2647 **	(0.1418)	-0.3118 ***	(0.1033)	-0.4151 **	(0.1878)	-0.4464 ***	(0.1843)
Montreal	-0.1847 **	(0.0909)	0.0027	(0.0583)	-0.0970	(0.0868)	-0.0918	(0.0846)
Rest of Quebec	-0.0482	(0.2327)	-0.0522	(0.1265)	-0.0046	(0.1661)	0.0510	(0.1490)
Rest of Ontario	0.0049	(0.0574)	-0.0510	(0.0467)	-0.0499	(0.0854)	-0.0588	(0.0842)
Manitoba	-0.1929 *	(0.1342)	-0.2181 *	(0.1406)	0.0362	(0.1773)	0.0060	(0.1849)
Saskatchewan	-0.3603	(0.3210)	-0.1204	(0.1387)	-0.5166 *	(0.3148)	-0.5682 **	(0.3136)

Alberta	-0.0529	(0.0638)	-0.1089 **	(0.0568)	-0.0589	(0.0737)	-0.0849	(0.0741)
Vancouver	0.1897 ***	(0.0570)	-0.0192	(0.0506)	0.0026	(0.0659)	-0.0019	(0.0652)
Rest of BC	0.0312	(0.0895)	-0.0372	(0.0629)	-0.0222	(0.1334)	-0.0563	(0.1316)
The Territories	0.3196 ***	(0.1173)	0.3400 **	(0.1692)	0.1966	(0.1578)	0.1648	(0.1449)
N	1831		2368		1074		1074	
R ²	0.0815		0.0530		0.0516		0.0733	

Dependent variable is the natural log of hourly wages.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, Born in the United States, Western or Northern Europe, or Australia, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Appendix B3

Table B3.1: Regression results for the Mincer earnings equation for the sample of all women working as nurses excluding place of employment variables (Robust standard errors in parenthesis)

	(1)		(2)	
Constant	2.8051 ***	(0.0217)	2.8133 ***	(0.0216)
Potential Experience	0.0253 ***	(0.0018)	0.0251 ***	(0.0018)
Potential Experience squared	-0.0004 ***	(0.0000)	-0.0004 ***	(0.0000)
Other certification below Bachelors	0.0153	(0.0132)	0.0123	(0.0132)
Bachelors degree	0.1158 ***	(0.0094)	0.1119 ***	(0.0094)
Higher degree	0.0812 ***	(0.0266)	0.0774 ***	(0.0265)
Canadian educated Immigrant	-0.0458 **	(0.0208)		
Foreign educated Immigrant	-0.1071 ***	(0.0288)		
Mixed education	-0.0340 **	(0.0202)		
United States, Western & Northern				
Europe and Australia			-0.0390 **	(0.0178)
Eastern & Southern Europe			-0.1024 ***	(0.0387)
Central & South America			-0.0259	(0.0464)
Caribbean and Africa			-0.0862 ****	(0.0361)
Asia and India			0.0323	(0.0332)
Dependent children	0.0068	(0.0088)	0.0080	(0.0087)
French	0.0445 ***	(0.0160)	0.0390 ***	(0.0161)
Other language	0.0470 ***	(0.0169)	0.0289 *	(0.0187)
Separated, divorced or widowed	-0.0223 *	(0.0150)	-0.0204 *	(0.0149)
Married or common law	0.0399 ***	(0.0122)	0.0386 ***	(0.0123)
Visible minority	-0.1087 ***	(0.0185)	-0.1304 ***	(0.0250)
Rural	-0.0146 *	(0.0108)	-0.0137	(0.0109)
Town	-0.0199 **	(0.0103)	-0.0199 **	(0.0103)
The Atlantic Provinces	-0.2132 ***	(0.0184)	-0.2159 ***	(0.0183)
Montreal	-0.0639 ***	(0.0218)	-0.0576 ***	(0.0219)
Rest of Quebec	-0.0721 ***	(0.0232)	-0.0700 ***	(0.0232)
Rest of Ontario	-0.0270 **	(0.0155)	-0.0280 **	(0.0156)
Manitoba	-0.1285 ***	(0.0235)	-0.1277 ***	(0.0235)
Saskatchewan	-0.0831 ***	(0.0232)	-0.0840 ***	(0.0232)
Alberta	-0.0486 ***	(0.0182)	-0.0519 ***	(0.0182)
Vancouver	0.0094	(0.0202)	-0.0005	(0.0201)
Rest of BC	-0.0282 *	(0.0205)	-0.0307 *	(0.0205)
The Territories	0.2141 ***	(0.0321)	0.2125 ***	(0.0322)
N	33207		33207	
R ²	0.0290		0.0294	

Dependent variable is the natural log of hourly wages.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, Canadian born & educated, Canadian born, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table B3.2: Regression results for the Mincer earnings equation for the sample of all women working as nurses using distinction between Canadian and foreign experience but excluding place of employment variables (Robust standard errors in parenthesis)

	Canadian Born & Canadian Educated		Foreign Born & Canadian Educated		Mixed Education		Foreign Born & Foreign Educated		Foreign Born & Foreign Educated	
Constant	2.8031 ***	(0.0242)	2.6269 ***	(0.0983)	2.6885 ***	(0.1019)	2.6298 ***	(0.3393)	3.9239 ***	(0.2771)
Potential Canadian Experience	0.0259 ***	(0.0018)	0.0325 ***	(0.0104)	0.0322 ***	(0.0087)	0.0308	(0.0251)	-0.0479 **	(0.0253)
Potential Canadian Experience squared	-0.0005 ***	(0.0000)	-0.0007 ***	(0.0003)	-0.0005 ***	(0.0002)	-0.0004	(0.0004)	-0.0001	(0.0010)
Foreign Potential Experience									-0.0211 **	(0.0125)
Foreign Potential experience squared									0.0001	(0.0003)
Other certification below Bachelors	0.0237 **	(0.0137)	-0.0700	(0.0833)	0.0503	(0.0460)	-0.1159	(0.0919)	-0.1117	(0.0909)
Bachelors degree	0.1209 ***	(0.0100)	0.1208 ***	(0.0412)	0.0749 **	(0.0383)	0.0836 *	(0.0618)	0.0877 *	(0.0626)
Higher degree	0.0798 ***	(0.0319)	0.0511	(0.0782)	0.1367 **	(0.0770)	0.1043 *	(0.0808)	0.1318 **	(0.0796)
Childcare	0.0134 *	(0.0093)	-0.0246	(0.0409)	-0.0123	(0.0361)	-0.1123 **	(0.0551)	-0.1180 **	(0.0551)
French	0.0347 ***	(0.0171)	0.0792	(0.1024)	-0.0472	(0.1102)	0.3700 ***	(0.1448)	0.3015 **	(0.1432)
Other language	0.0286	(0.0237)	0.1104 ***	(0.0436)	0.0594 *	(0.0364)	0.0447	(0.0609)	0.0580	(0.0610)
Married or common law	-0.0094	(0.0153)	-0.0464	(0.0876)	-0.0977 *	(0.0671)	-0.1080	(0.1117)	-0.1020	(0.1102)
Separated, divorced or widowed	0.0305 ***	(0.0128)	0.1447 **	(0.0661)	0.0804 *	(0.0527)	-0.0195	(0.0756)	-0.0182	(0.0738)
Visible minority	-0.1383 ***	(0.0290)	-0.0711 *	(0.0503)	-0.1789 ***	(0.0393)	0.0098	(0.0601)	0.0167	(0.0587)
Rural	-0.0081	(0.0111)	-0.0980 *	(0.0743)	-0.1273 *	(0.0846)	-0.0247	(0.1043)	0.0149	(0.1092)
Town	-0.0191 **	(0.0107)	0.0002	(0.0631)	-0.0949 *	(0.0606)	0.0808	(0.0902)	0.0806	(0.0850)
The Atlantic Provinces	-0.2062 ***	(0.0206)	-0.2299 *	(0.1442)	-0.3185 ***	(0.1017)	-0.4082 **	(0.1836)	-0.4415 ***	(0.1800)
Montreal	-0.0505 **	(0.0254)	-0.1862 **	(0.0907)	-0.0262	(0.0569)	-0.0792	(0.0822)	-0.0858	(0.0796)
Rest of Quebec	-0.0637 ***	(0.0259)	-0.0211	(0.2360)	-0.0421	(0.1275)	-0.0179	(0.1715)	0.0399	(0.1551)
Rest of Ontario	-0.0202	(0.0183)	0.0139	(0.0587)	-0.0718 *	(0.0485)	-0.0658	(0.0850)	-0.0779	(0.0836)
Manitoba	-0.1171 ***	(0.0250)	-0.1819 *	(0.1298)	-0.2291 *	(0.1411)	0.0501	(0.1719)	0.0153	(0.1796)
Saskatchewan	-0.0666 ***	(0.0240)	-0.3045	(0.3157)	-0.1355	(0.1349)	-0.5057 *	(0.3334)	-0.5606 **	(0.3308)
Alberta	-0.0400 **	(0.0213)	-0.0321	(0.0641)	-0.1149 **	(0.0567)	-0.0555	(0.0747)	-0.0810	(0.0751)
Vancouver	-0.0251	(0.0251)	0.2373 ***	(0.0574)	-0.0095	(0.0502)	0.0201	(0.0657)	0.0183	(0.0649)
Rest of BC	-0.0260	(0.0233)	0.0613	(0.0868)	-0.0553	(0.0629)	0.0021	(0.1323)	-0.0314	(0.1305)
The Territories	0.2085 ***	(0.0352)	0.3407 ***	(0.1146)	0.3116 **	(0.1667)	0.1619	(0.1561)	0.1310	(0.1435)
N	27934		1831		2368		1074		1074	
R ²	0.0295		0.0566		0.0408		0.0356		0.0601	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table B3.3: Regression results for the Mincer earnings equation for the sample of all women working as nurses using distinction between Canadian and foreign experience with the expanded country of origin groupings but excluding place of employment variables (Robust standard errors in parenthesis)

	Foreign born and Canadian educated		Mixed education		Foreign born and educated		Foreign born and educated	
Constant	2.6551 ***	(0.0950)	2.7193 ***	(0.1054)	2.6159 ***	(0.3390)	3.9512 ***	(0.2861)
Potential Canadian Experience	0.0338 ***	(0.0106)	0.0315 ***	(0.0087)	0.0327 *	(0.0250)	-0.0489 **	(0.0257)
Potential Canadian Experience squared	-0.0007 ***	(0.0003)	-0.0005 ***	(0.0002)	-0.0005	(0.0004)	0.0000	(0.0010)
Foreign Potential experience							-0.0205 *	(0.0125)
Foreign Potential experience squared							0.0001	(0.0003)
Other certification below Bachelors	-0.0691	(0.0834)	0.0202	(0.0464)	-0.1172	0.0923	-0.1174 *	(0.0913)
Bachelors degree	0.1117 ***	(0.0418)	0.0459	(0.0383)	0.0821 *	0.0602	0.0777 *	(0.0608)
Higher degree	0.0428	(0.0768)	0.1103 *	(0.0761)	0.1071 *	0.0808	0.1299 *	(0.0794)
Childcare	-0.0198	(0.0410)	-0.0085	(0.0360)	-0.1104 **	0.0554	-0.1159 **	(0.0552)
French	0.0991	(0.1029)	-0.0468	(0.1139)	0.3584 ***	0.1465	0.2883 **	(0.1451)
Other language	0.0722 *	(0.0512)	0.0155	(0.0474)	0.0671	0.0821	0.0569	(0.0815)
Married or common law	-0.0452	(0.0870)	-0.0780	(0.0671)	-0.1121	0.1101	-0.1033	(0.1086)
Separated, divorced or widowed	0.1389 **	(0.0658)	0.0775 *	(0.0525)	-0.0246	0.0755	-0.0248	(0.0736)
Eastern & Southern Europe	-0.0182	(0.0660)	-0.0682	(0.0785)	-0.0618	0.1161	-0.0561	(0.1142)
Central & South America	0.0290	(0.0712)	-0.1069 *	(0.0811)	-0.1253	0.1187	-0.1223	(0.1191)
Caribbean and Africa	-0.2073 ***	(0.0643)	-0.2169 ***	(0.0532)	0.0201	0.0890	0.0055	(0.0890)
Asia and India	-0.0146	(0.0689)	-0.0897 *	(0.0547)	-0.0126	0.0892	0.0269	(0.0893)
Rural	-0.0995 *	(0.0741)	-0.1151 *	(0.0853)	-0.0322	(0.1055)	0.0109	(0.1110)
Town	-0.0061	(0.0624)	-0.0841 *	(0.0612)	0.0759	(0.0913)	0.0757	(0.0861)
The Atlantic Provinces	-0.2696 **	(0.1460)	-0.3152 ***	(0.1026)	-0.4091 **	(0.1827)	-0.4430 ***	(0.1797)
Montreal	-0.1631 **	(0.0906)	0.0030	(0.0586)	-0.0820	(0.0858)	-0.0802	(0.0833)
Rest of Quebec	-0.0615	(0.2351)	-0.0410	(0.1285)	-0.0073	(0.1781)	0.0533	(0.1595)
Rest of Ontario	-0.0032	(0.0584)	-0.0645 *	(0.0482)	-0.0624	(0.0849)	-0.0723	(0.0835)
Manitoba	-0.1972 **	(0.1318)	-0.2221 *	(0.1400)	0.0518	(0.1730)	0.0182	(0.1833)
Saskatchewan	-0.3214	(0.3173)	-0.1333	(0.1371)	-0.5003 *	(0.3250)	-0.5561 **	(0.3222)
Alberta	-0.0429	(0.0645)	-0.1208 **	(0.0571)	-0.0580	(0.0738)	-0.0885	(0.0743)
Vancouver	0.2006 ***	(0.0574)	-0.0294	(0.0507)	0.0149	(0.0660)	0.0070	(0.0651)
Rest of BC	0.0363	(0.0878)	-0.0539	(0.0626)	-0.0053	(0.1337)	-0.0449	(0.1318)

The Territories	0.3288 *** (0.1150)	0.2930 ** (0.1638)	0.1582 (0.1548)	0.1226 (0.1432)
N	1831	2368	1074	1074
R ²	0.0624	0.0398	0.0370	0.0618

Dependent variable is the natural log of hourly wages.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

Reference groups are RN certification, Born in the United States, Western or Northern Europe, or Australia, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table B3.4: Probit results examining the probability of being employed as a registered nurse for the full sample of all women whose major field of study was nursing but excluding place of employment variables (Robust standard errors in parenthesis)

	(1)		(2)	
	dF/dx		dF/dx	
Potential Experience	0.0108 ***	(0.0009)	0.0101 ***	(0.0009)
Potential Experience squared	-0.0003 ***	(0.0000)	-0.0003 ***	(0.0000)
Other certification below Bachelors	0.0408 ***	(0.0073)	0.0403 ***	(0.0073)
Bachelors degree	0.0342 ***	(0.0056)	0.0343 ***	(0.0056)
Higher degree	-0.1492 ***	(0.0126)	-0.1508 ***	(0.0126)
Canadian educated Immigrant	0.0221 **	(0.0103)		
Foreign educated Immigrant	-0.1465 ***	(0.0135)		
Mixed education	-0.0496 ***	(0.0103)		
United States, Western & Northern				
Europe and Australia			-0.0536 ***	(0.0096)
Eastern & Southern Europe			-0.0765 ***	(0.0195)
Central & South America			-0.0767 ***	(0.0271)
Caribbean and Africa			0.0509 ***	(0.0154)
Asia and India			-0.0499 ***	(0.0162)
French	-0.0028	(0.0095)	-0.0015	(0.0095)
Other language	-0.0675 ***	(0.0084)	-0.0521 ***	(0.0094)
Visible minority	-0.0030	(0.0086)	-0.0424 ***	(0.0118)
Separated, divorced or widowed	0.0170 **	(0.0081)	0.0161 **	(0.0081)
Married or common law	0.0133 **	(0.0066)	0.0127 **	(0.0066)
Rural	-0.0568 ***	(0.0063)	-0.0550 ***	(0.0063)
Town	-0.0205 ***	(0.0061)	-0.0191 ***	(0.0061)
The Atlantic Provinces	0.0611 ***	(0.0100)	0.0649 ***	(0.0099)
Montreal	0.0934 ***	(0.0107)	0.0932 ***	(0.0107)
Rest of Quebec	0.1188 ***	(0.0115)	0.1209 ***	(0.0115)
Rest of Ontario	-0.0080	(0.0081)	-0.0016	(0.0081)
Manitoba	0.0012	(0.0122)	0.0081	(0.0122)
Saskatchewan	-0.0035	(0.0133)	0.0023	(0.0132)
Alberta	-0.0322 ***	(0.0096)	-0.0276 ***	(0.0096)
Vancouver	-0.0545 ***	(0.0110)	-0.0465 ***	(0.0110)
Rest of BC	-0.0517 ***	(0.0116)	-0.0444 ***	(0.0116)
The Territories	-0.0043	(0.0214)	0.0031	(0.0212)
Observed P	0.6548		0.6548	
Predicted P	0.6598		0.6598	
Number of observations	48691		48691	
Pseudo R ²	0.0343		0.0331	

Dependent variable is $Y_i = 1$ if the individual is working as a registered nurse and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Reference groups are RN certification, Canadian born & educated, Canadian born, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Table B3.5: Probit results examining the probability of being employed as a registered nurse for the full sample of all women whose major field of study was nursing using distinction between Canadian and foreign education and expanded country of origin groupings excluding place of employment (Robust standard errors in parenthesis)

	Canadian Born & Canadian Educated	Foreign Born & Canadian Educated	Mixed Education	Foreign Born & Foreign Educated	Foreign Born & Foreign Educated
	dF/dx	dF/dx	dF/dx	dF/dx	dF/dx
Potential Experience	0.0103 *** (0.0010)	0.0158 *** (0.0038)	0.0253 *** (0.0037)	0.0242 *** (0.0086)	-0.0252 ** (0.0111)
Potential Experience squared	-0.0004 *** (0.0000)	-0.0005 *** (0.0001)	-0.0004 *** (0.0001)	-0.0004 *** (0.0002)	0.0001 (0.0004)
Potential foreign Experience					-0.0014 (0.0044)
Potential foreign Experience squared					-0.0002 ** (0.0001)
Other certification below Bachelors	0.0436 *** (0.0081)	0.0318 (0.0326)	0.0689 *** (0.0243)	0.0564 ** (0.0343)	0.0651 ** (0.0347)
Bachelors degree	0.0188 *** (0.0062)	0.0822 *** (0.0227)	0.1241 *** (0.0202)	0.1357 *** (0.0292)	0.1519 *** (0.0295)
Higher degree	-0.1872 *** (0.0142)	-0.0678 * (0.0496)	0.0472 (0.0398)	0.0265 (0.0517)	0.0524 (0.0526)
Eastern & Southern Europe		0.0878 *** (0.0318)	0.0511 * (0.0372)	-0.0679 * (0.0510)	-0.0662 * (0.0515)
Central & South America		0.0089 (0.0495)	-0.0376 (0.0550)	-0.1507 ** (0.0732)	-0.1415 ** (0.0734)
Caribbean and Africa		-0.0157 (0.0428)	0.0938 ** (0.0445)	0.0488 (0.0670)	0.0572 (0.0668)
Asia and India		-0.0496 (0.0446)	0.0116 (0.0475)	-0.1176 * (0.0694)	-0.0911 * (0.0699)
French	-0.0057 (0.0101)	0.1070 * (0.0634)	-0.0607 (0.0584)	0.0039 (0.0916)	-0.0189 (0.0911)
Other language	-0.0387 *** (0.0124)	-0.0450 ** (0.0228)	-0.0383 * (0.0241)	-0.0787 *** (0.0339)	-0.0747 ** (0.0340)
Visible minority	-0.0660 *** (0.0136)	0.0123 (0.0389)	0.0521 (0.0432)	0.0481 (0.0622)	0.0385 (0.0619)
Separated, divorced or widowed	0.0311 *** (0.0086)	-0.0131 (0.0346)	-0.0456 * (0.0323)	-0.0351 (0.0427)	-0.0306 (0.0431)
Married or common law	0.0290 *** (0.0072)	0.0155 (0.0263)	-0.0595 *** (0.0254)	-0.0873 *** (0.0359)	-0.0850 *** (0.0362)
Rural	-0.0555 *** (0.0066)	-0.0261 (0.0336)	-0.0953 *** (0.0348)	-0.1406 *** (0.0494)	-0.1212 *** (0.0505)
Town	-0.0208 *** (0.0063)	-0.0161 (0.0308)	-0.0316 (0.0306)	-0.0235 (0.0486)	-0.0239 (0.0489)
The Atlantic Provinces	0.0825 *** (0.0106)	-0.0555 (0.0719)	-0.0679 (0.0632)	0.3335 *** (0.0758)	0.3282 *** (0.0777)
Montreal	0.1197 *** (0.0122)	0.0522 (0.0400)	0.0579 ** (0.0317)	-0.0628 * (0.0458)	-0.0619 * (0.0461)
Rest of Quebec	0.1380 *** (0.0122)	0.1926 * (0.0914)	0.2187 *** (0.0751)	0.1060 (0.1368)	0.1444 (0.1374)
Rest of Ontario	0.0154 * (0.0097)	-0.0142 (0.0287)	-0.0246 (0.0252)	-0.0274 (0.0367)	-0.0292 (0.0369)
Manitoba	0.0373 *** (0.0131)	-0.0647 (0.0536)	-0.0957 ** (0.0488)	-0.1581 *** (0.0626)	-0.1713 *** (0.0620)
Saskatchewan	0.0250 ** (0.0139)	-0.1533 ** (0.0834)	0.0432 (0.0764)	-0.0499 (0.0924)	-0.0540 (0.0912)
Alberta	0.0024 (0.0111)	-0.0878 ** (0.0392)	-0.0903 *** (0.0289)	-0.0870 ** (0.0370)	-0.0934 *** (0.0371)
Vancouver	-0.0171 (0.0139)	-0.0811 *** (0.0346)	-0.0930 *** (0.0262)	-0.0555 ** (0.0331)	-0.0613 ** (0.0332)

Rest of BC	-0.0157 (0.0129)	-0.1443 *** (0.0462)	-0.0538 * (0.0412)	-0.1234 ** (0.0569)	-0.1372 *** (0.0565)
The Territories	0.0348 * (0.0218)	-0.0996 (0.1112)	-0.0538 (0.0914)	-0.0317 (0.1127)	-0.0396 (0.1136)
Observed P	0.6730	0.6602	0.5682	0.4645	0.4645
Predicted P	0.6784	0.6657	0.5714	0.4638	0.4634
Number of observations	39978	2663	3935	2114	2114
Pseudo R ²	0.0332	0.0336	0.0425	0.0449	0.056

Dependent variable is $Y_i = 1$ if the individual is a registered nurse and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Reference groups are RN certification, Born in the United States, Western or Northern Europe, or Australia, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto.

Appendix C

An additional exercise in this study will involve examining various interaction effects to see if there are other aspects driving earnings and credential recognition for immigrant nurses in Canada. Firstly, all those who are working as nurses will be pooled together and various interaction effects such as place of birth, educational source and type of degree will be examined. The reference groups are RN certification, Canadian born & educated, Canadian born, English, No childcare, Single, Hospitals, Non-visible minority status, Urban and Toronto. Secondly, each group will analyzed separately to see what various interaction effects are significant for the different groups of nurses. In this case, the Reference groups are RN certification, born in the United States, Western or Northern Europe, or Australia, English, no childcare, single, hospitals, non-visible minority status, urban and Toronto. In general, the results from this exercise are inconclusive and the coefficients vary depending on the specification used. The results are not robust to changes and therefore the benefits of a detailed analysis are not substantially beneficial to this study.

Tables C3.1 through C3.19 report the various results for the different regressions using several interaction effects for the educational groupings pooled together and separately. Each of the tables shows the various interaction effects for the different groups and in many cases these interactions are not statistically significant. Frequently it is noted that the variable alone are significant, but when interacted together the effect is not important.

Table C3.1 shows the results for the pooled regressions with all of the nurses. One thing to note is that the interaction with educational source and level of education

is seldom significant for any group. Similarly, the interactions between source of education and country of origin are infrequently significant and often it is the relatively small sample size which is driving the results.

Table C3.2 shows the results for the sample of Canadian born nurses. Here it can be seen that having a BN or a higher certification is beneficial when it is interacted with the place of employment.

Tables C3.3 and C3.4 show the regression results using educational and place of employment interaction terms respectively for foreign born and Canadian educated nurses. Many of these interactions are not significant and in many cases when they are significant the coefficient is partially driven by the relatively small sample size. It is however interesting to note that having a BN or higher certification has a benefit in many cases when interacted with the region of birth. Table C3.4 reports the regression results including the place of employment interaction terms. Here it is seen that place of employment is infrequently significant when interacted with other variables. Alone this variable is significant but it's interaction with other variables is not.

Tables C3.5 and C3.6 show the regression results using educational and place of employment interaction terms respectively for nurses with a mixed education. The results for this group of nurses are quite variable. Frequently the effects appear to be quite large but again this is partially driven by the smaller sample sizes. Tables C3.7 through C3.10 show the regression results using educational and place of employment interaction terms for foreign born and educated nurses. Once again, many of the interaction terms are not statistically significant and many of the variables have a large magnitude which is misleading.

Tables C3.12 through C3.19 show the results for various probit regressions for the full sample and for the various samples individually again examining various interaction effects. Similarly these results are varied as was seen in the various regression results already presented. Not much is gained by including a detailed description of the various tables.

Table C3.1: Regression results for the Mincer earnings equation for the sample of all women working as nurses using various interaction effects (Robust standard errors in parenthesis)

	(1)		(2)		(3)		(4)	
Constant	2.8309 ***	(0.0222)	2.8284 ***	(0.0219)	2.8951 ***	(0.0211)	2.8367 ***	(0.0218)
Potential Experience	0.0257 ***	(0.0018)	0.0249 ***	(0.0018)	0.0233 ***	(0.0018)	0.0247 ***	(0.0018)
Potential Experience squared	-0.0004 ***	(0.0000)	-0.0004 ***	(0.0000)	-0.0004 ***	(0.0000)	-0.0004 ***	(0.0000)
Other certification below Bachelors	0.0210 *	(0.0132)	0.0294 **	(0.0137)	0.0239 **	(0.0137)	0.0298 **	(0.0137)
Bachelors degree	0.1230 ***	(0.0095)	0.1292 ***	(0.0102)	0.1218 ***	(0.0100)	0.1297 ***	(0.0102)
Higher degree	0.0925 ***	(0.0267)	0.0907 ***	(0.0321)	0.0793 ***	(0.0320)	0.0904 ***	(0.0323)
Canadian educated Immigrant	-0.0150	(0.0470)	-0.0395 *	(0.0251)	-0.2476 **	(0.1436)		
Foreign educated Immigrant	-0.2797 ***	(0.1033)	-0.0624 *	(0.0381)	0.0958 ***	(0.0399)		
Mixed education	-0.1691 ***	(0.0525)	-0.0195	(0.0241)	0.0811	(0.0920)		
United States, Western & Northern Europe and Australia					0.0176	(0.0675)	-0.0187	(0.0207)
Eastern & Southern Europe					-0.2865 ***	(0.0831)	-0.0424	(0.0438)
Central & South America					0.2802 **	(0.1301)	-0.0958 *	(0.0586)
Caribbean and Africa					-0.0307	(0.1968)	-0.0897 **	(0.0431)
Asia and India					0.0112	(0.1640)	0.1117 ***	(0.0410)
Canadian educated Immigrant * potential experience	-0.0017	(0.0022)						
Foreign educated Immigrant * potential experience	0.0072 **	(0.0036)						
Mixed education * potential experience	0.0055 ***	(0.0019)						
Canadian educated Immigrant * Other certification below Bachelors			-0.0967	(0.0856)				
Canadian educated Immigrant * Bachelors degree			0.0130	(0.0416)				
Canadian educated Immigrant * Higher degree			-0.0417	(0.0788)				
Foreign educated Immigrant * Other certification below Bachelors			-0.1442 *	(0.0895)				
Foreign educated Immigrant * Bachelors degree			-0.0422	(0.0547)				
Foreign educated Immigrant * Higher degree			-0.0220	(0.0855)				
Mixed education * Other certification below Bachelors			0.0101	(0.0481)				
Mixed education * Bachelors degree			-0.0723 **	(0.0400)				
Mixed education * Higher degree			0.0288	(0.0822)				
Canadian educated Immigrant * United States, Western & Northern Europe and Australia					0.1948	(0.1605)		
Canadian educated Immigrant * Eastern & Southern Europe					0.4763 ***	(0.1732)		

Canadian educated Immigrant * Central & South America								
Canadian educated Immigrant * Caribbean and Africa					0.0962	(0.2506)		
Canadian educated Immigrant * Asia and India					0.3535 *	(0.2229)		
Foreign educated Immigrant * United States, Western & Northern Europe and Australia					-0.2595 ***	(0.0933)		
Foreign educated Immigrant * Eastern & Southern Europe								
Foreign educated Immigrant * Central & South America					-0.5119 ***	(0.1721)		
Foreign educated Immigrant * Caribbean and Africa					-0.0695	(0.2116)		
Foreign educated Immigrant * Asia and India					-0.1118	(0.1720)		
Mixed education * United States, Western & Northern Europe and Australia					-0.0936	(0.1174)		
Mixed education * Eastern & Southern Europe					0.1103	(0.1348)		
Mixed education * Central & South America					-0.3708 **	(0.1724)		
Mixed education * Caribbean and Africa					-0.1243	(0.2197)		
Mixed education * Asia and India					-0.0337	(0.1891)		
United States, Western & Northern Europe and Australia * Other certification below Bachelors							-0.0957	(0.0792)
United States, Western & Northern Europe and Australia * Bachelors degree							-0.0222	(0.0394)
United States, Western & Northern Europe and Australia * Higher degree							-0.0350	(0.0759)
Eastern & Southern Europe * Other certification below Bachelors							-0.0048	(0.0869)
Eastern & Southern Europe * Bachelors degree							-0.2008 **	(0.1005)
Eastern & Southern Europe * Higher degree							-0.2147 **	(0.1270)
Central & South America * Other certification below Bachelors							0.2050 **	(0.0963)
Central & South America * Bachelors degree							0.1918 **	(0.1033)
Central & South America * Higher degree							0.2165 **	(0.1154)
Caribbean and Africa * Other certification below Bachelors							-0.0841	(0.1033)
Caribbean and Africa * Bachelors degree							0.0738	(0.0619)
Caribbean and Africa * Higher degree							-0.1023	(0.1459)
Asia and India * Other certification below Bachelors							-0.1052 **	(0.0537)
Asia and India * Bachelors degree							-0.1588 ***	(0.0436)
Asia and India * Higher degree							0.0161	(0.0779)
Dependent children	0.0067	(0.0087)	0.0073	(0.0087)	0.0022	(0.0087)	0.0083	(0.0087)
French	0.0475 ***	(0.0160)	0.0459 ***	(0.0159)	0.0468 ***	(0.0160)	0.0401 ***	(0.0160)
Other language	0.0541 ***	(0.0169)	0.0498 ***	(0.0167)	0.0333 **	(0.0187)	0.0263 *	(0.0187)

Separated, divorced or widowed	-0.0145	(0.0150)	-0.0165	(0.0150)	-0.0153	(0.0150)	-0.0150	(0.0149)
Married or common law	0.0465 ***	(0.0122)	0.0455 ***	(0.0122)	0.0457 ***	(0.0122)	0.0436 ***	(0.0122)
Nursing and residential care facilities	-0.1595 ***	(0.0136)	-0.1614 ***	(0.0136)	-0.1634 ***	(0.0136)	-0.1620 ***	(0.0135)
Offices	-0.1831 ***	(0.0199)	-0.1844 ***	(0.0199)	-0.1832 ***	(0.0200)	-0.1859 ***	(0.0199)
Other Health Care Facilities	-0.0905 ***	(0.0121)	-0.0924 ***	(0.0121)	-0.0620 ***	(0.0119)	-0.0923 ***	(0.0121)
Visible minority	-0.1163 ***	(0.0188)	-0.1081 ***	(0.0187)	-0.1292 ***	(0.0253)	-0.1271 ***	(0.0251)
Rural	-0.0038	(0.0109)	-0.0034	(0.0109)	-0.0102	(0.0109)	-0.0021	(0.0109)
Town	-0.0138 *	(0.0102)	-0.0132 *	(0.0102)	-0.0201 **	(0.0102)	-0.0131 *	(0.0102)
The Atlantic Provinces	-0.2279 ***	(0.0184)	-0.2261 ***	(0.0183)	-0.2215 ***	(0.0184)	-0.2308 ***	(0.0184)
Montreal	-0.0740 ***	(0.0217)	-0.0713 ***	(0.0217)	-0.0634 ***	(0.0219)	-0.0672 ***	(0.0218)
Rest of Quebec	-0.0868 ***	(0.0231)	-0.0845 ***	(0.0230)	-0.0887 ***	(0.0231)	-0.0842 ***	(0.0231)
Rest of Ontario	-0.0260 **	(0.0155)	-0.0248 *	(0.0154)	-0.0327 **	(0.0155)	-0.0274 **	(0.0155)
Manitoba	-0.1360 ***	(0.0236)	-0.1347 ***	(0.0235)	-0.1313 ***	(0.0236)	-0.1349 ***	(0.0235)
Saskatchewan	-0.0797 ***	(0.0232)	-0.0794 ***	(0.0232)	-0.0815 ***	(0.0232)	-0.0821 ***	(0.0233)
Alberta	-0.0589 ***	(0.0181)	-0.0581 ***	(0.0181)	-0.0498 ***	(0.0181)	-0.0628 ***	(0.0181)
Vancouver	-0.0014	(0.0201)	-0.0022	(0.0200)	-0.0039	(0.0201)	-0.0134	(0.0201)
Rest of BC	-0.0406 **	(0.0204)	-0.0397 **	(0.0204)	-0.0325 *	(0.0204)	-0.0442 **	(0.0205)
The Territories	0.1984 ***	(0.0322)	0.1990 ***	(0.0322)	0.2134 ***	(0.0322)	0.1948 ***	(0.0322)
N	33207		33207		33207		33207	
R ²	0.0376		0.0374		0.034		0.0385	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table C3.2: Regression results for Canadian born nurses including various interaction effects and including place of employment variables (Robust standard errors in parenthesis)

	(1)	(2)	(3)	(4)	(5)
Constant	2.8434 *** (0.0245)	2.6938 *** (0.0414)	2.8388 *** (0.0244)	2.6738 *** (0.0435)	2.8442 *** (0.0244)
Potential Experience	0.0248 *** (0.0019)	0.0249 *** (0.0018)	0.0249 *** (0.0018)	0.0250 *** (0.0018)	0.0245 *** (0.0019)
Potential Experience squared	-0.0004 *** (0.0000)	-0.0004 *** (0.0000)	-0.0004 *** (0.0000)	-0.0004 *** (0.0000)	-0.0004 *** (0.0000)
Other certification below Bachelors	0.0148 (0.0177)	0.2149 *** (0.0892)	0.0269 ** (0.0137)	0.0288 ** (0.0137)	0.0206 (0.0163)
Bachelors degree	0.0955 *** (0.0124)	0.0756 (0.0697)	0.1270 *** (0.0102)	0.1279 *** (0.0102)	0.0970 *** (0.0120)
Higher degree	0.0940 *** (0.0391)	0.1040 (0.1567)	0.0897 *** (0.0321)	0.0896 *** (0.0321)	0.0342 (0.0438)
French	0.0051 (0.0182)	0.0359 ** (0.0170)	0.0161 (0.0177)	0.0355 ** (0.0170)	0.0351 ** (0.0171)
Other language	0.0231 (0.0317)	0.0274 (0.0236)	0.0159 (0.0282)	0.0275 (0.0237)	0.0288 (0.0236)
Visible minority	-0.1344 *** (0.0290)	0.1395 *** (0.0344)	-0.1341 *** (0.0292)	0.1589 *** (0.0371)	-0.1339 *** (0.0290)
Nursing Homes	-0.1451 *** (0.0144)	-0.1444 *** (0.0144)	-0.1646 *** (0.0175)	-0.1293 * (0.0915)	-0.1651 *** (0.0178)
Offices	-0.1916 *** (0.0205)	-0.1909 *** (0.0205)	-0.2053 *** (0.0221)	-0.0299 (0.1087)	-0.2323 *** (0.0238)
Other health care facilities	-0.0805 *** (0.0127)	-0.0789 *** (0.0127)	-0.1011 *** (0.0159)	0.0103 (0.0605)	-0.1240 *** (0.0194)
Other certification below Bachelors * French	0.0403 * (0.0285)				
Other certification below Bachelors * Other language	0.0757 (0.0811)				
Bachelors degree * French	0.1114 *** (0.0213)				
Bachelors degree * Other language	0.0003 (0.0480)				
Higher degree * French	-0.0242 (0.0717)				
Higher degree * Other language	-0.0076 (0.1242)				
Other certification below Bachelors * Visible minority		-0.1919 ** (0.0903)			
Bachelors degree * Visible minority		0.0540 (0.0704)			
Higher degree * Visible minority		-0.0150 (0.1601)			
Nursing Homes * French			0.0702 ** (0.0317)		
Nursing Homes * Other language			0.0497 (0.0749)		
Offices * French			0.0641 (0.0657)		
Offices * Other language			0.1129 (0.1056)		
Other health care facilities * French			0.0713 *** (0.0260)		
Other health care facilities * Other language			0.0157 (0.0642)		
Nursing Homes * Visible minority				-0.0157 (0.0926)	

Offices * Visible minority Other health care facilities * Visible minority					-0.1653 *	(0.1106)	
					-0.0928 *	(0.0616)	
Other certification below Bachelors * Nursing Homes							0.0341 (0.0409)
Other certification below Bachelors * Offices							0.0634 (0.0754)
Other certification below Bachelors * Other health care facilities							0.0262 (0.0398)
Bachelors degree * Nursing Homes							0.0767 ** (0.0353)
Bachelors degree * Offices							0.1869 *** (0.0549)
Bachelors degree * Other health care facilities							0.1052 *** (0.0274)
Higher degree * Nursing Homes							0.1816 ** (0.0907)
Higher degree * Offices							0.2599 ** (0.1219)
Higher degree * Other health care facilities							0.1513 ** (0.0690)
Childcare	0.0142 * (0.0093)	0.0146 * (0.0093)	0.0147 * (0.0093)	0.0144 * (0.0093)	0.0139 * (0.0093)		
Married or common law	-0.0045 (0.0152)	-0.0050 (0.0152)	-0.0061 (0.0152)	-0.0046 (0.0152)	-0.0045 (0.0152)		
Separated, divorced or widowed	0.0359 *** (0.0128)	0.0357 *** (0.0128)	0.0346 *** (0.0128)	0.0358 *** (0.0128)	0.0355 *** (0.0128)		
Rural	0.0007 (0.0111)	0.0016 (0.0111)	0.0027 (0.0111)	0.0020 (0.0111)	0.0021 (0.0111)		
Town	-0.0137 * (0.0106)	-0.0130 (0.0106)	-0.0122 (0.0106)	-0.0127 (0.0106)	-0.0134 (0.0106)		
The Atlantic Provinces	-0.2210 *** (0.0206)	-0.2226 *** (0.0206)	-0.2226 *** (0.0206)	-0.2219 *** (0.0206)	-0.2196 *** (0.0206)		
Montreal	-0.0635 *** (0.0253)	-0.0606 *** (0.0253)	-0.0596 *** (0.0253)	-0.0598 *** (0.0253)	-0.0593 *** (0.0253)		
Rest of Quebec	-0.0743 *** (0.0258)	-0.0791 *** (0.0258)	-0.0772 *** (0.0259)	-0.0786 *** (0.0258)	-0.0778 *** (0.0258)		
Rest of Ontario	-0.0230 (0.0182)	-0.0221 (0.0183)	-0.0214 (0.0182)	-0.0218 (0.0182)	-0.0206 (0.0182)		
Manitoba	-0.1253 *** (0.0251)	-0.1279 *** (0.0251)	-0.1268 *** (0.0251)	-0.1266 *** (0.0251)	-0.1244 *** (0.0251)		
Saskatchewan	-0.0663 *** (0.0241)	-0.0692 *** (0.0241)	-0.0656 *** (0.0241)	-0.0675 *** (0.0241)	-0.0649 *** (0.0240)		
Alberta	-0.0492 *** (0.0212)	-0.0528 *** (0.0213)	-0.0527 *** (0.0212)	-0.0528 *** (0.0212)	-0.0504 *** (0.0212)		
Vancouver	-0.0392 * (0.0251)	-0.0415 ** (0.0251)	-0.0421 ** (0.0251)	-0.0409 * (0.0251)	-0.0397 * (0.0250)		
Rest of BC	-0.0379 * (0.0233)	-0.0409 ** (0.0233)	-0.0407 ** (0.0233)	-0.0410 ** (0.0233)	-0.0396 ** (0.0233)		
The Territories	0.1961 *** (0.0352)	0.1918 *** (0.0352)	0.1907 *** (0.0353)	0.1918 *** (0.0353)	0.1937 *** (0.0351)		
N	27934	27934	27934	27934	27934		
R ²	0.0377	0.037	0.0372	0.0369	0.0379		

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table C3.3: Regression results for foreign born and Canadian educated nurses including various educational interaction effects and including place of employment variables (Robust standard errors in parenthesis)

	(1)		(2)		(3)	
Constant	2.7087 ***	(0.0962)	2.7200 ***	(0.0960)	2.6405 ***	(0.1119)
Potential Experience	0.0350 ***	(0.0105)	0.0364 ***	(0.0105)	0.0365 ***	(0.0106)
Potential Experience squared	-0.0007 ***	(0.0003)	-0.0007 ***	(0.0003)	-0.0007 ***	(0.0003)
Other certification below Bachelors	-0.1796 *	(0.1236)	-0.1703	(0.1517)	0.0403	(0.1018)
Bachelors degree	0.1084 **	(0.0567)	0.0527	(0.0567)	0.2381 ***	(0.0709)
Higher degree	0.0877	(0.1007)	-0.0341	(0.1053)	0.1372	(0.1310)
French	0.1315 *	(0.0987)	0.1176	(0.1050)	0.1103	(0.1040)
Other language	0.0576	(0.0592)	0.0748 *	(0.0511)	0.0721 *	(0.0510)
Visible minority	0.0148	(0.0631)	0.0342	(0.0637)	0.0854	(0.0743)
Nursing Homes	-0.2945 ***	(0.0759)	-0.2919 ***	(0.0763)	-0.2906 ***	(0.0756)
Offices	-0.3496 ***	(0.1218)	-0.3492 ***	(0.1225)	-0.3603 ***	(0.1221)
Other health care facilities	-0.0732	(0.0587)	-0.0761 *	(0.0584)	-0.0673	(0.0586)
Eastern & Southern Europe	-0.0238	(0.0660)	0.0037	(0.0682)	-0.0221	(0.0658)
Central & South America	0.0205	(0.0757)	0.0061	(0.0930)	0.0254	(0.0753)
Caribbean and Africa	-0.2177 ***	(0.0730)	-0.3265 ***	(0.0951)	-0.1958 ***	(0.0728)
Asia and India	-0.0340	(0.0818)	-0.1226	(0.1111)	-0.0350	(0.0814)
Other certification below Bachelors * French	0.1846	(0.1683)				
Other certification below Bachelors * Other language	0.2251 *	(0.1644)				
Bachelors degree * French	-0.2893	(0.2564)				
Bachelors degree * Other language	0.0086	(0.0840)				
Higher degree * French	0.2868 **	(0.1692)				
Higher degree * Other language	-0.1104	(0.1481)				
Other certification below Bachelors * Eastern & Southern Europe			0.2921 *	(0.2075)		
Other certification below Bachelors * Central & South America			0.1468	(0.2326)		
Other certification below Bachelors * Caribbean and Africa			0.1738	(0.2363)		
Other certification below Bachelors * Asia and India			0.1465	(0.2070)		
Bachelors degree * Eastern & Southern Europe			-0.2044	(0.1632)		
Bachelors degree * Central & South America			-0.1089	(0.1648)		
Bachelors degree * Caribbean and Africa			0.2991 ***	(0.1318)		

Bachelors degree * Asia and India			0.1445 *	(0.1125)		
Higher degree * Eastern & Southern Europe			-0.0409	(0.1380)		
Higher degree * Central & South America			0.3275 *	(0.2532)		
Higher degree * Caribbean and Africa			0.1037	(0.3092)		
Higher degree * Asia and India			0.2324 *	(0.1698)		
Other certification below Bachelors * Visible minority					-0.2028	(0.1644)
Bachelors degree * Visible minority					-0.2446 ***	(0.0908)
Higher degree * Visible minority					-0.1499	(0.1598)
Childcare	-0.0289	(0.0413)	-0.0207	(0.0415)	-0.0206	(0.0411)
Married or common law	-0.0386	(0.0863)	-0.0486	(0.0860)	-0.0447	(0.0852)
Separated, divorced or widowed	0.1382 **	(0.0644)	0.1355 **	(0.0640)	0.1369 **	(0.0633)
Rural	-0.0933 *	(0.0720)	-0.0921	(0.0731)	-0.0906	(0.0722)
Town	0.0006	(0.0619)	-0.0030	(0.0629)	-0.0027	(0.0622)
The Atlantic Provinces	-0.2634 **	(0.1414)	-0.2698 **	(0.1432)	-0.2682 **	(0.1421)
Montreal	-0.1799 **	(0.0908)	-0.1938 **	(0.0911)	-0.1873 **	(0.0905)
Rest of Quebec	-0.0702	(0.2315)	-0.0674	(0.2282)	-0.0633	(0.2291)
Rest of Ontario	0.0002	(0.0579)	-0.0129	(0.0596)	-0.0100	(0.0593)
Manitoba	-0.1949 *	(0.1355)	-0.1843 *	(0.1302)	-0.1941 *	(0.1333)
Saskatchewan	-0.3660	(0.3192)	-0.3639	(0.3238)	-0.3648	(0.3220)
Alberta	-0.0563	(0.0636)	-0.0643	(0.0641)	-0.0569	(0.0637)
Vancouver	0.1843 ***	(0.0581)	0.1746 ***	(0.0582)	0.1883 ***	(0.0573)
Rest of BC	0.0269	(0.0911)	0.0167	(0.0909)	0.0285	(0.0904)
The Territories	0.3155 ***	(0.1182)	0.3276 ***	(0.1233)	0.3114 ***	(0.1233)
N	1831		1831		1831	
R ²	0.0842		0.0888		0.0857	

Dependent variable is the natural log of hourly wages.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table C3.4: Regression results for foreign born and Canadian educated nurses including various place of employment interaction effects (Robust standard errors in parenthesis)

	(1)	(2)	(3)	(4)
Constant	2.7098 *** (0.0984)	2.6883 *** (0.1015)	2.7233 *** (0.1033)	2.7087 *** (0.0975)
Potential Experience	0.0342 *** (0.0105)	0.0344 *** (0.0106)	0.0351 *** (0.0105)	0.0339 *** (0.0104)
Potential Experience squared	-0.0007 *** (0.0003)	-0.0007 *** (0.0003)	-0.0007 *** (0.0003)	-0.0007 *** (0.0003)
Other certification below Bachelors	-0.0773 (0.0829)	-0.0755 (0.0832)	-0.0774 (0.0825)	-0.1106 (0.0941)
Bachelors degree	0.1021 *** (0.0410)	0.1029 *** (0.0417)	0.0995 *** (0.0416)	0.0792 ** (0.0460)
Higher degree	0.0440 (0.0728)	0.0483 (0.0763)	0.0450 (0.0745)	0.0700 (0.0792)
French	0.0669 (0.1210)	0.1163 (0.1057)	0.1183 (0.1047)	0.1058 (0.1046)
Other language	0.0707 (0.0566)	0.0746 * (0.0506)	0.0742 * (0.0510)	0.0843 * (0.0512)
Visible minority	0.0159 (0.0634)	0.0251 (0.0632)	-0.0376 (0.0677)	0.0081 (0.0633)
Nursing Homes	-0.3095 *** (0.1038)	-0.2278 *** (0.0767)	-0.4346 *** (0.1562)	-0.2964 *** (0.0931)
Offices	-0.3668 ** (0.1886)	-0.3604 *** (0.1279)	-0.3689 * (0.2888)	-0.3924 *** (0.1571)
Other health care facilities	-0.0862 * (0.0620)	0.0055 (0.0752)	-0.0616 (0.0757)	-0.1726 *** (0.0662)
Eastern & Southern Europe	-0.0267 (0.0658)	0.0032 (0.0641)	-0.0249 (0.0657)	-0.0390 (0.0677)
Central & South America	0.0167 (0.0758)	0.0052 (0.0866)	0.0207 (0.0753)	0.0101 (0.0754)
Caribbean and Africa	-0.2192 *** (0.0736)	-0.2010 *** (0.0800)	-0.2115 *** (0.0731)	-0.2110 *** (0.0734)
Asia and India	-0.0318 (0.0815)	-0.0033 (0.0759)	-0.0254 (0.0837)	-0.0252 (0.0812)
Nursing Homes * French	0.1287 (0.1846)			
Nursing Homes * Other language	0.0233 (0.1569)			
Offices * French	0.2542 (0.2408)			
Offices * Other language	0.0014 (0.2300)			
Other health care facilities * French	0.1362 (0.1442)			
Other health care facilities * Other language	0.0265 (0.1299)			
Nursing Homes * Eastern & Southern Europe		0.0452 (0.2092)		
Nursing Homes * Central & South America		0.0606 (0.1966)		
Nursing Homes * Caribbean and Africa		-0.2448 (0.2742)		
Nursing Homes * Caribbean and Africa		-0.2021 (0.2547)		
Offices * Eastern & Southern Europe		-0.0837 (0.1778)		
Offices * Central & South America		0.2517 (0.3192)		

Offices * Caribbean and Africa			0.2846	(0.2565)			
Offices * Caribbean and Africa			-0.4203	(0.8357)			
Other health care facilities * Eastern & Southern Europe			-0.2907	(0.2723)			
Other health care facilities * Central & South America			-0.1294	(0.2119)			
Other health care facilities * Caribbean and Africa			-0.1227	(0.1804)			
Other health care facilities * Caribbean and Africa			-0.0642	(0.1039)			
Nursing Homes * Visible minority					0.2274 *	(0.1734)	
Offices * Visible minority					0.0251	(0.3140)	
Other health care facilities * Visible minority					-0.0094	(0.1111)	
Other certification below Bachelors * Nursing Homes							-0.1587 (0.3234)
Other certification below Bachelors * Offices							0.1016 (0.2130)
Other certification below Bachelors * Other health care facilities							0.4963 ** (0.2835)
Bachelors degree * Nursing Homes							0.1192 (0.1678)
Bachelors degree * Offices							0.3014 (0.2837)
Bachelors degree * Other health care facilities							0.0918 (0.1185)
Higher degree * Nursing Homes							-0.2427 (0.2618)
Higher degree * Offices							-0.7607 * (0.5917)
Higher degree * Other health care facilities							0.2335 ** (0.1531)
Childcare	-0.0241	(0.0404)	-0.0197	(0.0408)	-0.0198	(0.0407)	-0.0209 (0.0408)
Married or common law	-0.0404	(0.0862)	-0.0409	(0.0850)	-0.0435	(0.0858)	-0.0427 (0.0860)
Separated, divorced or widowed	0.1349 **	(0.0638)	0.1369 **	(0.0635)	0.1333 **	(0.0635)	0.1387 ** (0.0638)
Rural	-0.0905	(0.0719)	-0.0909 *	(0.0695)	-0.0889	(0.0707)	-0.0909 (0.0722)
Town	-0.0024	(0.0628)	-0.0041	(0.0630)	-0.0053	(0.0628)	-0.0037 (0.0618)
The Atlantic Provinces	-0.2647 **	(0.1426)	-0.2738 ***	(0.1417)	-0.2705 **	(0.1417)	-0.2624 ** (0.1428)
Montreal	-0.1822 **	(0.0924)	-0.1925 **	(0.0913)	-0.1867	(0.0910)	-0.1869 ** (0.0912)
Rest of Quebec	-0.0516	(0.2345)	-0.0563	(0.2341)	-0.0535	(0.2328)	-0.0400 (0.2346)
Rest of Ontario	0.0071	(0.0592)	0.0052	(0.0594)	0.0059	(0.0589)	0.0104 (0.0589)
Manitoba	-0.1931 *	(0.1359)	-0.1874 *	(0.1319)	-0.1864	(0.1337)	-0.1799 * (0.1354)
Saskatchewan	-0.3609	(0.3220)	-0.3686	(0.3198)	-0.3611	(0.3196)	-0.3519 (0.3208)
Alberta	-0.0514	(0.0640)	-0.0556	(0.0642)	-0.0523	(0.0637)	-0.0492 (0.0640)
Vancouver	0.1898 ***	(0.0573)	0.1910 ***	(0.0579)	0.1924	(0.0575)	0.1953 *** (0.0575)
Rest of BC	0.0330	(0.0908)	0.0372	(0.0924)	0.0373	(0.0915)	0.0372 (0.0910)
The Territories	0.3257 ***	(0.1207)	0.3098 ***	(0.1149)	0.3190	(0.1168)	0.3201 *** (0.1170)

N	1831	1831	1831	1831
R ²	0.0818	0.0870	0.0834	0.0874

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table C3.5: Regression results for mixed educated nurses including various interaction effects and including place of employment variables (Robust standard errors in parenthesis)

	(1)		(2)		(3)	
Constant	2.7918 ***	(0.1016)	2.7849 ***	(0.1039)	2.4591 ***	(0.1510)
Potential Experience	0.0284 ***	(0.0085)	0.0290 ***	(0.0085)	0.0296 ***	(0.0085)
Potential Experience squared	-0.0004 **	(0.0002)	-0.0004 **	(0.0002)	-0.0004 **	(0.0002)
Other certification below Bachelors	0.0210	(0.0814)	0.0250	(0.1037)	0.0173	(0.0565)
Bachelors degree	0.1440 ***	(0.0567)	0.2203 ***	(0.0660)	-0.0103	(0.0498)
Higher degree	0.2581 ***	(0.0977)	0.1814 *	(0.1161)	0.1503 *	(0.1039)
French	-0.1218	(0.1553)	-0.0634	(0.1086)	-0.0405	(0.1120)
Other language	0.0650	(0.0536)	0.0073	(0.0469)	0.0185	(0.0470)
Visible minority	-0.3952 ***	(0.1194)	-0.3791 ***	(0.1218)	0.3181 ***	(0.1192)
Nursing Homes	-0.1924 ***	(0.0491)	-0.1942 ***	(0.0492)	-0.1928 ***	(0.0491)
Offices	0.0247	(0.0818)	0.0222	(0.0812)	0.0330	(0.0812)
Other health care facilities	-0.2539 ***	(0.0694)	-0.2643 ***	(0.0684)	-0.2647 ***	(0.0688)
Eastern & Southern Europe	-0.0832	(0.0786)	-0.0101	(0.0898)	-0.0733	(0.0776)
Central & South America	0.1710 *	(0.1090)	0.0566	(0.1235)	0.1269	(0.1085)
Caribbean and Africa	0.1478	(0.1229)	0.1327	(0.1312)	0.1022	(0.1240)
Asia and India	0.2835 **	(0.1269)	0.3708 ***	(0.1335)	0.2412 **	(0.1260)
Other certification below Bachelors * French	0.3586 *	(0.2500)				
Other certification below Bachelors * Other language	-0.0275	(0.1002)				
Bachelors degree * French	0.1636	(0.1791)				
Bachelors degree * Other language	-0.1623 **	(0.0772)				
Higher degree * French	-1.0424	(1.0156)				
Higher degree * Other language	-0.2165 *	(0.1380)				
Other certification below Bachelors * Eastern & Southern Europe			-0.1915	(0.1553)		
Other certification below Bachelors * Central & South America			0.1119	(0.1899)		
Other certification below Bachelors * Caribbean and Africa			0.1373	(0.1554)		
Other certification below Bachelors * Asia and India			-0.0864	(0.1232)		
Bachelors degree * Eastern & Southern Europe			-0.2076 *	(0.1316)		
Bachelors degree * Central & South America			0.2942 *	(0.1871)		
Bachelors degree * Caribbean and Africa			-0.0837	(0.1084)		

Bachelors degree * Asia and India			-0.3231 ***	(0.0887)		
Higher degree * Eastern & Southern Europe			-0.4681 *	(0.3240)		
Higher degree * Central & South America			-0.3117 **	(0.1868)		
Higher degree * Caribbean and Africa			-0.2168	(0.2545)		
Higher degree * Asia and India			-0.0267	(0.1589)		
Other certification below Bachelors * Visible minority					0.0067	(0.1058)
Bachelors degree * Visible minority					0.2158 ***	(0.0766)
Higher degree * Visible minority					-0.0811	(0.1502)
Childcare	-0.0010	(0.0357)	0.0053	(0.0356)	0.0023	(0.0356)
Married or common law	-0.0781	(0.0669)	-0.0850	(0.0675)	-0.0840	(0.0679)
Separated, divorced or widowed	0.0739 *	(0.0525)	0.0652	(0.0529)	0.0718 *	(0.0526)
Rural	-0.1139 *	(0.0865)	-0.1054	(0.0871)	-0.1061	(0.0869)
Town	-0.0925 *	(0.0604)	-0.1104 **	(0.0603)	-0.1006 **	(0.0603)
The Atlantic Provinces	-0.3498 ***	(0.1042)	-0.3581 ***	(0.1038)	-0.3542 ***	(0.1032)
Montreal	-0.0079	(0.0579)	-0.0020	(0.0579)	-0.0026	(0.0575)
Rest of Quebec	-0.0566	(0.1252)	-0.0430	(0.1253)	-0.0441	(0.1279)
Rest of Ontario	-0.0612 *	(0.0467)	-0.0610 *	(0.0469)	-0.0580	(0.0467)
Manitoba	-0.2365 **	(0.1418)	-0.2369 **	(0.1399)	-0.2318 *	(0.1410)
Saskatchewan	-0.1408	(0.1368)	-0.1467	(0.1372)	-0.1427	(0.1359)
Alberta	-0.1249 **	(0.0570)	-0.1181 **	(0.0564)	-0.1190 **	(0.0567)
Vancouver	-0.0214	(0.0505)	-0.0226	(0.0505)	-0.0183	(0.0504)
Rest of BC	-0.0599	(0.0628)	-0.0466	(0.0641)	-0.0543	(0.0632)
The Territories	0.3553 **	(0.1679)	0.3594 **	(0.1694)	0.3548 **	(0.1702)
N	2366		2366		2366	
R ²	0.0647		0.0686		0.0622	

Dependent variable is the natural log of hourly wages.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table C3.6: Regression results for mixed educated nurses including various place of employment interaction effects (Robust standard errors in parenthesis)

	(1)	(2)	(3)	(4)
Constant	2.7988 *** (0.1036)	2.7728 *** (0.1030)	2.4276 *** (0.1493)	2.8411 *** (0.1057)
Potential Experience	0.0285 *** (0.0085)	0.0293 *** (0.0085)	0.0301 *** (0.0086)	0.0287 *** (0.0087)
Potential Experience squared	-0.0004 ** (0.0002)	-0.0004 *** (0.0002)	-0.0004 *** (0.0002)	-0.0004 ** (0.0002)
Other certification below Bachelors	0.0252 (0.0459)	0.0360 (0.0462)	0.0329 (0.0462)	-0.0077 (0.0562)
Bachelors degree	0.0471 (0.0384)	0.0450 (0.0385)	0.0462 (0.0383)	-0.0218 (0.0458)
Higher degree	0.1114 * (0.0753)	0.1104 * (0.0749)	0.1177 * (0.0759)	0.1115 * (0.0801)
French	-0.0468 (0.1254)	-0.0583 (0.1119)	-0.0543 (0.1114)	-0.0455 (0.1121)
Other language	0.0375 (0.0512)	0.0068 (0.0473)	0.0123 (0.0474)	0.0155 (0.0473)
Visible minority	-0.3918 *** (0.1204)	-0.3640 *** (0.1218)	0.3551 *** (0.1180)	-0.3771 *** (0.1183)
Nursing Homes	-0.2200 *** (0.0907)	-0.0813 (0.0937)	-0.2379 *** (0.0630)	-0.2752 *** (0.0689)
Offices	0.0171 (0.0859)	-0.1043 (0.1062)	0.1250 (0.1002)	-0.0502 (0.1217)
Other health care facilities	-0.0623 (0.0648)	-0.0649 (0.0657)	-0.3669 *** (0.1144)	-0.3722 *** (0.0914)
Eastern & Southern Europe	-0.0743 (0.0777)	-0.0205 (0.0821)	-0.0786 (0.0800)	-0.0710 (0.0782)
Central & South America	0.1706 * (0.1099)	0.2476 ** (0.1199)	0.1625 * (0.1086)	0.1497 * (0.1083)
Caribbean and Africa	0.1422 (0.1250)	0.1433 (0.1318)	0.1371 (0.1241)	0.1256 (0.1242)
Asia and India	0.2706 ** (0.1279)	0.2748 ** (0.1313)	0.2634 ** (0.1264)	0.2560 ** (0.1266)
Nursing Homes * French	0.3634 ** (0.2143)			
Nursing Homes * Other language	0.0368 (0.1078)			
Offices * French	-0.1570 (0.1611)			
Offices * Other language	0.0406 (0.1779)			
Other health care facilities * French	-0.3800 (0.4192)			
Other health care facilities * Other language	-0.3973 *** (0.1402)			
Nursing Homes * Eastern & Southern Europe		-0.1993 * (0.1442)		
Nursing Homes * Central & South America		-0.4915 *** (0.1933)		
Nursing Homes * Caribbean and Africa		-0.1917 (0.1577)		
Nursing Homes * Caribbean and Africa		-0.0636 (0.1185)		
Offices * Eastern & Southern Europe		0.7611 (0.7441)		
Offices * Central & South America		-0.2369 (0.2171)		
Offices * Caribbean and Africa		0.3233 ** (0.1721)		
Offices * Caribbean and Africa		0.1601 (0.1638)		
Other health care facilities * Eastern & Southern Europe		-0.5247 ** (0.2462)		

Other health care facilities * Central & South America			-0.2415	(0.3509)				
Other health care facilities * Caribbean and Africa			-0.1647	(0.1630)				
Other health care facilities * Caribbean and Africa			-0.3442 **	(0.1776)				
Nursing Homes * Visible minority					0.1285 *	(0.0988)		
Offices * Visible minority					-0.1548	(0.1585)		
Other health care facilities * Visible minority					0.2408 **	(0.1333)		
Other certification below Bachelors * Nursing Homes							0.1705 *	(0.1158)
Other certification below Bachelors * Offices							0.0790	(0.1617)
Other certification below Bachelors * Other health care facilities							0.0850	(0.1935)
Bachelors degree * Nursing Homes							0.2678 ***	(0.1136)
Bachelors degree * Offices							0.2275	(0.1850)
Bachelors degree * Other health care facilities							0.2709 **	(0.1596)
Higher degree * Nursing Homes							-0.1784	(0.2972)
Higher degree * Offices							0.1088	(0.5212)
Higher degree * Other health care facilities							0.2305	(0.2258)
Childcare	-0.0013	(0.0354)	-0.0066	(0.0353)	-0.0063	(0.0354)	-0.0047	(0.0356)
Married or common law	-0.0761	(0.0673)	-0.0610	(0.0663)	-0.0733	(0.0673)	-0.0831	(0.0677)
Separated, divorced or widowed	0.0795 *	(0.0521)	0.0905 **	(0.0507)	0.0799 *	(0.0524)	0.0719 *	(0.0524)
Rural	-0.1171 *	(0.0866)	-0.1222 *	(0.0864)	-0.1171 *	(0.0861)	-0.1104	(0.0866)
Town	-0.1051 **	(0.0604)	-0.1141 **	(0.0599)	-0.1037 **	(0.0601)	-0.0966 *	(0.0607)
The Atlantic Provinces	-0.3474 ***	(0.1048)	-0.3375 ***	(0.1042)	-0.3461 ***	(0.1041)	-0.3647 ***	(0.1046)
Montreal	-0.0045	(0.0575)	0.0123	(0.0577)	-0.0059	(0.0576)	-0.0082	(0.0572)
Rest of Quebec	-0.0468	(0.1296)	-0.0352	(0.1247)	-0.0396	(0.1283)	-0.0370	(0.1270)
Rest of Ontario	-0.0587	(0.0464)	-0.0470	(0.0463)	-0.0606 *	(0.0469)	-0.0588	(0.0468)
Manitoba	-0.2250 *	(0.1422)	-0.2251 *	(0.1422)	-0.2346 **	(0.1417)	-0.2355 *	(0.1427)
Saskatchewan	-0.1475	(0.1347)	-0.1441	(0.1322)	-0.1439	(0.1346)	-0.1487	(0.1381)
Alberta	-0.1173 **	(0.0568)	-0.1172 **	(0.0567)	-0.1237 **	(0.0568)	-0.1184 **	(0.0573)
Vancouver	-0.0200	(0.0502)	-0.0164	(0.0503)	-0.0194	(0.0504)	-0.0278	(0.0510)
Rest of BC	-0.0581	(0.0636)	-0.0499	(0.0635)	-0.0572	(0.0625)	-0.0619	(0.0631)
The Territories	0.3366 **	(0.1679)	0.3628 **	(0.1675)	0.3551 **	(0.1688)	0.3733 **	(0.1701)
N	2366		2366		2366		2366	
R ²	0.0645		0.0684		0.0621		0.0641	

Dependent variable is the natural log of hourly wages. Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table C3.7: Regression results for foreign born and educated nurses using foreign and Canadian experience and including various educational interaction effects and place of employment variables (Robust standard errors in parenthesis)

	(1)		(2)		(3)	
Constant	2.6047	(0.5060)	2.5894 ***	(0.5194)	2.5765 ***	(0.5004)
Potential Experience	0.0581 *	(0.0438)	0.0564	(0.0443)	0.0600 *	(0.0438)
Potential Experience squared	-0.0017 **	(0.0008)	-0.0017 **	(0.0008)	-0.0017 **	(0.0008)
Potential foreign Experience	0.0103	(0.0145)	0.0119	(0.0143)	0.0104	(0.0145)
Potential foreign Experience squared	0.0004	(0.0003)	0.0004	(0.0003)	0.0004	(0.0003)
Other certification below Bachelors	-0.1570	(0.1838)	0.0830	(0.1397)	-0.2109 **	(0.1212)
Bachelors degree	0.0976	(0.0916)	0.1772 *	(0.1263)	0.0505	(0.0722)
Higher degree	0.1162	(0.1485)	0.1015	(0.1960)	0.0894	(0.0999)
French	0.2830 **	(0.1266)	0.2754 **	(0.1446)	0.2801 **	(0.1436)
Other language	0.0549	(0.1018)	0.0339	(0.0834)	0.0601	(0.0820)
Visible minority	-0.0284	(0.1018)	0.0026	(0.1043)	-0.0343	(0.1121)
Nursing Homes	-0.1922 ***	(0.0688)	-0.1941 ***	(0.0689)	-0.2026 ***	(0.0679)
Offices	-0.2044 **	(0.1142)	-0.2280 **	(0.1158)	-0.2067 **	(0.1139)
Other health care facilities	-0.1975 ***	(0.0714)	-0.2297 ***	(0.0713)	-0.2070 ***	(0.0707)
Eastern & Southern Europe	-0.0280	(0.1192)	0.0162	(0.1439)	-0.0145	(0.1168)
Central & South America	-0.1090	(0.1396)	-0.3610 **	(0.1777)	-0.1088	(0.1411)
Caribbean and Africa	0.0175	(0.1126)	0.0689	(0.1292)	0.0205	(0.1104)
Asia and India	0.0364	(0.1218)	0.1196	(0.1388)	0.0498	(0.1206)
Other certification below Bachelors * French	-0.0036	(0.2237)				
Other certification below Bachelors * Other language	0.0713	(0.2047)				
Bachelors degree * French	0.0613	(0.4781)				
Bachelors degree * Other language	-0.0196	(0.1129)				
Higher degree * French						
Higher degree * Other language	0.0277	(0.1718)				
Other certification below Bachelors * Eastern & Southern Europe			0.0466	(0.2427)		
Other certification below Bachelors * Central & South America			0.6267 ***	(0.2277)		
Other certification below Bachelors * Caribbean and Africa			-0.5062 **	(0.3014)		
Other certification below Bachelors * Asia and India			-0.2635 *	(0.1853)		
Bachelors degree * Eastern & Southern Europe			-0.1812	(0.1870)		

Bachelors degree * Central & South America			0.5702 **	(0.2730)		
Bachelors degree * Caribbean and Africa			-0.0503	(0.1800)		
Bachelors degree * Asia and India			-0.1843 *	(0.1444)		
Higher degree * Eastern & Southern Europe			0.0086	(0.2620)		
Higher degree * Central & South America			0.5893 ***	(0.2613)		
Higher degree * Caribbean and Africa			0.1016	(0.2654)		
Higher degree * Asia and India			-0.0274	(0.2246)		
Other certification below Bachelors * Visible minority					0.3229 **	(0.1696)
Bachelors degree * Visible minority					0.0810	(0.1149)
Higher degree * Visible minority					0.1045	(0.1537)
Childcare	-0.1071 **	(0.0548)	-0.1104 **	(0.0540)	-0.1091 **	(0.0546)
Married or common law	-0.1106	(0.1086)	-0.0993	(0.1081)	-0.1066	(0.1091)
Separated, divorced or widowed	-0.0396	(0.0749)	-0.0216	(0.0743)	-0.0296	(0.0740)
Rural	0.0133	(0.1123)	-0.0221	(0.1121)	-0.0076	(0.1114)
Town	0.0592	(0.0882)	0.0507	(0.0893)	0.0714	(0.0884)
The Atlantic Provinces	-0.4615 ***	(0.1818)	-0.4691 ***	(0.1955)	-0.4594 ***	(0.1874)
Montreal	-0.0993	(0.0849)	-0.1180 *	(0.0842)	-0.0931	(0.0856)
Rest of Quebec	0.0401	(0.1489)	0.1095	(0.1571)	0.0679	(0.1513)
Rest of Ontario	-0.0675	(0.0857)	-0.0494	(0.0857)	-0.0595	(0.0855)
Manitoba	0.0156	(0.1851)	-0.0371	(0.1655)	-0.0027	(0.1761)
Saskatchewan	-0.5707 **	(0.3149)	-0.6010 **	(0.2989)	-0.5768 **	(0.3107)
Alberta	-0.0922	(0.0736)	-0.1049 *	(0.0732)	-0.0969 *	(0.0734)
Vancouver	-0.0088	(0.0658)	-0.0231	(0.0653)	-0.0108	(0.0652)
Rest of BC	-0.0736	(0.1335)	-0.0641	(0.1340)	-0.0665	(0.1339)
The Territories	0.1396	(0.1583)	0.1515	(0.1551)	0.1663	(0.1588)
N	1071		1071		1071	
R ²	0.0679		0.0828		0.071	

Dependent variable is the natural log of hourly wages.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table C3.8: Regression results for foreign born and educated nurses using foreign and Canadian experience and including various place of employment interaction effects (Robust standard errors in parenthesis)

	(1)		(2)		(3)		(4)	
Constant	2.5950 ***	(0.5091)	2.5936 ***	(0.5167)	2.5884 ***	(0.5072)	2.5872 ***	(0.5195)
Potential Experience	0.0582 *	(0.0442)	0.0585 *	(0.0448)	0.0574 *	(0.0441)	0.0602 *	(0.0447)
Potential Experience squared	-0.0017 **	(0.0008)	-0.0017 **	(0.0008)	-0.0017 **	(0.0008)	-0.0017 **	(0.0008)
Potential foreign Experience	0.0102	(0.0146)	0.0102	(0.0149)	0.0104	(0.0147)	0.0101	(0.0146)
Potential foreign Experience squared	0.0004	(0.0003)	0.0004	(0.0003)	0.0004	(0.0003)	0.0004	(0.0003)
Other certification below Bachelors	-0.1161	(0.0940)	-0.1333 *	(0.0939)	-0.1271 *	(0.0932)	-0.1946 *	(0.1236)
Bachelors degree	0.0824 *	(0.0601)	0.0777 *	(0.0607)	0.0798 *	(0.0601)	0.0977 *	(0.0745)
Higher degree	0.1311 *	(0.0796)	0.1342 *	(0.0812)	0.1300 *	(0.0790)	0.1001	(0.1082)
French	0.3209 **	(0.1809)	0.2990 **	(0.1426)	0.3037 **	(0.1407)	0.2828 **	(0.1413)
Other language	0.0594	(0.0950)	0.0600	(0.0831)	0.0565	(0.0834)	0.0604	(0.0824)
Visible minority	-0.0326	(0.1020)	-0.0242	(0.1046)	-0.0179	(0.1064)	-0.0328	(0.1013)
Nursing Homes	-0.2446 ***	(0.1064)	-0.1754 *	(0.1190)	-0.2428 ***	(0.0858)	-0.1955 **	(0.0955)
Offices	-0.2280	(0.1888)	-0.3614 *	(0.2695)	-0.2134 *	(0.1404)	-0.3051 **	(0.1799)
Other health care facilities	-0.1109	(0.0900)	-0.0812	(0.1099)	-0.2934 ***	(0.0967)	-0.2027 **	(0.0904)
Eastern & Southern Europe	-0.0221	(0.1174)	-0.1763 *	(0.1370)	-0.0388	(0.1151)	-0.0345	(0.1188)
Central & South America	-0.0922	(0.1394)	-0.0763	(0.1725)	-0.0929	(0.1399)	-0.1142	(0.1401)
Caribbean and Africa	0.0307	(0.1107)	0.0264	(0.1311)	0.0328	(0.1123)	0.0243	(0.1112)
Asia and India	0.0469	(0.1217)	0.0594	(0.1321)	0.0570	(0.1220)	0.0437	(0.1216)
Nursing Homes * French	0.0270	(0.2127)						
Nursing Homes * Other language	0.0745	(0.1433)						
Offices * French	0.2341	(0.2956)						
Offices * Other language	0.0387	(0.2327)						
Other health care facilities * French	-0.2825	(0.3678)						
Other health care facilities * Other language	-0.1484	(0.1379)						
Nursing Homes * Eastern & Southern Europe			0.2627	(0.2226)				
Nursing Homes * Central & South America			-0.2418	(0.2953)				
Nursing Homes * Caribbean and Africa			-0.0218	(0.2296)				
Nursing Homes * Caribbean and Africa			-0.0541	(0.1551)				
Offices * Eastern & Southern Europe			0.6468 **	(0.3405)				

Offices * Central & South America			0.2812	(0.3808)				
Offices * Caribbean and Africa			0.1405	(0.3947)				
Offices * Caribbean and Africa			0.1525	(0.2984)				
Other health care facilities * Eastern & Southern Europe			0.0770	(0.2578)				
Other health care facilities * Central & South America			0.2052	(0.1894)				
Other health care facilities * Caribbean and Africa			-0.1726	(0.1597)				
Other health care facilities * Caribbean and Africa			-0.2604 *	(0.1799)				
Nursing Homes * Visible minority					0.1712	(0.1387)		
Offices * Visible minority					0.0412	(0.2368)		
Other health care facilities * Visible minority					0.2338 **	(0.1364)		
Other certification below Bachelors * Nursing Homes							0.1696	(0.2479)
Other certification below Bachelors * Offices							0.4274 *	(0.3060)
Other certification below Bachelors * Other health care facilities							0.1582	(0.2236)
Bachelors degree * Nursing Homes							-0.0913	(0.1409)
Bachelors degree * Offices							0.1236	(0.2041)
Bachelors degree * Other health care facilities							-0.0491	(0.1563)
Higher degree * Nursing Homes							0.0571	(0.1760)
Higher degree * Offices							0.1828	(0.2533)
Higher degree * Other health care facilities							0.0577	(0.2503)
Childcare	-0.1064 **	(0.0547)	-0.1067 **	(0.0544)	-0.1057 **	(0.0547)	-0.1061 **	(0.0550)
Married or common law	-0.1074	(0.1112)	-0.1181	(0.1114)	-0.1207	(0.1101)	-0.1192	(0.1105)
Separated, divorced or widowed	-0.0378	(0.0752)	-0.0391	(0.0749)	-0.0422	(0.0738)	-0.0408	(0.0744)
Rural	0.0053	(0.1128)	-0.0148	(0.1144)	0.0017	(0.1131)	0.0034	(0.1128)
Town	0.0633	(0.0887)	0.0543	(0.0873)	0.0578	(0.0877)	0.0593	(0.0891)
The Atlantic Provinces	-0.4540 ***	(0.1850)	-0.4429 ***	(0.1888)	-0.4334 ***	(0.1845)	-0.4699 ***	(0.1835)
Montreal	-0.1030	(0.0864)	-0.0936	(0.0874)	-0.0912	(0.0846)	-0.0903	(0.0848)
Rest of Quebec	-0.0048	(0.1606)	0.0445	(0.1518)	0.0398	(0.1509)	0.0679	(0.1490)
Rest of Ontario	-0.0698	(0.0856)	-0.0625	(0.0868)	-0.0694	(0.0856)	-0.0715	(0.0863)
Manitoba	0.0210	(0.1811)	0.0395	(0.1826)	0.0344	(0.1822)	0.0234	(0.1828)
Saskatchewan	-0.5772 **	(0.3155)	-0.5596 **	(0.3014)	-0.5578 **	(0.3095)	-0.5646 **	(0.3162)
Alberta	-0.0940	(0.0754)	-0.0933	(0.0755)	-0.0812	(0.0732)	-0.0960 *	(0.0738)
Vancouver	-0.0099	(0.0666)	-0.0069	(0.0662)	-0.0062	(0.0653)	-0.0088	(0.0645)
Rest of BC	-0.0754	(0.1332)	-0.0613	(0.1335)	-0.0634	(0.1333)	-0.0706	(0.1355)

The Territories	0.1025 (0.1540)	0.1476 (0.1549)	0.1617 (0.1527)	0.1400 (0.1628)
N	1071	1071	1071	1071
R ²	0.0690	0.0746	0.0701	0.0709

Dependent variable is the natural log of hourly wages.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table C3.9: Regression results for foreign born and educated nurses using only one definition of experience and including various interaction effects and place of employment variables (Robust standard errors in parenthesis)

	(1)		(2)		(3)	
Constant	2.6463 ***	(0.3409)	2.6069 ***	(0.3450)	2.6225 ***	(0.3512)
Potential Experience	0.0373 *	(0.0249)	0.0388 *	(0.0254)	0.0378 *	(0.0248)
Potential Experience squared	-0.0006 *	(0.0004)	-0.0006 *	(0.0004)	-0.0006 *	(0.0004)
Other certification below Bachelors	-0.1581	(0.1862)	0.0418	(0.1406)	-0.1951 *	(0.1207)
Bachelors degree	0.1148	(0.0911)	0.1861 *	(0.1283)	0.0617	(0.0709)
Higher degree	0.0697	(0.1509)	0.0235	(0.1960)	0.0955	(0.1040)
French	0.3259 ***	(0.1291)	0.3348 ***	(0.1463)	0.3426 ***	(0.1456)
Other language	0.0661	(0.1039)	0.0435	(0.0847)	0.0719	(0.0832)
Visible minority	-0.0250	(0.1007)	0.0089	(0.1024)	-0.0245	(0.1102)
Nursing Homes	-0.2037 ***	(0.0693)	-0.2043 ***	(0.0695)	-0.2133 ***	(0.0685)
Offices	-0.2169 **	(0.1134)	-0.2420 **	(0.1152)	-0.2205 **	(0.1132)
Other health care facilities	-0.2162 ***	(0.0730)	-0.2461 ***	(0.0734)	-0.2249 ***	(0.0725)
Eastern & Southern Europe	-0.0414	(0.1207)	-0.0035	(0.1452)	-0.0294	(0.1183)
Central & South America	-0.1017	(0.1390)	-0.3728 **	(0.1767)	-0.0956	(0.1405)
Caribbean and Africa	0.0326	(0.1113)	0.0682	(0.1289)	0.0395	(0.1089)
Asia and India	0.0004	(0.1201)	0.0676	(0.1379)	0.0158	(0.1193)
Other certification below Bachelors * French	0.0367	(0.2221)				
Other certification below Bachelors * Other language	0.0760	(0.2086)				
Bachelors degree * French	0.0888	(0.4794)				
Bachelors degree * Other language	-0.0318	(0.1148)				
Higher degree * French						
Higher degree * Other language	0.0742	(0.1755)				
Other certification below Bachelors * Eastern & Southern Europe			0.0747	(0.2595)		
Other certification below Bachelors * Central & South America			0.6848 ***	(0.2286)		
Other certification below Bachelors * Caribbean and Africa			-0.4581 *	(0.3049)		
Other certification below Bachelors * Asia and India			-0.2002	(0.1856)		
Bachelors degree * Eastern & Southern Europe			-0.1833	(0.1922)		
Bachelors degree * Central & South America			0.5771 **	(0.2629)		
Bachelors degree * Caribbean and Africa			-0.0347	(0.1787)		

Bachelors degree * Asia and India			-0.1862 *	(0.1464)		
Higher degree * Eastern & Southern Europe			0.0895	(0.2619)		
Higher degree * Central & South America			0.7074 ***	(0.2639)		
Higher degree * Caribbean and Africa			0.1600	(0.2716)		
Higher degree * Asia and India			0.0595	(0.2253)		
Other certification below Bachelors * Visible minority					0.2790 *	(0.1705)
Bachelors degree * Visible minority					0.0794	(0.1155)
Higher degree * Visible minority					0.0545	(0.1565)
Childcare	-0.1103 **	(0.0554)	-0.1136 **	(0.0545)	-0.1118 **	(0.0552)
Married or common law	-0.1128	(0.1097)	-0.1003	(0.1090)	-0.1086	(0.1102)
Separated, divorced or widowed	-0.0269	(0.0757)	-0.0092	(0.0749)	-0.0167	(0.0748)
Rural	-0.0287	(0.1081)	-0.0614	(0.1091)	-0.0501	(0.1079)
Town	0.0684	(0.0916)	0.0568	(0.0925)	0.0808	(0.0917)
The Atlantic Provinces	-0.4196 **	(0.1877)	-0.4265 **	(0.2005)	-0.4164 **	(0.1927)
Montreal	-0.1030	(0.0869)	-0.1222 *	(0.0860)	-0.0945	(0.0875)
Rest of Quebec	0.0039	(0.1656)	0.0614	(0.1744)	0.0191	(0.1660)
Rest of Ontario	-0.0527	(0.0863)	-0.0362	(0.0864)	-0.0449	(0.0863)
Manitoba	0.0357	(0.1812)	-0.0147	(0.1639)	0.0223	(0.1736)
Saskatchewan	-0.5130 *	(0.3212)	-0.5407 **	(0.3056)	-0.5197 *	(0.3174)
Alberta	-0.0575	(0.0740)	-0.0696	(0.0731)	-0.0603	(0.0737)
Vancouver	0.0028	(0.0664)	-0.0110	(0.0658)	0.0010	(0.0658)
Rest of BC	-0.0245	(0.1336)	-0.0164	(0.1337)	-0.0171	(0.1341)
The Territories	0.2023	(0.1646)	0.2147 *	(0.1635)	0.2272 *	(0.1656)
N	1071		1071		1071	
R ²	0.0520		0.0669		0.054	

Dependent variable is the natural log of hourly wages.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table C3.10: Regression results for foreign born and educated nurses using only one definition of experience and including various place of employment interaction effects (Robust standard errors in parenthesis)

	(1)		(2)		(3)		(4)	
Constant	2.6302 ***	(0.3401)	2.6233 ***	(0.3420)	2.6267 ***	(0.3528)	2.6341 ***	(0.3465)
Potential Experience	0.0374 *	(0.0251)	0.0383 *	(0.0252)	0.0376 *	(0.0249)	0.0387 *	(0.0254)
Potential Experience squared	-0.0006 *	(0.0004)	-0.0006 *	(0.0004)	-0.0006 *	(0.0004)	-0.0006 *	(0.0004)
Other certification below Bachelors	-0.1141	(0.0941)	-0.1324 *	(0.0939)	-0.1259 *	(0.0932)	-0.1857 *	(0.1239)
Bachelors degree	0.0911 *	(0.0595)	0.0852 *	(0.0602)	0.0876 *	(0.0595)	0.1079 *	(0.0742)
Higher degree	0.1154 *	(0.0819)	0.1191 *	(0.0835)	0.1154 *	(0.0815)	0.0580	(0.1089)
French	0.3928 **	(0.1835)	0.3568 ***	(0.1449)	0.3623 ***	(0.1430)	0.3398 ***	(0.1439)
Other language	0.0825	(0.0964)	0.0694	(0.0844)	0.0660	(0.0845)	0.0697	(0.0835)
Visible minority	-0.0321	(0.1011)	-0.0209	(0.1032)	-0.0297	(0.1051)	-0.0280	(0.1000)
Nursing Homes	-0.2346 **	(0.1084)	-0.1569	(0.1244)	-0.2610 ***	(0.0860)	-0.2005 **	(0.0969)
Offices	-0.2313	(0.1841)	-0.3580 *	(0.2648)	-0.2422 **	(0.1414)	-0.3098 **	(0.1792)
Other health care facilities	-0.1049	(0.0959)	-0.0713	(0.1167)	-0.3219 ***	(0.0964)	-0.2453 ***	(0.0967)
Eastern & Southern Europe	-0.0333	(0.1190)	-0.1798 *	(0.1393)	-0.0529	(0.1168)	-0.0445	(0.1203)
Central & South America	-0.0829	(0.1389)	-0.0617	(0.1710)	-0.0838	(0.1396)	-0.1117	(0.1395)
Caribbean and Africa	0.0487	(0.1093)	0.0517	(0.1298)	0.0486	(0.1108)	0.0360	(0.1098)
Asia and India	0.0128	(0.1201)	0.0406	(0.1309)	0.0242	(0.1205)	0.0080	(0.1195)
Nursing Homes * French	0.0136	(0.2162)						
Nursing Homes * Other language	0.0419	(0.1457)						
Offices * French	0.1268	(0.2949)						
Offices * Other language	0.0240	(0.2318)						
Other health care facilities * French	-0.3377	(0.3768)						
Other health care facilities * Other language	-0.1929 *	(0.1427)						
Nursing Homes * Eastern & Southern Europe			0.2297	(0.2257)				
Nursing Homes * Central & South America			-0.2663	(0.2969)				
Nursing Homes * Caribbean and Africa			-0.0594	(0.2325)				
Nursing Homes * Caribbean and Africa			-0.0897	(0.1593)				
Offices * Eastern & Southern Europe			0.6711 **	(0.3371)				
Offices * Central & South America			0.2714	(0.3948)				
Offices * Caribbean and Africa			0.1301	(0.3968)				

Offices * Caribbean and Africa			0.1058	(0.2928)				
Other health care facilities * Eastern & Southern Europe			0.0459	(0.2682)				
Other health care facilities * Central & South America			0.2015	(0.1929)				
Other health care facilities * Caribbean and Africa			-0.1960	(0.1644)				
Other health care facilities * Caribbean and Africa			-0.3178 **	(0.1839)				
Nursing Homes * Visible minority					0.1960 *	(0.1390)		
Offices * Visible minority					0.0780	(0.2365)		
Other health care facilities * Visible minority					0.2594 **	(0.1401)		
Other certification below Bachelors * Nursing Homes							0.1617	(0.2480)
Other certification below Bachelors * Offices							0.3914 *	(0.3055)
Other certification below Bachelors * Other health care facilities							0.1391	(0.2380)
Bachelors degree * Nursing Homes							-0.1226	(0.1431)
Bachelors degree * Offices							0.0864	(0.2051)
Bachelors degree * Other health care facilities							0.0023	(0.1588)
Higher degree * Nursing Homes							0.1147	(0.1737)
Higher degree * Offices							0.2312	(0.2467)
Higher degree * Other health care facilities							0.1509	(0.2741)
Childcare	-0.1088 **	(0.0552)	-0.1086 **	(0.0549)	-0.1081 **	(0.0552)	-0.1084 **	(0.0556)
Married or common law	-0.1108	(0.1125)	-0.1196	(0.1125)	-0.1220	(0.1112)	-0.1196	(0.1117)
Separated, divorced or widowed	-0.0246	(0.0759)	-0.0256	(0.0757)	-0.0286	(0.0745)	-0.0258	(0.0750)
Rural	-0.0376	(0.1083)	-0.0559	(0.1101)	-0.0411	(0.1087)	-0.0390	(0.1084)
Town	0.0761	(0.0922)	0.0649	(0.0908)	0.0679	(0.0909)	0.0675	(0.0927)
The Atlantic Provinces	-0.4128 **	(0.1907)	-0.4016 **	(0.1945)	-0.3911 **	(0.1902)	-0.4266 **	(0.1895)
Montreal	-0.1049	(0.0884)	-0.0944	(0.0892)	-0.0923	(0.0865)	-0.0922	(0.0866)
Rest of Quebec	-0.0419	(0.1778)	0.0056	(0.1629)	-0.0034	(0.1652)	0.0249	(0.1641)
Rest of Ontario	-0.0562	(0.0862)	-0.0485	(0.0874)	-0.0552	(0.0862)	-0.0559	(0.0871)
Manitoba	0.0394	(0.1772)	0.0601	(0.1783)	0.0576	(0.1785)	0.0476	(0.1795)
Saskatchewan	-0.5217 *	(0.3207)	-0.5050 *	(0.3072)	-0.5028 *	(0.3152)	-0.5108 *	(0.3220)
Alberta	-0.0585	(0.0757)	-0.0582	(0.0758)	-0.0457	(0.0734)	-0.0596	(0.0740)
Vancouver	0.0025	(0.0671)	0.0045	(0.0668)	0.0046	(0.0659)	0.0032	(0.0650)
Rest of BC	-0.0276	(0.1332)	-0.0128	(0.1334)	-0.0145	(0.1335)	-0.0203	(0.1361)
The Territories	0.1602	(0.1566)	0.2069 *	(0.1579)	0.2250 *	(0.1553)	0.2014	(0.1716)
N		1071		1071		1071		1071

R^2	0.0531	0.0594	0.0546	0.0549
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Dependent variable is the natural log of hourly wages.
Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table C3.11: Regression results for the Mincer earnings equation for the sample of all women working as nurses using various interaction effects but excluding place of employment (Robust standard errors in parenthesis)

	(1)		(2)		(3)		(4)	
Constant	2.8032 ***	(0.0221)	2.8005 ***	(0.0218)	2.8664 ***	(0.0210)	2.8093 ***	(0.0217)
Potential Experience	0.0265 ***	(0.0018)	0.0256 ***	(0.0018)	0.0240 ***	(0.0018)	0.0253 ***	(0.0018)
Potential Experience squared	-0.0005 ***	(0.0000)	-0.0004 ***	(0.0000)	-0.0004 ***	(0.0000)	-0.0004 ***	(0.0000)
Other certification below Bachelors	0.0163	(0.0132)	0.0234 **	(0.0137)	0.0294 **	(0.0137)	0.0239 **	(0.0137)
Bachelors degree	0.1160 ***	(0.0094)	0.1214 ***	(0.0100)	0.1292 ***	(0.0102)	0.1218 ***	(0.0100)
Higher degree	0.0829 ***	(0.0266)	0.0798 ***	(0.0319)	0.0907 ***	(0.0321)	0.0793 ***	(0.0320)
Canadian educated Immigrant	-0.0210	(0.0473)	-0.0421 **	(0.0253)	-0.2810 **	(0.1423)		
Foreign educated Immigrant	-0.3333 ***	(0.1038)	-0.0796 **	(0.0384)	0.0855 ***	(0.0340)		
Mixed education	-0.1924 ***	(0.0525)	-0.0220	(0.0242)	0.1169 *	(0.0864)		
United States, Western & Northern Europe and Australia					0.0206	(0.0660)	-0.0230	(0.0208)
Eastern & Southern Europe					-0.3142 ***	(0.0794)	-0.0569 *	(0.0439)
Central & South America					0.3155 ***	(0.1285)	-0.1004 **	(0.0597)
Caribbean and Africa					-0.0667	(0.1971)	-0.0903 **	(0.0433)
Asia and India					0.0000	(0.1433)	0.1118 ***	(0.0413)
Canadian educated Immigrant * potential experience	-0.0015	(0.0022)						
Foreign educated Immigrant * potential experience	0.0086 ***	(0.0036)						
Mixed education * potential experience	0.0064 ***	(0.0019)						
Canadian educated Immigrant * Other certification below Bachelors			-0.0899	(0.0858)				
Canadian educated Immigrant * Bachelors degree			0.0167	(0.0418)				
Canadian educated Immigrant * Higher degree			-0.0394	(0.0807)				
Foreign educated Immigrant * Other certification below Bachelors			-0.1386 *	(0.0896)				
Foreign educated Immigrant * Bachelors degree			-0.0377	(0.0553)				
Foreign educated Immigrant * Higher degree			-0.0223	(0.0856)				
Mixed education * Other certification below Bachelors			0.0153	(0.0482)				
Mixed education * Bachelors degree			-0.0698 **	(0.0400)				
Mixed education * Higher degree			0.0359	(0.0827)				
Canadian educated Immigrant * United States, Western & Northern Europe and Australia					0.2235 *	(0.1587)		
Canadian educated Immigrant * Eastern & Southern Europe					0.5406 ***	(0.1704)		

Canadian educated Immigrant * Central & South America								
Canadian educated Immigrant * Caribbean and Africa				0.1642	(0.2500)			
Canadian educated Immigrant * Asia and India				0.3972 **	(0.2073)			
Foreign educated Immigrant * United States, Western & Northern Europe and Australia				-0.2621 ***	(0.0901)			
Foreign educated Immigrant * Eastern & Southern Europe								
Foreign educated Immigrant * Central & South America				-0.5591 ***	(0.1706)			
Foreign educated Immigrant * Caribbean and Africa				-0.0284	(0.2109)			
Foreign educated Immigrant * Asia and India				-0.1081	(0.1511)			
Mixed education * United States, Western & Northern Europe and Australia				-0.1381	(0.1121)			
Mixed education * Eastern & Southern Europe				0.0842	(0.1287)			
Mixed education * Central & South America				-0.4455 ***	(0.1690)			
Mixed education * Caribbean and Africa				-0.1226	(0.2177)			
Mixed education * Asia and India				-0.0547	(0.1686)			
United States, Western & Northern Europe and Australia * Other certification below Bachelors						-0.0907	(0.0788)	
United States, Western & Northern Europe and Australia * Bachelors degree						-0.0213	(0.0395)	
United States, Western & Northern Europe and Australia * Higher degree						-0.0328	(0.0777)	
Eastern & Southern Europe * Other certification below Bachelors						-0.0177	(0.0911)	
Eastern & Southern Europe * Bachelors degree						-0.1885 **	(0.1008)	
Eastern & Southern Europe * Higher degree						-0.1872 *	(0.1308)	
Central & South America * Other certification below Bachelors						0.2030 **	(0.1037)	
Central & South America * Bachelors degree						0.2017 **	(0.1040)	
Central & South America * Higher degree						0.2024 **	(0.1201)	
Caribbean and Africa * Other certification below Bachelors						-0.0809	(0.1036)	
Caribbean and Africa * Bachelors degree						0.0800 *	(0.0619)	
Caribbean and Africa * Higher degree						-0.0919	(0.1438)	
Asia and India * Other certification below Bachelors						-0.0993 **	(0.0541)	
Asia and India * Bachelors degree						-0.1581 ***	(0.0438)	
Asia and India * Higher degree						0.0132	(0.0793)	
Dependent children	0.0058	(0.0088)	0.0066	(0.0088)	0.0019	(0.0088)	0.0077	(0.0088)
French	0.0453 ***	(0.0160)	0.0437 ***	(0.0160)	0.0448 ***	(0.0161)	0.0377	(0.0161)
Other language	0.0548 ***	(0.0170)	0.0494 ***	(0.0168)	0.0334 **	(0.0188)	0.0265 *	(0.0187)

Separated, divorced or widowed	-0.0195 *	(0.0150)	-0.0219 *	(0.0150)	-0.0201 *	(0.0150)	-0.0204 *	(0.0149)
Married or common law	0.0418 ***	(0.0122)	0.0404 ***	(0.0123)	0.0408 ***	(0.0123)	0.0384 ***	(0.0123)
Visible minority	-0.1140 ***	(0.0188)	-0.1060 ***	(0.0188)	-0.1305 ***	(0.0253)	-0.1292 ***	(0.0251)
Rural	-0.0148 *	(0.0108)	-0.0145 *	(0.0108)	-0.0195 **	(0.0109)	-0.0131	(0.0109)
Town	-0.0202 **	(0.0103)	-0.0197 **	(0.0103)	-0.0256 ***	(0.0103)	-0.0196 **	(0.0103)
The Atlantic Provinces	-0.2149 ***	(0.0184)	-0.2126 ***	(0.0183)	-0.2108 ***	(0.0184)	-0.2172 ***	(0.0184)
Montreal	-0.0653 ***	(0.0218)	-0.0625 ***	(0.0218)	-0.0552 ***	(0.0219)	-0.0580 ***	(0.0219)
Rest of Quebec	-0.0735 ***	(0.0232)	-0.0710 ***	(0.0231)	-0.0758 ***	(0.0232)	-0.0703 ***	(0.0232)
Rest of Ontario	-0.0274 **	(0.0156)	-0.0261 **	(0.0155)	-0.0343 **	(0.0155)	-0.0284 **	(0.0156)
Manitoba	-0.1298 ***	(0.0235)	-0.1283 ***	(0.0234)	-0.1268 ***	(0.0235)	-0.1279 ***	(0.0234)
Saskatchewan	-0.0829 ***	(0.0231)	-0.0827 ***	(0.0231)	-0.0848 ***	(0.0231)	-0.0851 ***	(0.0232)
Alberta	-0.0496 ***	(0.0182)	-0.0485 ***	(0.0182)	-0.0418 ***	(0.0182)	-0.0531 ***	(0.0182)
Vancouver	0.0104	(0.0202)	0.0094	(0.0201)	0.0065	(0.0201)	-0.0019	(0.0201)
Rest of BC	-0.0290 *	(0.0205)	-0.0278 *	(0.0205)	-0.0225	(0.0205)	-0.0320 *	(0.0205)
The Territories	0.2124 ***	(0.0322)	0.2136 ***	(0.0321)	0.2280 ***	(0.0322)	0.2098 ***	(0.0322)
N	33207		33207		33207		33207	
R ²	0.0297		0.0294		0.0264		0.0305	

Dependent variable is the natural log of hourly wages.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

Table C3.12: Probit results examining the probability of being employed as a registered nurse for the full sample of all women whose major field of study was nursing using educational interaction effects and including place of employment (Robust standard errors in parenthesis)

	(1)		(2)	
	dF/dx		dF/dx	
Potential Experience	0.0098 ***	(0.0010)	0.0095 ***	(0.0010)
Potential Experience squared	-0.0003 ***	(0.0000)	-0.0003 ***	(0.0000)
Other certification below Bachelors	0.0707 ***	(0.0087)	0.0711 ***	(0.0087)
Bachelors degree	0.0253 ***	(0.0069)	0.0248 ***	(0.0069)
Higher degree	-0.1261 ***	(0.0162)	-0.1269 ***	(0.0162)
Canadian educated Immigrant	0.0009	(0.0135)		
Foreign educated Immigrant	-0.1007 ***	(0.0176)		
Mixed education	-0.0616 ***	(0.0130)		
United States, Western & Northern				
Europe and Australia			-0.0482 ***	(0.0124)
Eastern & Southern Europe			-0.0784 ***	(0.0233)
Central & South America			-0.1647 ***	(0.0346)
Caribbean and Africa			-0.0141	(0.0201)
Asia and India			-0.0431 **	(0.0207)
Nursing and residential care facilities	-0.2659 ***	(0.0077)	-0.2670 ***	(0.0077)
Offices	-0.3842 ***	(0.0148)	-0.3851 ***	(0.0148)
Other Health Care Facilities	-0.2212 ***	(0.0084)	-0.2221 ***	(0.0084)
Non health employment	-0.6550 ***	(0.0043)	-0.6558 ***	(0.0043)
Other certification below Bachelors * Canadian				
educated Immigrant	-0.0245	(0.0385)		
Other certification below Bachelors * Foreign				
educated Immigrant	-0.0466 *	(0.0350)		
Other certification below Bachelors * Mixed education	0.0047	(0.0258)		
Bachelors degree * Canadian educated Immigrant	0.0436 **	(0.0239)		
Bachelors degree * Foreign educated Immigrant	0.0230	(0.0259)		
Bachelors degree * Mixed education	0.0497 ***	(0.0190)		
Higher degree * Canadian educated Immigrant	0.0879 **	(0.0445)		
Higher degree * Foreign educated Immigrant	0.1422 ***	(0.0373)		
Higher degree * Mixed education	0.1182 ***	(0.0352)		
Other certification below Bachelors * United States,			0.0098	(0.0314)
Western & Northern Europe and Australia				
Other certification below Bachelors			-0.0552	(0.0686)
* Eastern & Southern Europe				
Other certification below Bachelors			-0.0673	(0.1078)
* Central & South America				
Other certification below Bachelors * Caribbean and Africa			-0.0575	(0.0469)
Other certification below Bachelors * Asia and India			-0.0333	(0.0285)
Bachelors degree * United States, Western &				
Northern Europe and Australia			0.0745 ***	(0.0239)
Bachelors degree * Eastern & Southern Europe			0.1181 ***	(0.0420)
Bachelors degree * Central & South America			0.1779 ***	(0.0435)
Bachelors degree * Caribbean and Africa			0.0630 **	(0.0352)
Bachelors degree * Asia and India			-0.0107	(0.0212)
Higher degree * United States, Western & Northern				
Europe and Australia			0.1070 ***	(0.0371)

Higher degree * Eastern & Southern Europe		0.2460 ***	(0.0377)
Higher degree * Central & South America		0.1307	(0.0905)
Higher degree * Caribbean and Africa		0.0891	(0.0673)
Higher degree * Asia and India		0.0968 **	(0.0387)
French	-0.0048 (0.0102)	-0.0044	(0.0102)
Other language	-0.0642 *** (0.0091)	-0.0543 ***	(0.0102)
Visible minority	-0.0358 *** (0.0095)	-0.0425 ***	(0.0129)
Separated, divorced or widowed	0.0312 *** (0.0087)	0.0308 ***	(0.0087)
Married or common law	0.0509 *** (0.0072)	0.0505 ***	(0.0072)
Rural	-0.0358 *** (0.0069)	-0.0355 ***	(0.0069)
Town	-0.0237 *** (0.0067)	-0.0230 ***	(0.0067)
The Atlantic Provinces	-0.0243 ** (0.0120)	-0.0235 **	(0.0120)
Montreal	0.0409 *** (0.0124)	0.0405 ***	(0.0124)
Rest of Quebec	0.0640 *** (0.0134)	0.0645 ***	(0.0134)
Rest of Ontario	-0.0398 *** (0.0091)	-0.0375 ***	(0.0091)
Manitoba	-0.0785 *** (0.0143)	-0.0765 ***	(0.0143)
Saskatchewan	-0.0721 *** (0.0156)	-0.0704 ***	(0.0156)
Alberta	-0.0847 *** (0.0110)	-0.0838 ***	(0.0110)
Vancouver	-0.1227 *** (0.0125)	-0.1200 ***	(0.0125)
Rest of BC	-0.1370 *** (0.0133)	-0.1352 ***	(0.0134)
The Territories	-0.0430 ** (0.0234)	-0.0427 **	(0.0234)
Observed P	0.6548	0.6548	
Predicted P	0.6809	0.6810	
Number of observations	48690	48690	
Pseudo R ²	0.2580	0.2579	

Dependent variable is $Y_i = 1$ if the individual is a registered nurse and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table C3.13: Probit results examining the probability of being employed as a registered nurse for the full sample of all women whose major field of study was nursing using educational interaction effects but excluding place of employment (Robust standard errors in parenthesis)

	(1)	(2)
	dF/dx	dF/dx
Potential Experience	0.0108 *** (0.0009)	0.0101 *** (0.0009)
Potential Experience squared	-0.0003 *** (0.0000)	-0.0003 *** (0.0000)
Other certification below Bachelors	0.0437 *** (0.0083)	0.0442 *** (0.0083)
Bachelors degree	0.0274 *** (0.0062)	0.0262 *** (0.0062)
Higher degree	-0.1825 *** (0.0141)	-0.1838 *** (0.0141)
Canadian educated Immigrant	0.0130 (0.0124)	
Foreign educated Immigrant	-0.1528 *** (0.0165)	
Mixed education	-0.0681 *** (0.0122)	
United States, Western & Northern Europe and Australia		-0.0721 *** (0.0116)
Eastern & Southern Europe		-0.1065 *** (0.0221)
Central & South America		-0.1073 *** (0.0325)
Caribbean and Africa		0.0482 *** (0.0174)
Asia and India		-0.0583 *** (0.0199)
Other certification below Bachelors * Canadian educated Immigrant	-0.0217 (0.0348)	
Other certification below Bachelors * Foreign educated Immigrant	-0.0365 (0.0331)	
Other certification below Bachelors * Mixed education	0.0125 (0.0243)	
Bachelors degree * Canadian educated Immigrant	0.0361 * (0.0226)	
Bachelors degree * Foreign educated Immigrant	0.0195 (0.0249)	
Bachelors degree * Mixed education	0.0424 ** (0.0183)	
Higher degree * Canadian educated Immigrant	0.0899 ** (0.0419)	
Higher degree * Foreign educated Immigrant	0.1329 *** (0.0373)	
Higher degree * Mixed education	0.1453 *** (0.0296)	
Other certification below Bachelors * United States, Western & Northern Europe and Australia		-0.0030 (0.0299)
Other certification below Bachelors * Eastern & Southern Europe		-0.0652 (0.0624)
Other certification below Bachelors * Central & South America		-0.1178 * (0.0889)
Other certification below Bachelors * Caribbean and Africa		-0.0488 (0.0418)
Other certification below Bachelors * Asia and India		0.0011 (0.0274)
Bachelors degree * United States, Western & Northern Europe and Australia		0.0658 *** (0.0227)
Bachelors degree * Eastern & Southern Europe		0.1554 *** (0.0367)
Bachelors degree * Central & South America		0.1562 *** (0.0476)
Bachelors degree * Caribbean and Africa		0.0381 (0.0336)
Bachelors degree * Asia and India		0.0039 (0.0201)
Higher degree * United States, Western & Northern Europe and Australia		0.1254 *** (0.0335)
Higher degree * Eastern & Southern Europe		0.2580 *** (0.0419)
Higher degree * Central & South America		0.1217 (0.0949)

Higher degree * Caribbean and Africa			0.0291	(0.0617)
Higher degree * Asia and India			0.1295 ***	(0.0335)
French	-0.0030	(0.0095)	-0.0011	(0.0095)
Other language	-0.0686 ***	(0.0084)	-0.0517 ***	(0.0094)
Visible minority	-0.0053	(0.0086)	-0.0421 ***	(0.0118)
Separated, divorced or widowed	0.0170 **	(0.0081)	0.0158 **	(0.0081)
Married or common law	0.0130 **	(0.0066)	0.0125 **	(0.0066)
Rural	-0.0578 ***	(0.0063)	-0.0562 ***	(0.0064)
Town	-0.0213 ***	(0.0061)	-0.0199 ***	(0.0061)
The Atlantic Provinces	0.0610 ***	(0.0100)	0.0653 ***	(0.0099)
Montreal	0.0932 ***	(0.0107)	0.0928 ***	(0.0108)
Rest of Quebec	0.1183 ***	(0.0115)	0.1204 ***	(0.0115)
Rest of Ontario	-0.0083	(0.0081)	-0.0014	(0.0081)
Manitoba	0.0010	(0.0122)	0.0079	(0.0122)
Saskatchewan	-0.0040	(0.0133)	0.0023	(0.0133)
Alberta	-0.0322 ***	(0.0096)	-0.0272 ***	(0.0096)
Vancouver	-0.0552 ***	(0.0110)	-0.0457 ***	(0.0110)
Rest of BC	-0.0519 ***	(0.0116)	-0.0441 ***	(0.0116)
The Territories	-0.0045	(0.0214)	0.0031	(0.0212)
Observed P	0.6548		0.6548	
Predicted P	0.6599		0.6599	
Number of observations	48690		48690	
Pseudo R ²	0.0348		0.0341	

Dependent variable is $Y_i = 1$ if the individual is a registered nurse and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table C3.14: Probit results examining the probability of being employed as a registered nurse for the full sample of all women whose major field of study was nursing using place of employment interaction effects (Robust standard errors in parenthesis)

	(1)		(2)		(3)	
	dF/dx		dF/dx		dF/dx	
Potential Experience	0.0086 ***	(0.0010)	0.0097 ***	(0.0010)	0.0095 ***	(0.0010)
Potential Experience squared	-0.0002 ***	(0.0000)	-0.0003 ***	(0.0000)	-0.0003 ***	(0.0000)
Other certification below Bachelors	0.0482 ***	(0.0121)	0.0663 ***	(0.0077)	0.0652 ***	(0.0077)
Bachelors degree	-0.0224 ***	(0.0088)	0.0328 ***	(0.0062)	0.0320 ***	(0.0062)
Higher degree	-0.1726 ***	(0.0207)	-0.0971 ***	(0.0142)	-0.0998 ***	(0.0142)
Canadian educated Immigrant			0.0196 *	(0.0151)		
Foreign educated Immigrant			-0.0290 *	(0.0219)		
Mixed education			0.0088	(0.0151)		
United States, Western & Northern Europe and Australia					0.0029	(0.0156)
Eastern & Southern Europe					-0.0214	(0.0306)
Central & South America					-0.0645 *	(0.0414)
Caribbean and Africa					-0.0096	(0.0223)
Asia and India					0.0302 *	(0.0197)
Nursing and residential care facilities	-0.2984 ***	(0.0089)	-0.2532 ***	(0.0088)	-0.2541 ***	(0.0088)
Offices	-0.3920 ***	(0.0177)	-0.3843 ***	(0.0167)	-0.3827 ***	(0.0168)
Other Health Care Facilities	-0.2965 ***	(0.0111)	-0.2061 ***	(0.0092)	-0.2059 ***	(0.0092)
Non health employment	-0.6702 ***	(0.0051)	-0.6461 ***	(0.0048)	-0.6452 ***	(0.0048)
Other certification below Bachelors * Nursing and residential care facilities	0.0576 ***	(0.0230)				
Other certification below Bachelors * Offices	-0.0452	(0.0555)				
Other certification below Bachelors * Other Health Care Facilities	0.0753 ***	(0.0231)				
Other certification below Bachelors * Non health employment	0.0083	(0.0201)				
Bachelors degree * Nursing and residential care facilities	0.0836 ***	(0.0168)				
Bachelors degree * Offices	0.0333	(0.0370)				
Bachelors degree * Other Health Care Facilities	0.1441 ***	(0.0127)				
Bachelors degree * Non health employment	0.0759 ***	(0.0138)				
Higher degree * Nursing and residential care facilities	0.1180 ***	(0.0340)				
Higher degree * Offices	0.0436	(0.0802)				
Higher degree * Other Health Care Facilities	0.1676 ***	(0.0240)				

Higher degree * Non health employment	0.0877 ***	(0.0260)		
Canadian educated Immigrant * Nursing and residential care facilities			-0.0143	(0.0307)
Canadian educated Immigrant * Offices			0.0544	(0.0579)
Canadian educated Immigrant * Other Health Care Facilities			-0.0080	(0.0342)
Canadian educated Immigrant * Non health employment			-0.0249	(0.0282)
Foreign educated Immigrant * Nursing and residential care facilities			-0.0894 ***	(0.0334)
Foreign educated Immigrant * Offices			0.0072	(0.0614)
Foreign educated Immigrant * Other Health Care Facilities			-0.1383 ***	(0.0429)
Foreign educated Immigrant * Non health employment			-0.0998 ***	(0.0334)
Mixed education * Nursing and residential care facilities			-0.0758 ***	(0.0255)
Mixed education * Offices			-0.0718 *	(0.0581)
Mixed education * Other Health Care Facilities			-0.1312 ***	(0.0333)
Mixed education * Non health employment			-0.0948 ***	(0.0249)
United States, Western & Northern Europe and Australia * Nursing and residential care facilities				-0.0292 (0.0308)
United States, Western & Northern Europe and Australia * Offices				0.0712 * (0.0475)
United States, Western & Northern Europe and Australia * Other Health Care Facilities				-0.0765 *** (0.0338)
United States, Western & Northern Europe and Australia * Non health employment				-0.0736 *** (0.0262)
Eastern & Southern Europe * Nursing and residential care facilities				-0.0001 (0.0467)
Eastern & Southern Europe * Offices				-0.2284 ** (0.1166)
Eastern & Southern Europe * Other Health Care Facilities				-0.0234 (0.0624)
Eastern & Southern Europe * Non health employment				-0.1066 ** (0.0522)
Central & South America * Nursing and residential care facilities				-0.1519 ** (0.0696)
Central & South America * Offices				0.0554 (0.1322)
Central & South America * Other Health Care Facilities				-0.1733 ** (0.1003)
Central & South America * Non health employment				-0.0327 (0.0785)
Caribbean and Africa * Nursing and residential care facilities				-0.0521 * (0.0355)
Caribbean and Africa * Offices				0.1645 ** (0.0599)
Caribbean and Africa * Other Health Care Facilities				0.0091 (0.0486)
Caribbean and Africa * Non health employment				0.0556 * (0.0329)
Asia and India * Nursing and residential care facilities				-0.1080 *** (0.0290)

Asia and India * Offices				-0.2234 ***	(0.0726)	
Asia and India * Other Health Care Facilities				-0.1775 ***	(0.0374)	
Asia and India * Non health employment				-0.1752 ***	(0.0304)	
French	-0.0043	(0.0102)	-0.0042	(0.0102)	-0.0045	(0.0102)
Other language	-0.0781 ***	(0.0084)	-0.0623 ***	(0.0092)	-0.0553 ***	(0.0103)
Visible minority	-0.0550 ***	(0.0086)	-0.0381 ***	(0.0096)	-0.0428 ***	(0.0129)
Separated, divorced or widowed	0.0308 ***	(0.0086)	0.0308 ***	(0.0087)	0.0313 ***	(0.0086)
Married or common law	0.0483 ***	(0.0072)	0.0508 ***	(0.0072)	0.0508 ***	(0.0072)
Rural	-0.0314 ***	(0.0068)	-0.0353 ***	(0.0068)	-0.0353 ***	(0.0069)
Town	-0.0212 ***	(0.0066)	-0.0233 ***	(0.0066)	-0.0230 ***	(0.0066)
The Atlantic Provinces	-0.0173 *	(0.0118)	-0.0232 **	(0.0120)	-0.0242 **	(0.0120)
Montreal	0.0451 ***	(0.0122)	0.0397 ***	(0.0125)	0.0392 ***	(0.0125)
Rest of Quebec	0.0681 ***	(0.0133)	0.0642 ***	(0.0134)	0.0635 ***	(0.0135)
Rest of Ontario	-0.0325 ***	(0.0089)	-0.0394 ***	(0.0091)	-0.0398 ***	(0.0092)
Manitoba	-0.0660 ***	(0.0140)	-0.0780 ***	(0.0143)	-0.0785 ***	(0.0144)
Saskatchewan	-0.0613 ***	(0.0154)	-0.0711 ***	(0.0156)	-0.0723 ***	(0.0156)
Alberta	-0.0779 ***	(0.0108)	-0.0842 ***	(0.0111)	-0.0858 ***	(0.0111)
Vancouver	-0.1195 ***	(0.0124)	-0.1223 ***	(0.0126)	-0.1252 ***	(0.0128)
Rest of BC	-0.1313 ***	(0.0132)	-0.1362 ***	(0.0133)	-0.1371 ***	(0.0134)
The Territories	-0.0338 *	(0.0231)	-0.0409 **	(0.0234)	-0.0435 **	(0.0235)
Observed P	0.6548		0.6548		0.6548	
Predicted P	0.6814		0.6802		0.6799	
Number of observations	48690		48690		48691	
Pseudo R ²	0.2587		0.2582		0.2587	

Dependent variable is $Y_i = 1$ if the individual is a registered nurse and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table C3.15: Probit results examining the probability of being employed as a registered nurse for the sample of all Canadian women whose major field of study was nursing using place of employment interaction effects (Robust standard errors in parenthesis)

	(1)
	dF/dx
Potential Experience	0.0085 *** (0.0010)
Potential Experience squared	-0.0002 *** (0.0000)
Other certification below Bachelors	0.0429 *** (0.0132)
Bachelors degree	-0.0405 *** (0.0095)
Higher degree	-0.2107 *** (0.0230)
Nursing and residential care facilities	-0.2795 *** (0.0101)
Offices	-0.3821 *** (0.0206)
Other Health Care Facilities	-0.2785 *** (0.0122)
Non health employment	-0.6617 *** (0.0058)
Other certification below Bachelors * Nursing and residential care facilities	0.0594 ** (0.0257)
Other certification below Bachelors * Offices	-0.0123 (0.0621)
Other certification below Bachelors * Other Health Care Facilities	0.1025 *** (0.0232)
Other certification below Bachelors * Non health employment	0.0215 (0.0216)
Bachelors degree * Nursing and residential care facilities	0.0921 *** (0.0189)
Bachelors degree * Offices	0.0056 (0.0426)
Bachelors degree * Other Health Care Facilities	0.1455 *** (0.0128)
Bachelors degree * Non health employment	0.0843 *** (0.0143)
Higher degree * Nursing and residential care facilities	0.1192 *** (0.0377)
Higher degree * Offices	0.0216 (0.0937)
Higher degree * Other Health Care Facilities	0.1665 *** (0.0240)
Higher degree * Non health employment	0.0951 *** (0.0271)
French	-0.0111 (0.0107)
Other language	-0.0456 *** (0.0134)
Visible minority	-0.0438 *** (0.0145)
Separated, divorced or widowed	0.0451 *** (0.0090)
Married or common law	0.0665 *** (0.0077)
Rural	-0.0389 *** (0.0071)
Town	-0.0252 *** (0.0068)
The Atlantic Provinces	-0.0028 (0.0130)
Montreal	0.0678 *** (0.0142)
Rest of Quebec	0.0820 *** (0.0142)
Rest of Ontario	-0.0219 ** (0.0109)
Manitoba	-0.0420 *** (0.0157)
Saskatchewan	-0.0483 *** (0.0166)
Alberta	-0.0553 *** (0.0129)
Vancouver	-0.0932 *** (0.0163)
Rest of BC	-0.1089 *** (0.0153)
The Territories	-0.0131 (0.0244)
Observed P	0.6730
Predicted P	0.7025
Number of observations	39978
Pseudo R ²	0.2512

Dependent variable is $Y_i = 1$ if the individual is a registered nurse and $Y_i = 0$ otherwise. Significance indicated by *** for 1%, ** for 5% and * for 10%. dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table C3.16: Probit results examining the probability of being employed as a registered nurse for the sample of all Canadian educated immigrant women whose major field of study was nursing using various interaction effects (Robust standard errors in parenthesis)

	(1)	(2)	(3)
	dF/dx	dF/dx	dF/dx
Potential Experience	0.0124 *** (0.0043)	0.0127 *** (0.0042)	0.0133 *** (0.0042)
Potential Experience squared	-0.0003 *** (0.0001)	-0.0003 *** (0.0001)	-0.0003 *** (0.0001)
Other certification below Bachelors	0.1024 ** (0.0458)	0.0305 (0.0498)	0.0490 * (0.0349)
Bachelors degree	0.0802 ** (0.0377)	0.0335 (0.0346)	0.0742 *** (0.0253)
Higher degree	-0.0344 (0.0755)	-0.0719 (0.0824)	-0.0211 (0.0545)
Eastern & Southern Europe	0.0848 ** (0.0395)	0.0780 ** (0.0351)	0.0565 (0.0488)
Central & South America	-0.0765 (0.0665)	-0.0357 (0.0568)	-0.0428 (0.0727)
Caribbean and Africa	0.0187 (0.0512)	-0.0231 (0.0477)	-0.0608 (0.0557)
Asia and India	0.0021 (0.0521)	-0.0136 (0.0470)	-0.0199 (0.0536)
Nursing and residential care facilities	-0.2737 *** (0.0324)	-0.2887 *** (0.0372)	-0.2904 *** (0.0466)
Offices	-0.3319 *** (0.0636)	-0.3186 *** (0.0786)	-0.2984 *** (0.0868)
Other Health Care Facilities	-0.2357 *** (0.0376)	-0.3562 *** (0.0506)	-0.3057 *** (0.0499)
Non health employment	-0.6745 *** (0.0179)	-0.6821 *** (0.0213)	-0.6692 *** (0.0246)
Other certification below Bachelors * Eastern & Southern Europe	-0.1281 (0.1498)		
Other certification below Bachelors * Central & South America	-0.3427 ** (0.1934)		
Other certification below Bachelors * Caribbean and Africa	-0.1052 (0.1149)		
Other certification below Bachelors * Asia and India	-0.0892 (0.0973)		
Bachelors degree * Eastern & Southern Europe	0.0332 (0.0911)		
Bachelors degree * Central & South America	0.2415 *** (0.0595)		
Bachelors degree * Caribbean and Africa	-0.1001 (0.0843)		
Bachelors degree * Asia and India	-0.0142 (0.0628)		
Higher degree * Eastern & Southern Europe	0.0172 (0.1776)		
Higher degree * Central & South America	0.1313 (0.1887)		
Higher degree * Caribbean and Africa	-0.1771 (0.1556)		
Higher degree * Asia and India	0.1252 (0.1116)		
Other certification below Bachelors * Nursing and residential care facilities		0.0484 (0.1140)	
Other certification below Bachelors * Offices		-0.3464 * (0.2025)	
Other certification below Bachelors * Other Health Care Facilities		0.1490 * (0.0885)	

Other certification below Bachelors * Non health employment			0.0422	(0.0846)		
Bachelors degree * Nursing and residential care facilities			0.0187	(0.0773)		
Bachelors degree * Offices			0.1592	(0.1244)		
Bachelors degree * Other Health Care Facilities			0.1829 ***	(0.0477)		
Bachelors degree * Non health employment			0.0633	(0.0611)		
Higher degree * Nursing and residential care facilities			0.2690 **	(0.0628)		
Higher degree * Offices			-0.1276	(0.3037)		
Higher degree * Other Health Care Facilities			0.1946 *	(0.0854)		
Higher degree * Non health employment			-0.0424	(0.1495)		
Eastern & Southern Europe * Nursing and residential care facilities					0.0958	(0.0859)
Eastern & Southern Europe * Other Health Care Facilities					0.1876 **	(0.0724)
Eastern & Southern Europe * Non health employment					-0.0514	(0.0981)
Central & South America * Nursing and residential care facilities					-0.0386	(0.1290)
Central & South America * Offices					-0.3343	(0.2730)
Central & South America * Other Health Care Facilities					-0.0916	(0.1732)
Central & South America * Non health employment					0.1785 *	(0.0883)
Caribbean and Africa * Nursing and residential care facilities					0.0071	(0.0824)
Caribbean and Africa * Offices					0.0349	(0.1520)
Caribbean and Africa * Other Health Care Facilities					0.1507 **	(0.0740)
Caribbean and Africa * Non health employment					0.0601	(0.0713)
Asia and India * Nursing and residential care facilities					0.0500	(0.0747)
Asia and India * Offices					-0.3033 *	(0.2228)
Asia and India * Other Health Care Facilities					0.1100 *	(0.0692)
Asia and India * Non health employment					-0.0803	(0.0809)
French	0.0825	(0.0803)	0.0842	(0.0801)	0.0762	(0.0799)
Other language	-0.0703 ***	(0.0253)	-0.0711 ***	(0.0255)	-0.0732 ***	(0.0253)
Visible minority	-0.0418	(0.0430)	-0.0339	(0.0432)	-0.0193	(0.0423)
Separated, divorced or widowed	0.0000	(0.0369)	0.0089	(0.0370)	-0.0036	(0.0372)
Married or common law	0.0431 *	(0.0289)	0.0454 *	(0.0290)	0.0376 *	(0.0289)
Rural	0.0048	(0.0366)	0.0084	(0.0364)	0.0114	(0.0361)
Town	-0.0244	(0.0337)	-0.0199	(0.0339)	-0.0212	(0.0338)
The Atlantic Provinces	-0.1249 *	(0.0836)	-0.1397 **	(0.0830)	-0.1215 *	(0.0829)
Montreal	-0.0159	(0.0463)	-0.0228	(0.0463)	-0.0062	(0.0460)

Rest of Quebec	0.1561	(0.1154)	0.1641	(0.1134)	0.1784 *	(0.1067)
Rest of Ontario	-0.0701 **	(0.0320)	-0.0721 ***	(0.0320)	-0.0638 **	(0.0317)
Manitoba	-0.1327 ***	(0.0608)	-0.1380 ***	(0.0605)	-0.1363 ***	(0.0610)
Saskatchewan	-0.2424 ***	(0.0928)	-0.2386 ***	(0.0911)	-0.2407 ***	(0.0907)
Alberta	-0.1429 ***	(0.0439)	-0.1466 ***	(0.0436)	-0.1379 ***	(0.0440)
Vancouver	-0.1604 ***	(0.0391)	-0.1714 ***	(0.0390)	-0.1641 ***	(0.0393)
Rest of BC	-0.2532 ***	(0.0512)	-0.2608 ***	(0.0510)	-0.2556 ***	(0.0510)
The Territories	-0.2045 **	(0.1213)	-0.1943 **	(0.1217)	-0.1919 **	(0.1228)
Observed P	0.6604		0.6604		0.6602	
Predicted P	0.6866		0.6860		0.6847	
Number of observations	2662		2662		2660	
Pseudo R ²	0.2604		0.2613		0.261	

Dependent variable is $Y_i = 1$ if the individual is a registered nurse and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table C3.17: Probit results examining the probability of being employed as a registered nurse for the sample of all foreign born and educated women whose major field of study was nursing using various interaction effects and a single experience definition (Robust standard errors in parenthesis)

	(1)		(2)		(3)	
	dF/dx		dF/dx		dF/dx	
Potential Experience	0.0235 ***	(0.0099)	0.0236 ***	(0.0099)	0.0242 ***	(0.0100)
Potential Experience squared	-0.0005 ***	(0.0002)	-0.0005 ***	(0.0002)	-0.0005 ***	(0.0002)
Other certification below Bachelors	0.2069 ***	(0.0682)	0.0908	(0.0714)	0.0512 *	(0.0387)
Bachelors degree	0.2589 ***	(0.0824)	0.0825 *	(0.0512)	0.1039 ***	(0.0339)
Higher degree	0.0824	(0.0952)	0.0907	(0.1161)	0.0461	(0.0602)
Eastern & Southern Europe	-0.0239	(0.0646)	-0.0533	(0.0571)	-0.0844	(0.0929)
Central & South America	-0.1400 *	(0.0909)	-0.1420 *	(0.0831)	-0.2223 **	(0.0898)
Caribbean and Africa	0.0722	(0.0816)	0.0666	(0.0791)	0.0042	(0.0946)
Asia and India	0.0367	(0.0849)	-0.0451	(0.0810)	-0.0379	(0.0920)
Nursing and residential care facilities	-0.3119 ***	(0.0260)	-0.3303 ***	(0.0332)	-0.3109 ***	(0.0672)
Offices	-0.3095 ***	(0.0387)	-0.3182 ***	(0.0464)	-0.2463 ***	(0.0867)
Other Health Care Facilities	-0.3173 ***	(0.0282)	-0.3098 ***	(0.0405)	-0.1542 **	(0.0814)
Non health employment	-0.6595 ***	(0.0174)	-0.6475 ***	(0.0229)	-0.7000 ***	(0.0323)
Other certification below Bachelors * Eastern & Southern Europe	-0.0740	(0.1450)				
Other certification below Bachelors * Central & South America	-0.0612	(0.2075)				
Other certification below Bachelors * Caribbean and Africa	-0.1643 *	(0.1028)				
Other certification below Bachelors * Asia and India	-0.2197 ***	(0.0702)				
Bachelors degree * Eastern & Southern Europe	-0.2239 **	(0.1073)				
Bachelors degree * Central & South America	-0.1538	(0.1450)				
Bachelors degree * Caribbean and Africa	0.0198	(0.1462)				
Bachelors degree * Asia and India	-0.2168 ***	(0.0822)				
Higher degree * Eastern & Southern Europe	0.0774	(0.1525)				
Higher degree * Central & South America	0.2208	(0.2114)				
Higher degree * Caribbean and Africa	0.2503	(0.2225)				
Higher degree * Asia and India	-0.1204	(0.1155)				
Other certification below Bachelors * Nursing and residential care facilities			0.0006	(0.1018)		
Other certification below Bachelors * Offices			0.0748	(0.1881)		
Other certification below Bachelors * Other Health Care Facilities			-0.1098	(0.1169)		

Other certification below Bachelors * Non health employment			-0.0752	(0.0973)		
Bachelors degree * Nursing and residential care facilities			0.0989	(0.0800)		
Bachelors degree * Offices			-0.0105	(0.1717)		
Bachelors degree * Other Health Care Facilities			0.0708	(0.0968)		
Bachelors degree * Non health employment			-0.0270	(0.0803)		
Higher degree * Nursing and residential care facilities			-0.0471	(0.1656)		
Higher degree * Offices			0.2330	(0.3308)		
Higher degree * Other Health Care Facilities			-0.0073	(0.1966)		
Higher degree * Non health employment			-0.0410	(0.1480)		
Eastern & Southern Europe * Nursing and residential care facilities					0.0525	(0.1355)
Eastern & Southern Europe * Offices					-0.2529 *	(0.1435)
Eastern & Southern Europe * Other Health Care Facilities					-0.1882 *	(0.1250)
Eastern & Southern Europe * Non health employment					0.1632 *	(0.1223)
Central & South America * Nursing and residential care facilities					0.1396	(0.1531)
Central & South America * Other Health Care Facilities					-0.2721 *	(0.1228)
Central & South America * Non health employment					0.2844 **	(0.1423)
Caribbean and Africa * Nursing and residential care facilities					-0.0609	(0.1110)
Caribbean and Africa * Offices					0.2744	(0.2339)
Caribbean and Africa * Other Health Care Facilities					-0.1027	(0.1304)
Caribbean and Africa * Non health employment					0.2693 ***	(0.0946)
Asia and India * Nursing and residential care facilities					-0.0123	(0.1011)
Asia and India * Offices					-0.2036 *	(0.1275)
Asia and India * Other Health Care Facilities					-0.2674 ***	(0.0767)
Asia and India * Non health employment					0.0465	(0.0910)
French	0.0064	(0.1097)	0.0421	(0.1067)	0.0565	(0.1100)
Other language	-0.0635 *	(0.0400)	-0.0626 *	(0.0387)	-0.0556 *	(0.0386)
Visible minority	-0.0516	(0.0729)	-0.0615	(0.0744)	-0.0389	(0.0717)
Separated, divorced or widowed	-0.0559	(0.0481)	-0.0557	(0.0475)	-0.0483	(0.0472)
Married or common law	-0.0874 **	(0.0407)	-0.0912 ***	(0.0404)	-0.0882 **	(0.0403)
Rural	-0.1161 **	(0.0561)	-0.1008 **	(0.0556)	-0.1098 **	(0.0598)
Town	-0.0143	(0.0536)	-0.0121	(0.0532)	-0.0283	(0.0543)
The Atlantic Provinces	0.2862 **	(0.1181)	0.2913 **	(0.1155)	0.3125 ***	(0.1167)
Montreal	-0.1189 ***	(0.0499)	-0.1201 ***	(0.0492)	-0.1094 **	(0.0490)

Rest of Quebec	0.2878 **	(0.1407)	0.2718 **	(0.1450)	0.2855 **	(0.1408)
Rest of Ontario	-0.0429	(0.0399)	-0.0492	(0.0399)	-0.0503 *	(0.0399)
Manitoba	-0.1938 ***	(0.0640)	-0.1894 ***	(0.0668)	-0.1915 ***	(0.0634)
Saskatchewan	-0.1384 *	(0.0963)	-0.1210	(0.1033)	-0.1295	(0.1020)
Alberta	-0.1240 ***	(0.0403)	-0.1201 ***	(0.0405)	-0.1195 ***	(0.0403)
Vancouver	-0.1361 ***	(0.0351)	-0.1364 ***	(0.0350)	-0.1383 ***	(0.0352)
Rest of BC	-0.1530 ***	(0.0581)	-0.1551 ***	(0.0565)	-0.1736 ***	(0.0566)
The Territories	0.0172	(0.1398)	-0.0017	(0.1352)	-0.0095	(0.1444)
Observed P	0.4638		0.4638		0.4633	
Predicted P	0.4385		0.4384		0.4341	
Number of observations	2111		2111		2109	
Pseudo R ²	0.3058		0.3018		0.3119	

Dependent variable is $Y_i = 1$ if the individual is a registered nurse and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table C3.18: Probit results examining the probability of being employed as a registered nurse for the sample of all foreign born and educated women whose major field of study was nursing using various interaction effects and a split experience definition (Robust standard errors in parenthesis)

	(1)		(2)		(3)	
	dF/dx		dF/dx		dF/dx	
Potential Canadian Experience	-0.0205 **	(0.0123)	-0.0194 *	(0.0123)	-0.0248 **	(0.0123)
Potential Canadian Experience squared	0.0002	(0.0004)	0.0002	(0.0004)	0.0005	(0.0004)
Potential Foreign Experience	0.0024	(0.0048)	0.0038	(0.0048)	0.0045	(0.0048)
Potential Foreign Experience squared	-0.0003 **	(0.0001)	-0.0003 **	(0.0001)	-0.0003 ***	(0.0001)
Other certification below Bachelors	0.2229 ***	(0.0676)	0.0883	(0.0721)	0.0554 *	(0.0390)
Bachelors degree	0.2701 ***	(0.0814)	0.0880 **	(0.0518)	0.1128 ***	(0.0344)
Higher degree	0.0919	(0.0946)	0.1132	(0.1158)	0.0583	(0.0600)
Eastern & Southern Europe	-0.0176	(0.0647)	-0.0510	(0.0572)	-0.0836	(0.0934)
Central & South America	-0.1291 *	(0.0911)	-0.1316 *	(0.0832)	-0.2171 **	(0.0903)
Caribbean and Africa	0.0834	(0.0810)	0.0785	(0.0784)	0.0105	(0.0946)
Asia and India	0.0588	(0.0838)	-0.0224	(0.0803)	-0.0244	(0.0916)
Nursing and residential care facilities	-0.3062 ***	(0.0263)	-0.3287 ***	(0.0333)	-0.3115 ***	(0.0671)
Offices	-0.2990 ***	(0.0401)	-0.3143 ***	(0.0471)	-0.2427 ***	(0.0874)
Other Health Care Facilities	-0.3096 ***	(0.0288)	-0.3023 ***	(0.0413)	-0.1559 **	(0.0812)
Non health employment	-0.6548 ***	(0.0177)	-0.6442 ***	(0.0231)	-0.6987 ***	(0.0324)
Other certification below Bachelors * Eastern & Southern Europe	-0.0951	(0.1427)				
Other certification below Bachelors * Central & South America	-0.0606	(0.2046)				
Other certification below Bachelors * Caribbean and Africa	-0.1777 *	(0.1008)				
Other certification below Bachelors * Asia and India	-0.2288 ***	(0.0691)				
Bachelors degree * Eastern & Southern Europe	-0.2318 **	(0.1057)				
Bachelors degree * Central & South America	-0.1631	(0.1426)				
Bachelors degree * Caribbean and Africa	0.0206	(0.1473)				
Bachelors degree * Asia and India	-0.2148 ***	(0.0821)				
Higher degree * Eastern & Southern Europe	0.0754	(0.1532)				
Higher degree * Central & South America	0.2182	(0.2031)				
Higher degree * Caribbean and Africa	0.2710	(0.2103)				
Higher degree * Asia and India	-0.1127	(0.1160)				
Other certification below Bachelors * Nursing and residential care facilities			0.0153	(0.1028)		

Other certification below Bachelors * Offices			0.1073	(0.1904)		
Other certification below Bachelors * Other Health Care Facilities			-0.1064	(0.1175)		
Other certification below Bachelors * Non health employment			-0.0660	(0.0982)		
Bachelors degree * Nursing and residential care facilities			0.1127 *	(0.0800)		
Bachelors degree * Offices			0.0186	(0.1709)		
Bachelors degree * Other Health Care Facilities			0.0725	(0.0963)		
Bachelors degree * Non health employment			-0.0188	(0.0806)		
Higher degree * Nursing and residential care facilities			-0.0501	(0.1631)		
Higher degree * Offices			0.2114	(0.3338)		
Higher degree * Other Health Care Facilities			-0.0234	(0.1975)		
Higher degree * Non health employment			-0.0518	(0.1481)		
Eastern & Southern Europe * Nursing and residential care facilities					0.0578	(0.1359)
Eastern & Southern Europe * Offices					-0.2498 *	(0.1433)
Eastern & Southern Europe * Other Health Care Facilities					-0.1750	(0.1289)
Eastern & Southern Europe * Non health employment					0.1639 *	(0.1228)
Central & South America * Nursing and residential care facilities					0.1433	(0.1523)
Central & South America * Other Health Care Facilities					-0.2640 *	(0.1246)
Central & South America * Non health employment					0.2889 **	(0.1423)
Caribbean and Africa * Nursing and residential care facilities					-0.0588	(0.1116)
Caribbean and Africa * Offices					0.2903	(0.2243)
Caribbean and Africa * Other Health Care Facilities					-0.0970	(0.1315)
Caribbean and Africa * Non health employment					0.2774 ***	(0.0942)
Asia and India * Nursing and residential care facilities					0.0025	(0.1018)
Asia and India * Offices					-0.1870	(0.1329)
Asia and India * Other Health Care Facilities					-0.2543 ***	(0.0798)
Asia and India * Non health employment					0.0552	(0.0914)
French	-0.0015	(0.1097)	0.0361	(0.1067)	0.0507	(0.1104)
Other language	-0.0619 *	(0.0400)	-0.0608 *	(0.0388)	-0.0540 *	(0.0386)
Visible minority	-0.0601	(0.0718)	-0.0712	(0.0734)	-0.0482	(0.0706)
Separated, divorced or widowed	-0.0547	(0.0480)	-0.0552	(0.0475)	-0.0485	(0.0471)
Married or common law	-0.0863 **	(0.0405)	-0.0901 **	(0.0403)	-0.0886 **	(0.0402)
Rural	-0.1046 **	(0.0570)	-0.0894 *	(0.0563)	-0.0990 *	(0.0605)
Town	-0.0160	(0.0537)	-0.0137	(0.0533)	-0.0319	(0.0543)

The Atlantic Provinces	0.2868 **	(0.1199)	0.2894 **	(0.1180)	0.3090 **	(0.1195)
Montreal	-0.1196 ***	(0.0502)	-0.1208 ***	(0.0495)	-0.1107 **	(0.0492)
Rest of Quebec	0.3117 **	(0.1372)	0.2935 **	(0.1420)	0.3049 **	(0.1390)
Rest of Ontario	-0.0437	(0.0400)	-0.0503	(0.0400)	-0.0518 *	(0.0400)
Manitoba	-0.1992 ***	(0.0629)	-0.1930 ***	(0.0662)	-0.1947 ***	(0.0628)
Saskatchewan	-0.1403 *	(0.0962)	-0.1216	(0.1031)	-0.1334	(0.1011)
Alberta	-0.1263 ***	(0.0402)	-0.1216 ***	(0.0405)	-0.1221 ***	(0.0402)
Vancouver	-0.1390 ***	(0.0351)	-0.1392 ***	(0.0351)	-0.1408 ***	(0.0352)
Rest of BC	-0.1595 ***	(0.0581)	-0.1606 ***	(0.0566)	-0.1784 ***	(0.0568)
The Territories	0.0146	(0.1398)	-0.0039	(0.1355)	-0.0125	(0.1453)
Observed P	0.4638		0.4638		0.4633	
Predicted P	0.4375		0.4374		0.4332	
Number of observations	2111		2111		2109	
Pseudo R ²	0.3090		0.3049		0.3146	

Dependent variable is $Y_i = 1$ if the individual is a registered nurse and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table C3.19: Probit results examining the probability of being employed as a registered nurse for the sample of all mixed education women whose major field of study was nursing using place of employment interaction effects (Robust standard errors in parenthesis)

	(1)		(2)		(3)	
	dF/dx		dF/dx		dF/dx	
Potential Experience	0.0122 ***	(0.0044)	0.0134 ***	(0.0044)	0.0129 ***	(0.0045)
Potential Experience squared	-0.0002 *	(0.0001)	-0.0002 **	(0.0001)	-0.0002 **	(0.0001)
Other certification below Bachelors	0.0719 *	(0.0504)	0.1024 ***	(0.0409)	0.0907 ***	(0.0273)
Bachelors degree	0.2112 ***	(0.0462)	0.0781 ***	(0.0330)	0.1130 ***	(0.0237)
Higher degree	0.0647	(0.0780)	-0.0578	(0.0666)	0.0279	(0.0490)
Eastern & Southern Europe	-0.0130	(0.0475)	-0.0141	(0.0439)	-0.0430	(0.0618)
Central & South America	-0.0747	(0.0716)	-0.0646	(0.0633)	0.0458	(0.0891)
Caribbean and Africa	0.0310	(0.0611)	0.0272	(0.0577)	-0.0155	(0.0650)
Asia and India	0.0480	(0.0609)	0.0097	(0.0577)	0.0415	(0.0638)
Nursing and residential care facilities	-0.3192 ***	(0.0224)	-0.3525 ***	(0.0276)	-0.2929 ***	(0.0472)
Offices	-0.4189 ***	(0.0357)	-0.4558 ***	(0.0406)	-0.3434 ***	(0.0757)
Other Health Care Facilities	-0.3423 ***	(0.0275)	-0.3590 ***	(0.0371)	-0.3391 ***	(0.0450)
Non health employment	-0.6906 ***	(0.0126)	-0.6979 ***	(0.0157)	-0.6737 ***	(0.0215)
Other certification below Bachelors * Eastern & Southern Europe	-0.1424	(0.1219)				
Other certification below Bachelors * Central & South America	-0.0387	(0.1804)				
Other certification below Bachelors * Caribbean and Africa	-0.0125	(0.0879)				
Other certification below Bachelors * Asia and India	0.0505	(0.0653)				
Bachelors degree * Eastern & Southern Europe	0.0070	(0.1316)				
Bachelors degree * Central & South America	0.1268	(0.1346)				
Bachelors degree * Caribbean and Africa	-0.0149	(0.0866)				
Bachelors degree * Asia and India	-0.1802 ***	(0.0611)				
Higher degree * Eastern & Southern Europe	0.3717 **	(0.0770)				
Higher degree * Central & South America	-0.3839 *	(0.1823)				
Higher degree * Caribbean and Africa	-0.1311	(0.1519)				
Higher degree * Asia and India	-0.0544	(0.1141)				
Other certification below Bachelors * Nursing and residential care facilities			0.1230 *	(0.0728)		
Other certification below Bachelors * Offices			-0.1199	(0.1921)		
Other certification below Bachelors * Other Health Care Facilities			-0.1766 **	(0.1044)		

Other certification below Bachelors * Non health employment			-0.0466	(0.0721)		
Bachelors degree * Nursing and residential care facilities			0.0654	(0.0573)		
Bachelors degree * Offices			0.2020 **	(0.0969)		
Bachelors degree * Other Health Care Facilities			0.0935 *	(0.0668)		
Bachelors degree * Non health employment			0.0588	(0.0565)		
Higher degree * Nursing and residential care facilities			0.0803	(0.1225)		
Higher degree * Offices			0.1850	(0.2633)		
Higher degree * Other Health Care Facilities			0.2494 **	(0.1077)		
Higher degree * Non health employment			0.1855 **	(0.0857)		
Eastern & Southern Europe * Nursing and residential care facilities					0.1012	(0.0871)
Eastern & Southern Europe * Offices					-0.3184 *	(0.1691)
Eastern & Southern Europe * Other Health Care Facilities					0.1382	(0.1101)
Eastern & Southern Europe * Non health employment					-0.0648	(0.0975)
Central & South America * Nursing and residential care facilities					-0.3224 ***	(0.1042)
Central & South America * Offices					-0.0378	(0.2724)
Central & South America * Other Health Care Facilities					0.0559	(0.2039)
Central & South America * Non health employment					-0.2318 *	(0.1516)
Caribbean and Africa * Nursing and residential care facilities					-0.0083	(0.0722)
Caribbean and Africa * Offices					0.1952	(0.1371)
Caribbean and Africa * Other Health Care Facilities					0.0651	(0.0921)
Caribbean and Africa * Non health employment					0.1293 **	(0.0638)
Asia and India * Nursing and residential care facilities					-0.0685	(0.0659)
Asia and India * Offices					-0.2746 **	(0.1225)
Asia and India * Other Health Care Facilities					-0.0680	(0.0770)
Asia and India * Non health employment					-0.1052 **	(0.0590)
French	0.0336	(0.0642)	0.0371	(0.0642)	0.0271	(0.0613)
Other language	-0.0271	(0.0275)	-0.0248	(0.0275)	-0.0246	(0.0274)
Visible minority	-0.0424	(0.0542)	-0.0498	(0.0529)	-0.0314	(0.0535)
Separated, divorced or widowed	-0.0549 *	(0.0371)	-0.0579 *	(0.0370)	-0.0484 *	(0.0369)
Married or common law	-0.0492 **	(0.0291)	-0.0490 *	(0.0291)	-0.0458 *	(0.0294)
Rural	-0.0262	(0.0395)	-0.0270	(0.0395)	-0.0347	(0.0388)
Town	-0.0517 *	(0.0349)	-0.0509 *	(0.0350)	-0.0530 *	(0.0348)
The Atlantic Provinces	-0.1352 **	(0.0706)	-0.1282 **	(0.0712)	-0.1174 **	(0.0711)

Montreal	-0.0035	(0.0378)	-0.0030	(0.0380)	-0.0025	(0.0383)
Rest of Quebec	0.1239	(0.0984)	0.1211	(0.0993)	0.1161	(0.0962)
Rest of Ontario	-0.0404 *	(0.0293)	-0.0420 *	(0.0294)	-0.0492 **	(0.0294)
Manitoba	-0.2507 ***	(0.0482)	-0.2489 ***	(0.0486)	-0.2587 ***	(0.0473)
Saskatchewan	0.0419	(0.0846)	0.0414	(0.0862)	0.0311	(0.0852)
Alberta	-0.1418 ***	(0.0332)	-0.1448 ***	(0.0331)	-0.1495 ***	(0.0335)
Vancouver	-0.1555 ***	(0.0297)	-0.1636 ***	(0.0297)	-0.1676 ***	(0.0300)
Rest of BC	-0.1456 ***	(0.0474)	-0.1449 ***	(0.0473)	-0.1465 ***	(0.0469)
The Territories	-0.0778	(0.0984)	-0.0650	(0.0982)	-0.0674	(0.0990)s
Observed P	0.5683		0.5683		0.5683	
Predicted P	0.5745		0.5740		0.5719	
Number of observations	3931		3931		3931	
Pseudo R ²	0.3072		0.3053		0.308	

Dependent variable is $Y_i = 1$ if the individual is a registered nurse and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Chapter 4

An Economic Analysis of the Job Search Decisions for Canadian Nurses

An Economic Analysis of the Job Search Decisions for Canadian Nurses

4.1 Introduction and Motivation

Due to the fact that there is a shortage of nurses in Canada, recruitment and retention of nursing staff is an area that is important to examine in order to staff nursing positions. The focus of this chapter will be on the retention of nurses and on examining the various aspects that impact an individual's intention to search for a new job. If more nurses are recruited into the nursing profession this will help to alleviate the shortage that is being seen, but if these nurses leave the profession the benefits of this increased recruitment is mitigated. Understanding the determinants of job search decisions is an important area to study in order to increase, or at least maintain, the stock of nurses in the profession. This study will involve a detailed analysis of the issue of retention of those who trained as nurses and it will add to the existing literature in this area as there are very few studies that attempt to estimate the probability of job search for nurses, particularly in Canada.

The goal of this study is to provide a detailed economic analysis of the job search decisions of nurses in Canada in order to understand the incidence of nursing turnover and to identify its predictors. Numerous factors, including salaries, satisfaction and employee attitudes, are believed to be important in understanding the job search decisions and turnover rates of nurses. In addition to various socio-economic factors that influence someone's decision to remain within a particular job or to search for a new job, this research will also examine the impact of satisfaction on nurse's job search

intentions. Shields and Ward (2001) find strong evidence that job satisfaction is the single most important determinant of intentions to quit among British nurses.

This study will also test whether increasing wages paid to Canadian nurses has a significant impact on improving the retention of nurses. Frijters, Shields and Wheatley Price (2003) suggest that wages have some effect on retaining British nurses but promotion and job satisfaction have a major impact. Studies in the United States by Ahlburg and Brown Mahoney (1995) and Parker and Rickman (1995) also show that wages have a beneficial effect on retention of nurses, but this effect is not large. Spetz and Given (2003) however suggest that increases in wages of between 3.2 and 3.8 percent per year between 2002 and 2016 will alleviate the nursing shortage seen in the United States. Using a binary probit model will enable me to predict which variables have and do not have an impact on the retention of nurses in Canada. If wages are not a significant factor in retention, this study will identify other variables, such as satisfaction and working conditions, which do have a significant effect on retention.

This paper will be structured as follows: Section 2 will describe the data that will be used, and it will introduce the model and the empirical specification that will be used; Section 3 will examine some preliminary results, the summary statistics and present the regression results; and Section 4 will conclude with a discussion and implications.

4.2 The Data, Sample Characteristics and Preliminary Analysis

4.2.1 The Data

This study will use data from the confidential files of the National Graduates Survey (NGS) and the Follow-up Survey of Graduates (FOG). These surveys have been conducted by Statistics Canada approximately every five years since 1976 and are designed to measure the short to medium-term labour market outcomes of graduates from Canadian public university, community college and trade-vocational programs. In each survey year of interest, the surveys are sent to all graduates two years after graduation (the National Graduates Survey or the NGS) and again five years after graduation (the Follow-up Survey of Graduates or the FOG). This study will use data from the graduating class of 1995. This data set includes information on field of study, occupation, job satisfaction and satisfaction with pay. There are also several questions in the survey that give some insight into the attitudes of the graduates. Questions are asked of attitudes relating to someone's perception of whether they are over or under qualified for their job, whether their training prepared them completely for their job or not, and if they would study the same field again if they were to do it over again. There are also numerous questions regarding various socio-economic factors such as age, gender, marital status, province of residence, visible minority status, annual earnings and presence of dependent children. Each of these variables is expected to have an effect on the employment decisions made by nurses. The key aspect of the NGS and FOG that can be used to analyze the job search decisions of nurses is the question in the survey that asks individuals if they have been looking for a new job in the past four

weeks. Based on the answer to this question inferences can be made regarding someone's job search intentions.

Unfortunately data access and confidentiality restrictions do not allow for linking these two data sets, but analysis will be carried out looking at the two different samples to see what changes may have occurred in these groups of nurses over the years. One additional disadvantage of this data set is that it only considers nurses who graduated in 1995 and does not allow for analysis of nurses who have been in the profession for many years. On the other hand, a benefit of this allows for an analysis of new entrants into the labour market for registered nurses and this could be used to analyze factors that affect recruitment of new entrants.

4.2.2 The Theoretical Framework

The question that will be examined in this paper will be the issue of whether or not someone who trained to be a registered nurse intends to quit her job or not.²⁵ Job search theory is frequently used to model an individual's decision whether to change or leave an existing job. This study will incorporate a simplified model of the job search process. The analysis begins by considering the following model of on the job search where the decision to search for a new job reflects the underlying marginal benefit and cost considerations. It is expected that someone who plans to quit their job will only do

²⁵ This study will examine only women since the sample size of male nurses who graduated in 1995 is too small to allow for any meaningful analysis. There are a total of 72 men who trained as nurses in the NGS. Of these men, 43 were working as nurses and 13 of those men had looked for a new job in the past four weeks. There are a total of 50 men who trained as nurses in the FOG. Of these men, 24 were working as nurses and only 6 of those men had looked for a new job in the past four weeks.

so if the expected utility in an alternative job exceeds the expected utility in the existing job.

Formally, define V as a value function describing the utility stream from a specific job i . An individual will quit their existing job to move to job j if $V_i < V_j - C$ (where C is the cost of quitting the existing job and of the search for and the move to new one). The cost of quitting an existing job is a function of various aspects, including marital status, the presence of children, education and location. Marital status and the presence of children will influence decisions since these variables affect a person's mobility. Someone who is married or has dependent children has a greater difficulty in moving into new employment quickly and easily. Various levels and types of education can influence how mobile someone is as well. Having specific well defined education credentials, such as nursing, makes someone easily employable in numerous locations and this makes them more mobile and potentially more likely to be searching for new employment if they are not happy with their current employment. There are numerous locations, such as hospitals, nursing homes or medical offices, where nurses will work and some of these will be more preferable than others to different individuals.

V is the present value of accepting an offer and it is equal to w/r , the discounted wage rate, assuming that the wage rate is constant of all periods. There will be values for V which are attractive to the individual and values that are not. This distribution of V 's is known by all employees and workers will be randomly positioned along this distribution. This reflects the random distributions in the goodness of fit between employee and employer. Those who are within the less attractive jobs of the distribution will be more likely have a higher probability of search while those at the

opposite end of the distribution should have a lower probability of search. There are also various features or attributes of various jobs, such as working conditions, worker attitudes and satisfaction that will influence the probability of an individual having a higher probability of search. These additional individual attitudes and job attributes will also influence what values of V are desirable for different individuals. These aspects of the goodness of the job match will affect the probability of a worker desiring a new job.

Since the benefit of search is not observable, the difference between benefit and cost can be modeled as a latent variable, y^* , such that

$$y^* = X_i\beta + S_i\gamma + A_i\theta + \varepsilon_i \quad (4.1)$$

The individual's observable socio-economic characteristics are given by the vector X , information on satisfaction in vector S and other individual attitudes and job attributes are contained in vector A . Various individual attitudes and job attributes will influence which values of V are desirable to any given worker and these in turn will affect someone's likelihood of searching for new employment opportunities.

The dependent variable for this study is the individual's intent to quit her job. This variable is inferred from the answer to the question "In the past four weeks, have you looked for another job." A follow up question asks "Do you want this job to replace your current (main) job or to serve as an additional job?" It will be assumed that someone who answers that they are seeking a new job to replace their current job are those who intend to quit their current job. Unfortunately this doesn't decisively tell us if they plan on quitting the nursing profession or if they are seeking another nursing job to replace their existing nursing job. It does however tell us that there is some

turnover in the profession and this information can be used to determine what characteristics influence this decision. Although the latent variable y^* is not actually observed, we do know that a search has occurred based on the answer to this question.

That is, we observe

$$\begin{aligned} y &= 1 \text{ iff } y^* > 0 \\ y &= 0 \text{ iff } y^* \leq 0 \end{aligned} \tag{4.2}$$

The probability that search occurs can then be modeled as:

$$\text{Prob}(y^* > 0) = \text{Prob}(X_i\beta + S_i\gamma + A_i\theta + \varepsilon_i > 0) \tag{4.3}$$

It is assumed that ε_i is identically and independently distributed (iid) normal with mean zero and variance one. Formally, a binary probit model will be used to estimate the probability of a woman intending to search for a new job and the following equation will be estimated using maximum likelihood estimation:

$$\text{Pr}(y_i = 1 \mid X_i) = \Phi(X_i\beta + S_i\gamma + A_i\theta + \varepsilon_i) \tag{4.4}$$

where ε_i is iid $N(0, \sigma_{\varepsilon_i}^2)$ and $\Phi(\cdot)$ is the density function of the standard normal variable.

In equation (4.4), Y_i denotes whether individual i plans to search for a new job.²⁶

4.2.3 The Explanatory Variables

The explanatory variables will be grouped into various individual characteristics. In this sample the individuals are categorized into three groups based on their marital status: divorced, legally separated or widowed, legally married or in a common law relationship, and single. The individuals who are single form the reference group. Also included is a dummy variable for the presence of dependent

²⁶ $Y_i = 1$ if the individual intends to search for a new job and $Y_i = 0$ otherwise.

children. Marital status and the presence of children have an effect, through C, on the mobility of an individual, and therefore on her decision to quit an existing job.

Income and whether the nurse works mostly full time or part time are also variables that will be included since this is something that might have an influence on someone's intent to search. Individuals may be working part time on an involuntary basis and they may have a preference for full time employment, which will influence their probability of searching for new employment. Alternatively, part time employment may be voluntary, particularly for those who may chose to work fewer hours while they have young children at home so that they are able to spend time away from work. In this scenario, part time employment will likely not influence the probability of search since, for these individuals, this is the preferred state to be in.

The sample is also grouped by the levels of education they have and these include those who have a diploma certificate in nursing, those who have a Bachelors degree and those who have a higher degree. Finally, nurses are also categorized into several provincial groupings which include the Atlantic Provinces (Prince Edward Island, Nova Scotia, Newfoundland and New Brunswick), Quebec, Ontario (the reference group), the Western provinces and territories (including Manitoba, Saskatchewan, Alberta, the Northwest Territories and Yukon) and British Columbia.

4.3 Analysis

4.3.1 Sample Characteristics

Tables 4.1 and 4.2 present the summary statistics for the two samples from the class of 1995 NGS and the FOG respectively. The sample is separated into three

groups: those who studied nursing and work as a registered nurse, those who studied nursing and do not work as a registered nurse and all other women who studied fields other than nursing.²⁷ It is interesting to note there is not much difference in the characteristics of the samples between the NGS and the FOG for each group. There are several individuals who are no longer in the sample for various reasons. Some of those with nursing training may now be working in non-nursing jobs. These individuals would be in the nursing sample in the initial survey and in the non-nursing sample in follow-up survey. There are also many individuals who may not have participated in the second survey. Unfortunately the data sets could not be linked together to fully analyze this change in the samples.

Those who are working as nurses have the lowest proportion (21%) of individuals who have been looking for a new job in the past four weeks. On the other hand those who trained as nurses but are not working as nurses have the highest proportion in both surveys of actively seeking new employment. This is a good indication of those who may be in undesirable jobs, given their education, and are searching for alternate employment which will place them in a more desirable area of the job distribution.

In each of the surveys each person was asked to rank their level of overall job satisfaction as well as their satisfaction with the pay they received. The questions asked are: "Considering all aspects of the job you had last week, how satisfied were you with

²⁷ Since this study is primarily interested in what factors influence the decision to quit an existing job and to search for new employment, I only consider women who are currently employed and exclude those who are not employed. There are actually not too many women who have trained as nurses who are not currently employed (there are 73 women in the NGS and 47 in the FOG). Additionally of these women who are not currently employed only 12 in the NGS and 5 in the FOG stated that they had been looking for a job in the past four weeks.

the job?” and “Considering the duties and responsibilities of that job, how satisfied were you with the money you made?” A ranking system was used with the possible responses ranging from “very satisfied”, “satisfied” to “dissatisfied” for these two questions. Between the NGS and FOG there is very little change in the proportions who report each level of job satisfaction. 39% of those working as a nurse report being very satisfied with their jobs, nearly 52% report being satisfied with their jobs and only 9% report being dissatisfied with their jobs in both surveys. In terms of satisfaction with pay, there is again very little difference in the proportion that report various levels of satisfaction. Nearly 23% report being very satisfied with their pay in the NGS and 24% report the same in the FOG. 57% report being satisfied with their pay in both samples. In the NGS nearly 20% report being dissatisfied with their pay while 18% reports the same in the follow-up survey. This similar trend can be seen in the other two groups of women.

It is however, interesting to note some of the differences between the three groups in terms of some of the other questions. One question that is asked in the survey is: “If you could choose again, would you select the same field of study or specialization that you completed in 1995?” This question is very interesting since it gives some indication of whether an individual feels they made the right choice of education. If they are unhappy with their choice and have some regrets about it, this gives an indication that they may be seeking other employment so that they can be working at something that they prefer. In the NGS the group of women working as nurses has the largest proportion (73%) stating that they would repeat the same training that they just completed and this gives an indication that these individuals are happy

with their choice of education and employment. Those who trained as nurses, but are not working as nurses, have the lowest proportions who answer that they would repeat the same training again. Again this is an indication that these women are unhappy with some aspect of the training and education they went through or the existing job they hold in relation to the training they obtained.

Two additional questions address the attitude individuals have in terms of their training and work. The first question asks “How closely is your current job related to your field of study?” and the second asks “Considering your experience, education and training, do you feel that you are overqualified for your current job?” Of those who are working as nurses, 78% report that their training is very closely related to their job. Those who studied nursing have specific human capital skills that are learned and when they are working as nurses these specific skills are being actively used. In contrast we see that this proportion is over 20% lower for the other two groups and particularly for those who trained as nurses but are working in a non-nursing job, the attitude is that they are over trained for the work they are doing. Since they have specific skills that are not being used in their current job, their attitude of being overqualified is likely quite accurate. It is also interesting to note that 41% of the women who studied nursing but are not working as a nurse report that they are overqualified for the job they hold. These values are very similar in the follow-up survey as well. These responses indicate that these women are potentially in less desirable jobs given their education and training and may be more likely to be seeking new employment.

Table 4.3 shows the various occupational groupings for individuals who trained as nurses in both the NGS and FOG. This table shows a breakdown of what type of

occupations these women are working in. The majority of women whose major field of study was nursing are working as nurse supervisors or registered nurses. There are also numerous women working in various other occupations. The second largest grouping of occupations where those trained as nurses are working include other health occupations such as dental health care and other health care occupations. Other occupations which see numerous women who studied nursing include childcare and home support workers, sales and service occupations and other occupations in social science, education, government services or religion.

Looking now at a few cross tabulations for the three groups of women reported in Tables 4.4 and 4.5 respectively for the NGS and the FOG, it can again be seen that there are several differences between the groups. In these two tables several variables are looked at to see how they correspond with intent to search for the three different groups of women. It is interesting to note that, given a woman is working as a nurse and has been seeking new employment in the past four weeks, relative to the other groups of women she is the least likely to report being dissatisfied with her job and with the pay she receives. On the other hand, women who trained as nurses and are not working as nurses are the most likely to be dissatisfied with their jobs and pay relative to the other groups of women who are actively seeking new employment. This trend is the same in both the NGS and the FOG. One other variable that is of interest and demonstrates a difference between the groups, relates to feelings of being overqualified for the job. Relative to the other women, those who are seeking new jobs given they are currently working as a nurse are far less likely to report that they are over qualified for their existing job. Conversely, those who trained as a nurse but are not working as a

nurse are far more likely to report they are overqualified for their jobs given they are seeking new employment relative to the other women.

Finally, several tables of coefficients of correlation for the two groups of women who trained as nurses are reported in Tables 4.6 and 4.7 for the NGS and in Tables 4.8 and 4.9 for the FOG. Many of the variables show a weak or a moderate correlation and in several cases this correlation is not statistically significant. There is a moderate positive correlation between satisfaction with pay and overall job satisfaction. The correlation between annual earnings and satisfaction with pay is not significant for the women in the sample who are working as nurses and, for those who are not working as nurses this value is weakly correlated. One correlation that shows a difference between the two groups of women is in terms of their intent to search for a new job. Those who are not currently working as nurses show stronger correlations between that variable and several other variables.

It seems that the samples are different and that it would be beneficial to look at the groups separately. Since the question of interest for this study involves looking at what factors influence the quit decisions for registered nurses, this study will focus on only those women whose major field of study was nursing.²⁸ It is also apparent from the simple cross tabulations and the summary statistics that there is enough variation across the two groups of women who studied nursing to only focus on them to try to determine concrete answers to the question posed. Since these women have the same training and specific human capital skills, it will be informative to see which variables

²⁸ It would be very interesting to analyze this question more fully for all individuals, but since the focus of this thesis is on nurses I will examine them in the greatest detail.

have differing effects with those who are and those who are not working as nurses.²⁹

Additionally, there are many policy implications that can be examined to focusing a study exclusively on this specific labour market. If the results show significant differences in certain variables between the two groups this could be beneficial in determining why there is a turnover in those who have trained to be nurses. The nursing shortage is an issue that warrants attention and trying to determine aspects that influence the probability of search decisions is an interesting issue to examine.

4.3.2 The Analysis of Search Decisions

The remaining tables present the marginal effect or the change in the probability of searching for a new job for a very small change in each continuous variable and report the discrete change in the probability for dummy variables for the samples from the NGS and FOG. The marginal effects that are reported are at the means of the other right hand side variables. The qualitative dependent variable is the binary choice of searching for another job. The question being addressed is what variables influence the probability of a woman searching for a new job. Various specifications are examined in which different explanatory variables are included in the model in order to ascertain which variables have an impact on this decision.

As a starting point, Tables 4.10 and 4.11 report the results for all women in the NGS and the FOG, respectively, using dummy variables to distinguish between those who studied nursing and those who did not. The most important variable to note here is

²⁹ Those trained as nurses in the hospital based diploma program and those with a university degree in nursing are considered to have very similar training as all of these women have trained to work as registered nurses. They have very similar skills given they all graduated in 1995.

the positive and statistically significant coefficient on the dummy variable for those who studied nursing. In both samples and in each specification, those who studied nursing are roughly 4 or 5% more likely in the NGS and around 6% more likely in the FOG, to be seeking other employment. This shows that the characteristics of nurses are different in some way from the rest of the women in the samples and that addressing the question of what factors may contribute to nurses intending to search is relevant and can yield important results. One important factor that drives the difference between the two groups of women is the higher degree of mobility for those who studied nursing. Nurses have very specific human capital skills that are readily transferable to new jobs and this characteristic shows up in the samples. With all of the women in the sample, it can also be seen that wages and satisfaction have a significant effect in reducing the probability of search for women.

Turning to Table 4.12 and 4.13, which report the probit results for the samples of all the women whose major field of study was nursing in the NGS and the FOG respectively, it is interesting to note that there are again significant differences in the two samples of women who are and are not working as nurses. In the sample with all of the women it was noted that those who studied nursing were more likely to be seeking other employment and now focusing only on the sample of all those who trained as nurses it can be seen that those who are actually working as nurses are between 7 to 10% less likely than those not working as nurses to be seeking other employment. It seems that those who are working in a nursing job are more stable and are less likely to be seeking new jobs compared to those who are not in nursing employment. As seen in

the sample of all women, increases in income as well as satisfaction with pay and job satisfaction reduce the probability of search among those who trained as nurses.

Tables 4.14 through 4.17 report the probit results for those within the NGS who are and are not working as nurses, while Tables 4.18 through 4.21 report the probit results for those within the FOG. In each of these tables, those who are working as nurses and those who are not are considered separately since the previous analysis shows that these two groups of women are different in terms of their probability of searching for a new job. As pointed out earlier, the two groups of women have very similar educational training and specific human capital skills but they are differentiated by their location within the job distribution. Those who have nursing jobs have the more desirable jobs compared to those without nursing jobs. Those trained as nurses who are not working as nurses have more incentive to be actively searching for a new job. Due to the skills mobility of this particular labour market, those who have the less desirable non-nursing jobs will be more likely to be seeking the “better” jobs that coincide with their training.

It is very interesting to note that income has a significant effect on the likelihood of job search, particularly for those who are not working as nurses. As income increases, the probability of looking for a new job decreases for several of the specifications being considered, although this effect is most evident in the sample of those who trained as nurses but are not working as nurses. Several existing studies (Ahlburg and Brown Mahoney (1995), Parker and Rickman (1995), Spetz and Given (2003) and Frijters, Shields and Wheatley Price (2003)) suggest that increases in wages lower the probability of quits and helps in retention. This is also the case with the

samples of Canadian women in the NGS and FOG who studied as nurses but are not working as nurses. This effect is not as evident in the sample of women working as nurses and this implies that increasing wages for women already working as nurses is not an effective way to retain those nurses. However, income is an important factor in search decisions for those who are not working as nurses.

One other variable that is of concern regarding the probability of search is satisfaction with pay. In each of the specifications from the NGS and the FOG, a registered nurse who is very satisfied with her pay is between 11 and 16% less likely to search compared to someone who is dissatisfied. These numbers are substantially larger and more frequently statistically significant for those who trained as nurses and are currently working as a nurse. Similarly, a nurse who is satisfied with her job has a lower probability of searching for a new job. When these variables are considered separately they are often significant, but when they are included together the magnitude and the significance of these variables changes. Since these variables have a moderately strong relationship as identified with their coefficient of correlation, it is anticipated that the strength of their effect on someone's probability of searching for a new job will vary depending on which variables are included in the analysis. When only satisfaction with pay is included the effect is strong and statistically significant and similarly this is seen when only job satisfaction is included. Once both variables are included together the effects are mitigated because of their somewhat collinear relationship.

Other variables related to nurses' attitudes appear to have varying impacts on the intent to search. For those working as nurses in the NGS sample none of the additional

variables related to attitudes are significant, and for those in the FOG only feelings of being overqualified for the job is significant. Worker attitudes are not as important an indicator of intents to search in the samples of those working as nurses compared to those who are not working as nurses. Again there is a substantial difference when looking at those who are and are not working as nurses. Those working as a registered nurse are around 9% more likely to search and those not working as a nurse are over 25% more likely to be searching for a new job than someone who reports not being overqualified for their job. This result is in keeping with the expectations on the behavior of these women. Those who trained as nurses but are working in other jobs more often feel over qualified for the job they are doing and they can be expected to be seeking other employment which is a better match to their specialized education and training.

In terms of those who indicated that they would not pursue the same type of study again, if women are working as a nurse this is not statistically significant, but the women who are not working as nurses are 18% more likely in the NGS and 24% more likely in the FOG to be searching for a new job if they also report that they would not study nursing again. This result is again a significant indication of the level of happiness that these women feel in the position they are employed at.

Finally, in terms of socio-economic characteristics, it is also interesting to note that in each of the samples, with the exception of those not working as a nurse in the NGS, as age increases nurses are less likely to be searching for a new job. This is in keeping with the literature related to job satisfaction and quit decisions which shows that individuals become more stable in their employment as they move through their

careers. In many of the specifications, the presence of dependent children reduces the likelihood of search in those who are working as nurses but this effect is not significant in most of the non-nursing women. Again, in terms of those working as nurses, this result is what is expected and confirms the reduction in mobility of these women. Those who are married or in a common law relationship and are not working as nurses are less likely to be seeking new employment while those who are working as nurses and are married are more likely to be seeking a new job. One final aspect that is interesting to note is the relative consistency and stability of the results across all of the various specifications.

4.4 Discussion, Implications and Conclusion

The results of this study demonstrate that the most important variables that influence the probability of a nurse searching for a new job are annual earnings and satisfaction with pay. Socio-economic variables and individual attitudes have an effect for some groups of individuals, but these variables are not as important. There are however significant differences between women who are and are not currently employed as nurses. Earnings and satisfaction with pay have a lesser effect on those who are already in the nursing profession, but this is an area that could be used to attract women who are not currently working as nurses. These variables have a much stronger effect on the women who are working in non-nursing jobs. Improved wages could potentially induce a substantial number of trained nurses who are planning to look for other employment to move into nursing jobs.

The most important group to focus on are the women who have studied nursing but are not currently employed as nurses. Women who studied nursing and are working as nurses are less likely to be the individuals who are looking for a new job. The important question to address is why are women who study nursing working in other professions and not as nurses and secondly what can be done to ensure these women are working in the profession that they were specifically trained for? Analyzing the reasons why women who studied nursing are not working as nurses and addressing these issues can go a long way in filling in the gaps in labour market for registered nurses in Canada. Further studies need to focus on why women who study nursing are working in other professions and how to bring them into the profession.

Additionally, since there is such a strong relationship between job satisfaction and the intent to search, further analysis is required to examine factors that affect job satisfaction for nurses. Potential policy implications can be focused on ensuring that nurses are happy with their jobs and if they are they are more likely to remain in these jobs. Addressing job satisfaction is an issue that can keep more nurses working in their profession and this can help in influencing whether more people decide to enter the labour market for nursing.

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Table 4.1: Weighted Summary Statistics for all women in the National Graduates Survey (NGS) Class of 1995

	All other women	Studied nursing but not working as a nurse	Studied nursing and working as a nurse
	N = 14776	N = 330	N = 689
Age at graduation	27.71	30.23	29.32
Income	26004	26850	32486
Married or common law	0.4366	0.5650	0.5846
Single	0.5018	0.3451	0.3567
Divorced, separated or widowed	0.0603	0.0899	0.0587
Visible minority	0.0869	0.0893	0.0705
Not a visible minority	0.8931	0.9107	0.9296
Dependant children	0.2552	0.4353	0.3553
No dependant children	0.7437	0.5647	0.6445
Atlantic Provinces	0.0716	0.0251	0.0866
Quebec	0.3268	0.2503	0.3295
Ontario	0.3557	0.2982	0.2582
The Prairies and Territories	0.1460	0.0901	0.1944
British Columbia	0.0999	0.3363	0.1313
Mostly full time	0.7830	0.6707	0.7030
Mostly part time	0.2170	0.3293	0.2970
College diploma or trade certificate	0.4131	0.7223	0.4868
Bachelors Degree	0.5069	0.2335	0.4887
Higher education	0.0800	0.0442	0.0244
Overqualified for job	0.3596	0.4136	0.1911
Not overqualified for job	0.6404	0.5864	0.8089
Work experience required	0.4929	0.5155	0.4694
Work experience not required	0.5071	0.4845	0.5306
Training closely related to job	0.5307	0.5605	0.7823
Training somewhat related to job	0.2153	0.1889	0.1827
Training not related to job	0.2540	0.2507	0.0351
Very satisfied with job	0.4220	0.4630	0.3927
Satisfied with job	0.4639	0.4020	0.5154
Dissatisfied with job	0.1141	0.1350	0.0919
Very satisfied with pay	0.2029	0.2301	0.2259
Satisfied with pay	0.5455	0.5433	0.5758
Dissatisfied with pay	0.2516	0.2266	0.1983
Looked for a new job	0.2400	0.3221	0.2083
Have not looked for a new job	0.7600	0.6779	0.7917
Would repeat same training	0.7071	0.6629	0.7311
Would not repeat same training	0.2929	0.3371	0.2689

Table 4.2: Weighted Summary Statistics for all women in the Follow-up Survey of Graduates (FOG) Class of 1995

	All other women	Studied nursing but not working as a nurse	Studied nursing and working as a nurse
	N = 10401	N = 263	N = 520
Income	25996	26598	32392
Married or common law	0.4563	0.6069	0.5805
Single	0.4801	0.3208	0.3651
Divorced, separated or widowed	0.0636	0.0723	0.0545
Visible minority	0.0757	0.0839	0.0577
Not a visible minority	0.9244	0.9161	0.9423
Dependant children	0.2733	0.4441	0.3747
No dependant children	0.7267	0.5559	0.6253
Atlantic Provinces	0.0710	0.0257	0.0812
Quebec	0.3361	0.2678	0.3384
Ontario	0.3487	0.2980	0.2684
The Prairies and Territories	0.1433	0.0951	0.1867
British Columbia	0.0990	0.3134	0.1253
Mostly full time	0.7747	0.6581	0.6907
Mostly part time	0.2253	0.3419	0.3093
College diploma or trade certificate	0.4124	0.7296	0.4676
Bachelors Degree	0.5070	0.2286	0.5069
Higher education	0.0806	0.0418	0.0255
Overqualified for job	0.3590	0.4379	0.1941
Not overqualified for job	0.6320	0.5621	0.8059
Work experience required	0.4868	0.5007	0.4710
Work experience not required	0.5132	0.4993	0.5290
Training closely related to job	0.5401	0.5587	0.7656
Training somewhat related to job	0.2105	0.1593	0.1953
Training not related to job	0.2494	0.2820	0.0391
Very satisfied with job	0.4335	0.4648	0.3948
Satisfied with job	0.4565	0.4169	0.5161
Dissatisfied with job	0.1100	0.1183	0.0892
Very satisfied with pay	0.2117	0.2216	0.2436
Satisfied with pay	0.5440	0.5816	0.5747
Dissatisfied with pay	0.2443	0.1968	0.1817
Looked for a new job	0.2383	0.3400	0.2069
Have not looked for a new job	0.7617	0.6600	0.7931
Would repeat same training	0.7108	0.6507	0.7407
Would not repeat same training	0.2892	0.3493	0.2593

Table 4.3: Weighted values showing the various occupational groupings where individuals are working given that their major field of study was nursing.

	NGS	FOG
	N = 1014	N = 830
Working as a nurse		
Nurse Supervisors & Registered Nurses	633	546
Not working as a nurse		
Management Occupations	44	49
Business, Finance and Administrative Occupations	22	11
Health Occupations ³⁰	138	87
Occupations in Social Science, Education, Gov't Services and Religion	38	57
Child Care and Home Support Workers	36	25
Sales and Service Occupations	97	56
Other ³¹	26	13
Not stated	14	11

³⁰ Other health occupations include: Technical Occupations in Dental Health Care, Assisting Occupations in Dental Health Care and other non-nursing Health Occupations.

³¹ Other includes: Natural and Applied Sciences and Related Occupations, Occupations in Art, Culture, Recreation and Sport, Trade Transport and Equipment Operators and Related Occupations, Occupations Unique to Primary Industry and Occupations Unique to Processing, Manufacturing and Utilities.

Table 4.4: Weighted Cross tabulations for the three basic groups of women from the National Graduates Survey Class of 1995 (Values reported as a percentage)

	Nurse			Non nurse			All other women		
	Quit	Not quit	Total	Quit	Not quit	Total	Quit	Not quit	Total
Job Satisfaction									
Very satisfied	3.76	35.51	39.27	8.51	37.79	46.30	4.97	37.96	42.92
Satisfied	13.56	37.97	51.54	13.60	26.61	40.20	12.39	33.47	45.86
Dissatisfied	3.51	5.68	9.19	10.11	3.39	13.50	6.04	5.18	11.22
Satisfaction with pay									
Very satisfied	3.14	19.45	22.59	3.93	19.08	23.01	2.35	17.83	20.17
Satisfied	10.87	46.71	57.58	16.70	37.63	54.33	11.13	43.29	54.42
Dissatisfied	6.82	13.01	19.83	11.59	11.08	22.66	9.92	15.49	25.41
Would you select the same field of study again?									
Yes	12.96	60.14	73.11	16.68	49.60	66.29	14.32	56.46	70.77
No	7.87	19.02	26.89	15.53	18.18	33.71	9.08	20.15	29.23
How closely related is job to field of study									
Closely related	16.45	61.77	78.23	12.57	43.48	56.05	8.79	42.68	51.47
Somewhat related	...	...	...	7.96	10.92	18.89	5.93	16.17	22.10
Not related at all	...	...	...	11.68	13.39	25.07	8.68	17.75	26.43
Was work experience necessary for job									
Yes	10.88	36.06	46.94	15.38	36.18	51.55	11.87	37.18	49.05
No	9.96	43.10	53.06	16.84	31.61	48.45	11.52	39.43	50.95
Feelings about qualifications for job									
Overqualified	5.68	13.43	19.11	22.98	18.38	41.36	13.49	22.82	36.32
Not overqualified	15.16	65.73	80.89	9.23	49.40	58.64	9.90	53.78	63.68
Total	20.83	79.17	100.00	32.21	67.79	100.00	23.39	76.61	100.00

... indicates cases where the sample sizes are too small to report without disclosure problems.

Table 4.5: Weighted Cross tabulations for the three basic groups of women from the Follow-up Survey Class of 1995 (Values reported as a percentage)

	Nurse			Non nurse			All other women		
	Quit	Not quit	Total	Quit	Not quit	Total	Quit	Not quit	Total
Job Satisfaction									
Very satisfied	4.31	35.43	39.74	9.62	37.12	46.74	5.31	38.11	43.42
Satisfied	12.66	38.72	51.38	14.97	26.53	41.49	12.16	33.34	45.50
Dissatisfied	3.62	5.26	8.88	9.26	2.51	11.77	6.25	4.83	11.08
Satisfaction with pay									
Very satisfied	3.66	20.60	24.26	4.53	17.53	22.06	2.49	18.49	20.98
Satisfied	10.76	46.82	57.58	19.13	39.23	58.36	11.30	42.83	54.13
Dissatisfied	6.17	11.99	18.16	10.18	9.40	19.58	9.93	14.96	24.90
Would you select the same field of study again?									
Yes	13.35	60.83	74.17	16.78	48.46	65.24	14.24	56.88	71.12
No	7.24	18.59	25.83	17.07	17.70	34.76	9.48	19.40	28.88
How closely related is job to field of study									
Closely related	16.39	60.26	76.65	12.49	43.59	56.08	9.04	43.80	52.84
Somewhat related	...	...	...	7.55	8.30	15.85	5.59	15.69	21.28
Not related at all	...	...	...	13.81	14.26	28.07	9.09	16.79	25.88
Was work experience necessary for job									
Yes	10.58	36.53	47.11	16.02	33.91	49.93	11.88	36.83	48.71
No	10.01	42.89	52.89	17.82	32.25	50.07	11.84	39.45	51.29
Feelings about qualifications for job									
Overqualified	5.76	13.57	19.33	24.15	19.43	43.59	13.86	22.69	36.55
Not overqualified	14.83	65.84	80.67	9.69	46.72	56.41	9.86	53.59	63.45
Total	20.59	79.41	100.00	33.84	66.16	100.00	23.72	76.28	100.00

... indicates cases where the sample sizes are too small to report without disclosure problems.

Table 4.6: Weighted Coefficients of Correlation for the National Graduates Survey Class of 1995 for the sample of women whose major field of study was nursing and who are working as registered nurses or nursing supervisors

	Annual earnings	Job satisfaction	Satisfaction with pay	Search	Repeat the same field	Training related to work	Experience required	Overqualified
Annual earnings	1							
Job satisfaction	-0.0975*	1						
Satisfaction with pay	0.0328	0.4595*	1					
Search	0.1119*	-0.2354*	-0.1596*	1				
Repeat the same field	-0.1849*	0.2498*	0.1008*	-0.1264*	1			
Training related to work	0.0709	0.1674*	0.1811*	0.0167	0.0809*	1		
Experience required	-0.1418*	0.1127*	-0.005	0.0543	0.1519*	0.0368	1	
Overqualified	0.0699	-0.1755*	-0.2698*	0.1061*	-0.1672*	-0.0851*	-0.0505	1

Significance at the 5% level indicated by *

Table 4.7: Weighted Coefficients of Correlation for the National Graduates Survey Class of 1995 for the sample of women whose major field of study was nursing and who are not working as registered nurses or nursing supervisors

	Annual earnings	Job satisfaction	Satisfaction with pay	Search	Repeat the same field	Training related to work	Experience required	Overqualified
Annual earnings	1							
Job satisfaction	-0.2219*	1						
Satisfaction with pay	-0.1378*	0.4355*	1					
Search	0.2742*	-0.3719*	-0.2460*	1				
Repeat the same field	-0.2095*	0.1490*	0.0812	-0.2114*	1			
Training related to work	-0.3905*	0.3145*	0.2400*	-0.2301*	0.3773*	1		
Experience required	-0.3164*	0.0843	-0.0234	-0.0527	0.1046	0.1582*	1	
Overqualified	0.4242*	-0.4393*	-0.2881*	0.4196*	-0.2458*	-0.5644*	-0.1470*	1

Significance at the 5% level indicated by *

Table 4.8: Weighted Coefficients of Correlation for the Follow-up Survey Class of 1995 for the sample of women whose major field of study was nursing and who are working as registered nurses or nursing supervisors

	Annual earnings	Job satisfaction	Satisfaction with pay	Search	Repeat the same field	Training related to work	Experience required	Overqualified
Annual earnings	1							
Job satisfaction	-0.0767	1						
Satisfaction with pay	0.0143	0.4781*	1					
Search	0.0619	-0.2227*	-0.1416*	1				
Repeat the same field	-0.1530*	0.2448*	0.1191*	-0.1093*	1			
Training related to work	0.0342	0.2271*	0.1837*	0.0154	0.073	1		
Experience required	-0.1593*	0.1288*	0.0422	0.0438	0.1598*	0.019	1	
Overqualified	0.0662	-0.1622*	-0.2144*	0.1031*	-0.2042*	-0.1488*	-0.0572	1

Significance at the 5% level indicated by *

Table 4.9: Weighted Coefficients of Correlation for the Follow-up Survey Class of 1995 for the sample of women whose major field of study was nursing and who are not working as registered nurses or nursing supervisors

	Annual earnings	Job satisfaction	Satisfaction with pay	Search	Repeat the same field	Training related to work	Experience required	Overqualified
Annual earnings	1							
Job satisfaction	-0.2257*	1						
Satisfaction with pay	-0.1683*	0.3480*	1					
Search	0.3064*	-0.3564*	-0.2126*	1				
Repeat the same field	-0.2208*	0.1133	0.0524	-0.2353*	1			
Training related to work	-0.4114*	0.3533*	0.2447*	-0.2612*	0.3871*	1		
Experience required	-0.3019*	0.1041	-0.0166	-0.037	0.1281*	0.1916*	1	
Overqualified	0.4188*	-0.4294*	-0.2406*	0.3933*	-0.2115*	-0.5948*	-0.1	1

Significance at the 5% level indicated by *

Table 4.10: Probit results examining the probability of searching for a new job for all women from the National Graduates Survey Class of 1995 (robust standard errors in parenthesis)

Searching for a new job (Y=1)	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Log annual earnings	-0.0284 ***	(0.0060)	-0.0228 ***	(0.0061)	-0.0206 ***	(0.0058)	-0.0193 ***	(0.0060)
Studied nursing	0.0405 **	(0.0212)	0.0334 **	(0.0210)	0.0528 ***	(0.0217)	0.0407 **	(0.0212)
Age at graduation	-0.0038 ***	(0.0008)	-0.0031 ***	(0.0008)	-0.0037 ***	(0.0008)	-0.0033 ***	(0.0008)
Bachelors degree	0.0245 **	(0.0123)	0.0153	(0.0124)	0.0171 *	(0.0123)	0.0114	(0.0124)
Higher degree	0.0613 ***	(0.0173)	0.0548 ***	(0.0171)	0.0605 ***	(0.0173)	0.0520 ***	(0.0170)
Mostly full time	-0.1351 ***	(0.0175)	-0.1178 ***	(0.0177)	-0.1237 ***	(0.0175)	-0.1160 ***	(0.0177)
Married or common law	-0.0122	(0.0139)	-0.0129	(0.0140)	-0.0033	(0.0140)	-0.0080	(0.0140)
Separated, divorced or widowed	0.0588 **	(0.0285)	0.0593 **	(0.0286)	0.0602 **	(0.0289)	0.0570 **	(0.0286)
Dependent children	-0.0468 ***	(0.0144)	-0.0400 ***	(0.0147)	-0.0429 ***	(0.0145)	-0.0393 ***	(0.0146)
Not a visible minority	-0.0316 **	(0.0198)	-0.0199	(0.0196)	-0.0193	(0.0190)	-0.0128	(0.0190)
Very satisfied with job			-0.2604 ***	(0.0173)			-0.2158 ***	(0.0191)
Satisfied with job			-0.1564 ***	(0.0175)			-0.1330 ***	(0.0181)
Very satisfied with pay	-0.2034 ***	(0.0107)	-0.1330 ***	(0.0144)	-0.1671 ***	(0.0121)	-0.1207 ***	(0.0147)
Satisfied with pay	-0.1569 ***	(0.0135)	-0.1018 ***	(0.0142)	-0.1230 ***	(0.0138)	-0.0889 ***	(0.0142)
Would not study again					0.1357 ***	(0.0141)	0.0966 ***	(0.0145)
Overqualified					0.0249 **	(0.0118)	0.0314 ***	(0.0119)
Experience was required					-0.0233 *	(0.0154)	0.0056	(0.0158)
Training very related					-0.0058	(0.0165)	0.0069	(0.0170)
Training somewhat related					0.0423 ***	(0.0136)	0.0269 **	(0.0135)
Atlantic Provinces	0.0014	(0.0150)	0.0132	(0.0158)	0.0107	(0.0153)	0.0183	(0.0159)
Quebec	-0.0691 ***	(0.0154)	-0.0637 ***	(0.0156)	-0.0548 ***	(0.0157)	-0.0538 ***	(0.0159)
Prairies and Territories	-0.0148	(0.0135)	-0.0056	(0.0139)	0.0003	(0.0140)	0.0024	(0.0141)
British Columbia	-0.0436 ***	(0.0146)	-0.0357 **	(0.0149)	-0.0326 **	(0.0150)	-0.0300 **	(0.0151)
Observed P	0.2346		0.2346		0.2346		0.2346	
Predicted P	0.2137		0.2059		0.2074		0.2032	
N	15998		15998		15998		15998	
Pseudo R ²	0.0879		0.1256		0.1158		0.1371	

Dependent variable is $Y_i = 1$ if the individual is searching for a new job and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table 4.11: Probit results examining the probability of searching for a new job for all women from the Follow-up Survey Class of 1995 (robust standard errors in parenthesis)

Searching for a new job (Y=1)	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Log annual earnings	-0.0646 ***	(0.0156)	-0.0473 ***	(0.0159)	-0.0168	(0.0164)	-0.0225 *	(0.0167)
Studied nursing	0.0658 ***	(0.0265)	0.0552 **	(0.0260)	0.0649 ***	(0.0263)	0.0568 ***	(0.0257)
Age at graduation	-0.0030 ***	(0.0009)	-0.0027 ***	(0.0010)	-0.0032 ***	(0.0010)	-0.0030 ***	(0.0010)
Bachelors degree	0.0355 **	(0.0156)	0.0235 *	(0.0158)	0.0154	(0.0156)	0.0125	(0.0158)
Higher degree	0.0675 ***	(0.0238)	0.0557 ***	(0.0236)	0.0450 **	(0.0229)	0.0425 **	(0.0230)
Mostly full time	-0.0965 ***	(0.0241)	-0.0911 ***	(0.0242)	-0.1174 ***	(0.0248)	-0.1055 ***	(0.0247)
Married or common law	0.0065	(0.0171)	0.0022	(0.0171)	0.0140	(0.0171)	0.0078	(0.0171)
Separated, divorced or widowed	0.0813 ***	(0.0359)	0.0816 ***	(0.0360)	0.0854 ***	(0.0364)	0.0817 ***	(0.0361)
Dependent children	-0.0573 ***	(0.0173)	-0.0472 ***	(0.0176)	-0.0543 ***	(0.0172)	-0.0474 ***	(0.0174)
Not a visible minority	0.0690 ***	(0.0274)	0.0554 **	(0.0268)	0.0579 ***	(0.0261)	0.0493 **	(0.0260)
Very satisfied with job			-0.2700 ***	(0.0212)			-0.2178 ***	(0.0235)
Satisfied with job			-0.1770 ***	(0.0213)			-0.1490 ***	(0.0221)
Very satisfied with pay	-0.1989 ***	(0.0139)	-0.1307 ***	(0.0181)	-0.1691 ***	(0.0152)	-0.1233 ***	(0.0182)
Satisfied with pay	-0.1526 ***	(0.0167)	-0.0973 ***	(0.0176)	-0.1254 ***	(0.0170)	-0.0884 ***	(0.0176)
Would not study again					0.0567 ***	(0.0171)	0.0405 ***	(0.0171)
Overqualified					0.1394 ***	(0.0174)	0.1023 ***	(0.0180)
Experience was required					0.0260 **	(0.0145)	0.0338 **	(0.0147)
Training very related					-0.0362 **	(0.0195)	-0.0069	(0.0202)
Training somewhat related					-0.0259	(0.0199)	-0.0126	(0.0207)
Atlantic Provinces	-0.0220	(0.0175)	-0.0075	(0.0183)	-0.0029	(0.0183)	0.0031	(0.0188)
Quebec	-0.0890 ***	(0.0183)	-0.0779 ***	(0.0187)	-0.0709 ***	(0.0187)	-0.0663 ***	(0.0191)
Prairies and Territories	-0.0242 *	(0.0166)	-0.0121	(0.0171)	-0.0052	(0.0172)	-0.0019	(0.0175)
British Columbia	-0.0567 ***	(0.0177)	-0.0478 ***	(0.0181)	-0.0465 ***	(0.0180)	-0.0425 **	(0.0182)
Observed P	0.2386		0.2386		0.2386		0.2386	
Predicted P	0.2179		0.2111		0.2110		0.2079	
N	10407		10407		10407		10407	
Pseudo R ²	0.0899		0.1279		0.121		0.1417	

Dependent variable is $Y_i = 1$ if the individual is searching for a new job and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table 4.12: Probit results examining the probability of searching for a new job from sample of all women whose major field of study was nursing from the National Graduate Survey Class of 1995 (robust standard errors in parenthesis)

Searching for a new job (Y=1)	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Log annual earnings	-0.1228 ***	(0.0487)	-0.1063 **	(0.0480)	-0.0902 **	(0.0472)	-0.0878 **	(0.0489)
Registered nurse	-0.0901 **	(0.0487)	-0.1005 **	(0.0494)	-0.0742 *	(0.0493)	-0.0937 **	(0.0498)
Age at graduation	-0.0038 **	(0.0023)	-0.0041 **	(0.0023)	-0.0038 **	(0.0023)	-0.0040 **	(0.0023)
Bachelors degree	0.0004	(0.0426)	0.0012	(0.0419)	-0.0040	(0.0416)	0.0023	(0.0411)
Higher degree	0.0959	(0.0862)	0.1336 **	(0.0885)	0.0621	(0.0799)	0.1000 *	(0.0827)
Mostly full time	-0.0219	(0.0561)	-0.0283	(0.0556)	-0.0328	(0.0564)	-0.0350	(0.0560)
Married or common law	0.0193	(0.0468)	0.0246	(0.0455)	0.0112	(0.0467)	0.0154	(0.0456)
Separated, divorced or widowed	0.0551	(0.0795)	0.0522	(0.0778)	0.0339	(0.0769)	0.0362	(0.0759)
Dependent children	-0.1102 ***	(0.0414)	-0.1065 ***	(0.0406)	-0.1058 ***	(0.0406)	-0.1056 ***	(0.0400)
Not a visible minority	-0.0662	(0.0688)	-0.0668	(0.0716)	-0.0676	(0.0690)	-0.0667	(0.0706)
Very satisfied with job			-0.2860 ***	(0.0576)			-0.2633 ***	(0.0579)
Satisfied with job			-0.1430 ***	(0.0616)			-0.1238 **	(0.0616)
Very satisfied with pay	-0.1863 ***	(0.0421)	-0.0790	(0.0590)	-0.1553 ***	(0.0460)	-0.0612	(0.0606)
Satisfied with pay	-0.1427 ***	(0.0501)	-0.0843 **	(0.0506)	-0.1218 ***	(0.0510)	-0.0748 *	(0.0511)
Would not study again					0.0998 **	(0.0492)	0.0772 **	(0.0470)
Overqualified					0.1700 ***	(0.0550)	0.1354 ***	(0.0538)
Experience was required					0.0365	(0.0421)	0.0470	(0.0416)
Training very related					0.0852	(0.0644)	0.0905 *	(0.0616)
Training somewhat related					0.0353	(0.0840)	0.0044	(0.0774)
Atlantic Provinces	-0.0528	(0.0490)	-0.0426	(0.0495)	-0.0320	(0.0521)	-0.0344	(0.0511)
Quebec	-0.1465 ***	(0.0495)	-0.1575 ***	(0.0481)	-0.1451 ***	(0.0513)	-0.1575 ***	(0.0493)
Prairies and Territories	-0.0433	(0.0474)	-0.0298	(0.0484)	-0.0354	(0.0488)	-0.0337	(0.0485)
British Columbia	-0.1523 ***	(0.0447)	-0.1384 ***	(0.0446)	-0.1492 ***	(0.0444)	-0.1427 ***	(0.0440)
Observed P	0.2512		0.2512		0.2512		0.2512	
Predicted P	0.2213		0.2100		0.2134		0.2042	
N	1014		1014		1014		1014	
Pseudo R ²	0.1362		0.1788		0.1678		0.2018	

Dependent variable is $Y_i = 1$ if the individual is searching for a new job and $Y_i = 0$ otherwise

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table 4.13: Probit results examining the probability of searching for a new job from the sample of all women whose major field of study was nursing from the Follow-up Survey Class of 1995 (robust standard errors in parenthesis)

Searching for a new job (Y=1)	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Log annual earnings	-0.1285 ***	(0.0524)	-0.1135 **	(0.0516)	-0.0901 **	(0.0507)	-0.0929 **	(0.0520)
Registered nurse	-0.1073 **	(0.0541)	-0.1210 **	(0.0549)	-0.0821 *	(0.0549)	-0.1052 **	(0.0551)
Age at graduation	-0.0020	(0.0025)	-0.0026	(0.0025)	-0.0021	(0.0025)	-0.0026	(0.0025)
Bachelors degree	-0.0133	(0.0479)	-0.0068	(0.0478)	-0.0161	(0.0472)	-0.0032	(0.0472)
Higher degree	0.1156 *	(0.0925)	0.1407 *	(0.0960)	0.0786	(0.0885)	0.1086 *	(0.0913)
Mostly full time	0.0131	(0.0608)	0.0051	(0.0609)	-0.0058	(0.0613)	-0.0076	(0.0615)
Married or common law	-0.0457	(0.0568)	-0.0335	(0.0560)	-0.0462	(0.0567)	-0.0368	(0.0565)
Separated, divorced or widowed	-0.0277	(0.0769)	-0.0222	(0.0765)	-0.0396	(0.0742)	-0.0350	(0.0742)
Dependent children	-0.0849 *	(0.0508)	-0.0810 *	(0.0503)	-0.0872 **	(0.0498)	-0.0841 **	(0.0500)
Not a visible minority	-0.0996 *	(0.0790)	-0.0797	(0.0843)	-0.0983	(0.0843)	-0.0764	(0.0851)
Very satisfied with job			-0.2906 ***	(0.0662)			-0.2799 ***	(0.0658)
Satisfied with job			-0.1646 **	(0.0711)			-0.1651 ***	(0.0695)
Very satisfied with pay	-0.1575 ***	(0.0531)	-0.0582	(0.0709)	-0.1284 **	(0.0566)	-0.0436	(0.0716)
Satisfied with pay	-0.1330 **	(0.0583)	-0.0847 *	(0.0591)	-0.1235 **	(0.0585)	-0.0818 *	(0.0590)
Would not study again					0.1131 **	(0.0562)	0.0927 **	(0.0543)
Overqualified					0.1737 ***	(0.0621)	0.1452 ***	(0.0608)
Experience was required					0.0502	(0.0474)	0.0672 *	(0.0462)
Training very related					0.0644	(0.0738)	0.0892	(0.0690)
Training somewhat related					0.0031	(0.0869)	-0.0090	(0.0814)
Atlantic Provinces	-0.0644	(0.0538)	-0.0439	(0.0570)	-0.0428	(0.0581)	-0.0361	(0.0590)
Quebec	-0.1210 **	(0.0567)	-0.1319 **	(0.0561)	-0.1188 **	(0.0587)	-0.1318 **	(0.0573)
Prairies and Territories	-0.0004	(0.0584)	0.0097	(0.0601)	0.0056	(0.0600)	0.0016	(0.0599)
British Columbia	-0.1761 ***	(0.0479)	-0.1572 ***	(0.0494)	-0.1702 ***	(0.0484)	-0.1599 ***	(0.0489)
Observed P	0.2566		0.2566		0.2566		0.2566	
Predicted P	0.2289		0.2195		0.2188		0.2115	
N	783		783		783		783	
Pseudo R ²	0.1339		0.1731		0.1689		0.2017	

Dependent variable is $Y_i = 1$ if the individual is searching for a new job and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table 4.14: Probit Results examining the probability of searching for a new job from the sample of women whose major field of study was nursing and who are working as registered nurses or nursing supervisors from the National Graduates Survey Class of 1995 (robust standard errors in parenthesis)

Searching for a new job (Y=1)	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Log annual earnings	-0.1357 **	(0.0691)	-0.1065 *	(0.0680)	-0.1115 *	(0.0691)	-0.0985 *	(0.0675)
Age at graduation	-0.0075 ***	(0.0026)	-0.0084 ***	(0.0025)	-0.0082 ***	(0.0026)	-0.0086 ***	(0.0025)
Bachelors degree	0.0286	(0.0432)	0.0147	(0.0428)	0.0079	(0.0442)	0.0083	(0.0432)
Higher degree	0.1291 *	(0.1093)	0.1568 *	(0.1235)	0.1178	(0.1152)	0.1538 *	(0.1267)
Mostly full time	0.0446	(0.0487)	0.0588	(0.0462)	0.0625 *	(0.0471)	0.0670 *	(0.0456)
Married or common law	0.0709	(0.1053)	0.0920	(0.1041)	0.0615	(0.0981)	0.0878	(0.1016)
Separated, divorced or widowed	-0.1083 ***	(0.0436)	-0.0949 **	(0.0425)	-0.1053 ***	(0.0429)	-0.0947 **	(0.0423)
Dependent children	0.0873 *	(0.0527)	0.0745 *	(0.0481)	0.0516	(0.0543)	0.0606	(0.0502)
Not a visible minority	-0.0995	(0.0990)	-0.0549	(0.0844)	-0.0564	(0.0826)	-0.0292	(0.0761)
Very satisfied with job			-0.2399 ***	(0.0587)			-0.2058 ***	(0.0626)
Satisfied with job			-0.0832	(0.0692)			-0.0523	(0.0697)
Very satisfied with pay					-0.1655 ***	(0.0427)	-0.0813 *	(0.0560)
Satisfied with pay					-0.1320 ***	(0.0568)	-0.0948 **	(0.0555)
Atlantic Provinces	-0.0238	(0.0577)	-0.0136	(0.0565)	-0.0109	(0.0598)	-0.0067	(0.0582)
Quebec	-0.0832 *	(0.0621)	-0.1024 *	(0.0573)	-0.0947 *	(0.0610)	-0.1090 **	(0.0573)
Prairies and Territories	0.0186	(0.0585)	0.0358	(0.0578)	0.0254	(0.0590)	0.0371	(0.0584)
British Columbia	0.0252	(0.0683)	0.0306	(0.0667)	0.0365	(0.0692)	0.0367	(0.0676)
Observed P	0.2086		0.2086		0.2086		0.2086	
Predicted P	0.1836		0.1663		0.1758		0.1641	
N	684		684		684		684	
Pseudo R ²	0.0866		0.1453		0.1140		0.1536	

Dependent variable is $Y_i = 1$ if the individual is searching for a new job and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table 4.15: Probit Results examining the probability of searching for a new job from the sample of women whose major field of study was nursing and who are working as registered nurses or nursing supervisors from the National Graduates Survey Class of 1995 (robust standard errors in parenthesis)

Searching for a new job (Y=1)	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Log annual earnings	-0.0966 *	(0.0692)	-0.0821	(0.0680)	-0.0858 *	(0.0681)	-0.0805	(0.0672)
Age at graduation	-0.0078 ***	(0.0026)	-0.0088 ***	(0.0025)	-0.0080 ***	(0.0027)	-0.0086 ***	(0.0025)
Bachelors degree	0.0166	(0.0444)	0.0112	(0.0435)	0.0027	(0.0438)	0.0077	(0.0433)
Higher degree	0.0964	(0.1010)	0.1253	(0.1169)	0.0971	(0.1081)	0.1285	(0.1206)
Mostly full time	0.0400	(0.0488)	0.0533	(0.0455)	0.0540	(0.0465)	0.0592 *	(0.0447)
Married or common law	0.0458	(0.1010)	0.0725	(0.1014)	0.0373	(0.0957)	0.0677	(0.0994)
Separated, divorced or widowed	-0.1036 **	(0.0438)	-0.0938 **	(0.0423)	-0.1022 ***	(0.0426)	-0.0927 **	(0.0419)
Dependent children	0.0671	(0.0549)	0.0595	(0.0495)	0.0386	(0.0549)	0.0500	(0.0503)
Not a visible minority	-0.0903	(0.0971)	-0.0437	(0.0807)	-0.0543	(0.0828)	-0.0227	(0.0749)
Very satisfied with job			-0.2397 ***	(0.0579)			-0.2091 ***	(0.0599)
Satisfied with job			-0.0875 *	(0.0690)			-0.0586	(0.0694)
Very satisfied with pay					-0.1597 ***	(0.0457)	-0.0740	(0.0593)
Satisfied with pay					-0.1326 **	(0.0610)	-0.0922 *	(0.0592)
Would not study again	0.0713 *	(0.0567)	0.0323	(0.0519)	0.0660	(0.0570)	0.0346	(0.0523)
Overqualified	0.1039 **	(0.0651)	0.0817 *	(0.0613)	0.0655	(0.0659)	0.0643	(0.0631)
Experience was required	0.0368	(0.0432)	0.0517	(0.0414)	0.0322	(0.0427)	0.0491	(0.0415)
Training very related	0.0438	(0.0871)	0.0535	(0.0764)	0.1094	(0.0779)	0.0873	(0.0726)
Training somewhat related	0.0141	(0.1103)	-0.0018	(0.0971)	0.0932	(0.1381)	0.0429	(0.1156)
Atlantic Provinces	-0.0077	(0.0615)	-0.0077	(0.0585)	-0.0040	(0.0622)	-0.0039	(0.0602)
Quebec	-0.0767	(0.0631)	-0.0964 *	(0.0581)	-0.0916 *	(0.0619)	-0.1038 *	(0.0585)
Prairies and Territories	0.0217	(0.0603)	0.0255	(0.0586)	0.0238	(0.0606)	0.0266	(0.0595)
British Columbia	0.0221	(0.0691)	0.0200	(0.0662)	0.0323	(0.0703)	0.0273	(0.0679)
Observed P	0.2086		0.2086		0.2086		0.2086	
Predicted P	0.1796		0.1633		0.1721		0.1614	
N	684		684		684		684	
Pseudo R ²	0.1042		0.1583		0.1280		0.1656	

Dependent variable is $Y_i = 1$ if the individual is searching for a new job and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table 4.16: Probit Results examining the probability of searching for a new job from the sample of women whose major field of study was nursing and who are not working as registered nurses or nursing supervisors from the National Graduates Survey Class of 1995 (robust standard errors in parenthesis)

Searching for a new job (Y=1)	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Log annual earnings	-0.1816 **	(0.0804)	-0.1209 **	(0.0650)	-0.1465 **	(0.0759)	-0.1216 **	(0.0672)
Age at graduation	0.0026	(0.0044)	0.0017	(0.0043)	0.0016	(0.0047)	0.0019	(0.0044)
Bachelors degree	0.0352	(0.1017)	0.0648	(0.0943)	0.0192	(0.0961)	0.0581	(0.0937)
Higher degree	0.0785	(0.1354)	0.1207	(0.1333)	0.0745	(0.1319)	0.1278	(0.1340)
Mostly full time	-0.1374 *	(0.0971)	-0.1044	(0.0904)	-0.1093	(0.0959)	-0.1032	(0.0895)
Married or common law	-0.0244	(0.1278)	-0.0396	(0.1173)	-0.0217	(0.1242)	-0.0449	(0.1165)
Separated, divorced or widowed	-0.0844	(0.0802)	-0.0857	(0.0760)	-0.0807	(0.0812)	-0.0859	(0.0757)
Dependent children	-0.0879	(0.1073)	-0.1832 **	(0.1048)	-0.1337	(0.1104)	-0.1883 **	(0.1063)
Not a visible minority	-0.1758 *	(0.1336)	-0.2192 *	(0.1473)	-0.1136	(0.1411)	-0.1973 *	(0.1486)
Very satisfied with job			-0.4379 ***	(0.1029)			-0.4252 ***	(0.1065)
Satisfied with job			-0.2847 ***	(0.1075)			-0.2720 ***	(0.1074)
Very satisfied with pay					-0.1899 **	(0.0947)	-0.0297	(0.1205)
Satisfied with pay					-0.1633 **	(0.0976)	-0.0773	(0.0950)
Atlantic Provinces	-0.0986	(0.0905)	-0.1002	(0.0890)	-0.1200	(0.0865)	-0.1087	(0.0896)
Quebec	-0.2694 ***	(0.0800)	-0.2620 ***	(0.0808)	-0.2339 ***	(0.0841)	-0.2515 ***	(0.0806)
Prairies and Territories	-0.1625 **	(0.0771)	-0.1471 *	(0.0802)	-0.1437 *	(0.0793)	-0.1409 *	(0.0812)
British Columbia	-0.3653 ***	(0.0765)	-0.3268 ***	(0.0797)	-0.3464 ***	(0.0793)	-0.3233 ***	(0.0803)
Observed P	0.3221		0.3221		0.3221		0.3221	
Predicted P	0.2880		0.2716		0.2813		0.2695	
N	330		330		330		330	
Pseudo R ²	0.1991		0.2779		0.2175		0.2812	

Dependent variable is $Y_i = 1$ if the individual is searching for a new job and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table 4.17: Probit Results examining the probability of searching for a new job from the sample of women whose major field of study was nursing and who are not working as registered nurses or nursing supervisors from the National Graduates Survey Class of 1995 (robust standard errors in parenthesis)

Searching for a new job (Y=1)	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Log annual earnings	-0.1222 *	(0.0748)	-0.1056 *	(0.0706)	-0.1076 *	(0.0729)	-0.1063 *	(0.0723)
Age at graduation	0.0030	(0.0042)	0.0024	(0.0041)	0.0027	(0.0043)	0.0028	(0.0041)
Bachelors degree	0.0519	(0.0953)	0.0787	(0.0921)	0.0450	(0.0935)	0.0763	(0.0918)
Higher degree	0.0270	(0.1208)	0.0708	(0.1233)	0.0306	(0.1241)	0.0811	(0.1259)
Mostly full time	-0.1599 *	(0.0966)	-0.1381 *	(0.0918)	-0.1448 *	(0.0939)	-0.1430 *	(0.0910)
Married or common law	-0.0260	(0.1151)	-0.0302	(0.1133)	-0.0257	(0.1136)	-0.0403	(0.1120)
Separated, divorced or widowed	-0.0421	(0.0779)	-0.0642	(0.0749)	-0.0471	(0.0779)	-0.0651	(0.0752)
Dependent children	-0.1004	(0.1135)	-0.1670 *	(0.1104)	-0.1284	(0.1129)	-0.1726 *	(0.1110)
Not a visible minority	-0.2042 *	(0.1347)	-0.2574 **	(0.1385)	-0.1601	(0.1358)	-0.2427 **	(0.1394)
Very satisfied with job			-0.3543 ***	(0.1127)			-0.3517 ***	(0.1129)
Satisfied with job			-0.2129 **	(0.1092)			-0.2037 **	(0.1066)
Very satisfied with pay					-0.1068	(0.1029)	0.0091	(0.1210)
Satisfied with pay					-0.1264 *	(0.0909)	-0.0690	(0.0880)
Would not study again	0.1912 **	(0.0940)	0.1963 **	(0.0967)	0.1845 **	(0.0940)	0.1870 **	(0.0946)
Overqualified	0.3452 ***	(0.0900)	0.2470 ***	(0.0941)	0.3354 ***	(0.0920)	0.2561 *	(0.0954)
Experience was required	0.0424	(0.0809)	0.0522	(0.0834)	0.0421	(0.0818)	0.0546	(0.0832)
Training very related	0.1752 *	(0.1183)	0.1731 *	(0.1217)	0.1700 *	(0.1203)	0.1656 *	(0.1223)
Training somewhat related	0.1335	(0.1549)	0.0295	(0.1412)	0.1023	(0.1515)	0.0121	(0.1367)
Atlantic Provinces	-0.0784	(0.0940)	-0.0952	(0.0919)	-0.1003	(0.0917)	-0.1038	(0.0925)
Quebec	-0.2518 ***	(0.0812)	-0.2556 ***	(0.0794)	-0.2342 **	(0.0835)	-0.2507 ***	(0.0785)
Prairies and Territories	-0.1297 *	(0.0746)	-0.1325 *	(0.0764)	-0.1203 *	(0.0758)	-0.1276 *	(0.0768)
British Columbia	-0.3448 ***	(0.0755)	-0.3355 ***	(0.0790)	-0.3366 ***	(0.0760)	-0.3328 ***	(0.0787)
Observed P	0.3221		0.3221		0.3221		0.3221	
Predicted P	0.2581		0.2516		0.2547		0.2490	
N	330		330		330		330	
Pseudo R ²	0.2917		0.3303		0.2999		0.3340	

Dependent variable is $Y_i = 1$ if the individual is searching for a new job and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table 4.18: Probit Results examining the probability of searching for a new job from the sample of women whose major field of study was nursing and who are working as registered nurses or nursing supervisors from the Follow-up Survey Class of 1995 (robust standard errors in parenthesis)

Searching for a new job (Y=1)	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Log annual earnings	-0.1182 *	(0.0789)	-0.0952	(0.0785)	-0.0970	(0.0797)	-0.0916	(0.0785)
Age at graduation	-0.0074 ***	(0.0029)	-0.0084 ***	(0.0028)	-0.0079 ***	(0.0029)	-0.0083 ***	(0.0028)
Bachelors degree	0.0409	(0.0487)	0.0255	(0.0490)	0.0223	(0.0501)	0.0223	(0.0493)
Higher degree	0.1468 *	(0.1232)	0.1786 *	(0.1357)	0.1387	(0.1276)	0.1809 *	(0.1382)
Mostly full time	0.1095 **	(0.0578)	0.1003 **	(0.0541)	0.0825 *	(0.0592)	0.0932 *	(0.0561)
Married or common law	0.0094	(0.0577)	0.0356	(0.0556)	0.0287	(0.0557)	0.0410	(0.0546)
Separated, divorced or widowed	0.0039	(0.0980)	0.0273	(0.0991)	-0.0024	(0.0902)	0.0216	(0.0960)
Dependent children	-0.0781 *	(0.0535)	-0.0691 *	(0.0525)	-0.0741 *	(0.0534)	-0.0668	(0.0523)
Not a visible minority	-0.0675	(0.1106)	-0.0248	(0.0919)	-0.0588	(0.0990)	-0.0191	(0.0890)
Very satisfied with job			-0.2351 ***	(0.0697)			-0.2089 ***	(0.0757)
Satisfied with job			-0.1015	(0.0818)			-0.0753	(0.0835)
Very satisfied with pay					-0.1457 ***	(0.0534)	-0.0543	(0.0720)
Satisfied with pay					-0.1240 **	(0.0659)	-0.0748	(0.0660)
Atlantic Provinces	-0.0156	(0.0678)	0.0013	(0.0699)	-0.0107	(0.0685)	0.0024	(0.0702)
Quebec	-0.0380	(0.0723)	-0.0506	(0.0697)	-0.0542	(0.0715)	-0.0612	(0.0697)
Prairies and Territories	0.0914 *	(0.0753)	0.1036 *	(0.0759)	0.0989 *	(0.0762)	0.1047 *	(0.0763)
British Columbia	0.0412	(0.0810)	0.0515	(0.0817)	0.0462	(0.0817)	0.0523	(0.0819)
Observed P	0.2061		0.2061		0.2061		0.2061	
Predicted P	0.1851		0.1722		0.1794		0.1707	
N	518		518		518		518	
Pseudo R ²	0.0726		0.1216		0.0928		0.1263	

Dependent variable is $Y_i = 1$ if the individual is searching for a new job and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table 4.19: Probit Results examining the probability of searching for a new job from the sample of women whose major field of study was nursing and who are working as registered nurses or nursing supervisors from the Follow-up Survey Class of 1995 (robust standard errors in parenthesis)

Searching for a new job (Y=1)	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Log annual earnings	-0.0662	(0.0781)	-0.0609	(0.0765)	-0.0584	(0.0774)	-0.0623	(0.0761)
Age at graduation	-0.0078 ***	(0.0030)	-0.0087 ***	(0.0029)	-0.0079 ***	(0.0030)	-0.0085 ***	(0.0029)
Bachelors degree	0.0205	(0.0508)	0.0160	(0.0502)	0.0100	(0.0506)	0.0155	(0.0498)
Higher degree	0.1044	(0.1108)	0.1368	(0.1254)	0.1055	(0.1158)	0.1426 *	(0.1283)
Mostly full time	0.0788	(0.0600)	0.0741 *	(0.0558)	0.0583	(0.0599)	0.0708	(0.0565)
Married or common law	0.0161	(0.0575)	0.0396	(0.0543)	0.0311	(0.0546)	0.0428	(0.0533)
Separated, divorced or widowed	-0.0171	(0.0928)	0.0031	(0.0945)	-0.0241	(0.0863)	-0.0038	(0.0911)
Dependent children	-0.0830 *	(0.0524)	-0.0769 *	(0.0511)	-0.0797 *	(0.0517)	-0.0729 *	(0.0506)
Not a visible minority	-0.0843	(0.1224)	-0.0361	(0.0970)	-0.0786	(0.1120)	-0.0306	(0.0948)
Very satisfied with job			-0.2470 ***	(0.0676)			-0.2280 ***	(0.0714)
Satisfied with job			-0.1221 *	(0.0816)			-0.1018	(0.0836)
Very satisfied with pay					-0.1334 **	(0.0577)	-0.0431	(0.0752)
Satisfied with pay					-0.1124 *	(0.0698)	-0.0647	(0.0682)
Would not study again	0.0669	(0.0674)	0.0264	(0.0628)	0.0625	(0.0679)	0.0283	(0.0630)
Overqualified	0.1143 *	(0.0724)	0.1004 *	(0.0702)	0.0910 *	(0.0749)	0.0924 *	(0.0726)
Experience was required	0.0374	(0.0489)	0.0624 *	(0.0471)	0.0417	(0.0478)	0.0639 *	(0.0467)
Training very related	-0.0654	(0.1181)	-0.0095	(0.1020)	-0.0143	(0.1203)	0.0094	(0.1033)
Training somewhat related	-0.1224	(0.0844)	-0.1009	(0.0822)	-0.0949	(0.1003)	-0.0864	(0.0919)
Atlantic Provinces	-0.0093	(0.0708)	-0.0001	(0.0704)	-0.0099	(0.0706)	0.0005	(0.0711)
Quebec	-0.0450	(0.0728)	-0.0549	(0.0694)	-0.0604	(0.0715)	-0.0638	(0.0692)
Prairies and Territories	0.0734	(0.0757)	0.0729	(0.0743)	0.0778	(0.0764)	0.0747	(0.0752)
British Columbia	0.0172	(0.0798)	0.0214	(0.0780)	0.0225	(0.0810)	0.0243	(0.0791)
Observed P	0.2061		0.2061		0.2061		0.2061	
Predicted P	0.1787		0.1657		0.1728		0.1642	
N	518		518		518		518	
Pseudo R ²	0.0961		0.1434		0.1122		0.147	

Dependent variable is $Y_i = 1$ if the individual is searching for a new job and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table 4.20: Probit Results examining the probability of searching for a new job from the sample of women whose major field of study was nursing and who are not working as registered nurses or nursing supervisors from the Follow-up Survey Class of 1995 (robust standard errors in parenthesis)

Searching for a new job (Y=1)	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Log annual earnings	-0.1950 ***	(0.0845)	-0.1419 **	(0.0704)	-0.1824 **	(0.0839)	-0.1527 **	(0.0727)
Age at graduation	0.0081 *	(0.0049)	0.0069 *	(0.0044)	0.0077 *	(0.0051)	0.0074 *	(0.0045)
Bachelors degree	-0.0689	(0.0982)	0.0090	(0.1023)	-0.0808	(0.0933)	-0.0076	(0.0966)
Higher degree	0.1351	(0.1311)	0.1546	(0.1422)	0.1233	(0.1364)	0.1524	(0.1489)
Mostly full time	-0.0518	(0.1151)	-0.1540 *	(0.1180)	-0.0749	(0.1174)	-0.1559 *	(0.1181)
Married or common law	-0.2959 ***	(0.1100)	-0.2778 ***	(0.1049)	-0.2773 ***	(0.1107)	-0.2736 ***	(0.1053)
Separated, divorced or widowed	-0.1311	(0.1141)	-0.1049	(0.1149)	-0.1148	(0.1190)	-0.0898	(0.1185)
Dependent children	-0.0530	(0.0890)	-0.0571	(0.0898)	-0.0587	(0.0904)	-0.0661	(0.0880)
Not a visible minority	-0.3665 ***	(0.1280)	-0.3932 ***	(0.1354)	-0.3448 ***	(0.1335)	-0.4057 ***	(0.1385)
Very satisfied with job			-0.4544 ***	(0.1021)			-0.4690 ***	(0.1031)
Satisfied with job			-0.3046 ***	(0.1094)			-0.3007 ***	(0.1081)
Very satisfied with pay					-0.0951	(0.1324)	0.0409	(0.1502)
Satisfied with pay					-0.1309	(0.1135)	-0.0994	(0.1072)
Atlantic Provinces	-0.1550 *	(0.0870)	-0.1635 *	(0.0816)	-0.1677 *	(0.0839)	-0.1676	(0.0808)
Quebec	-0.2612 ***	(0.0893)	-0.2919 ***	(0.0817)	-0.2391 **	(0.0926)	-0.2754 ***	(0.0834)
Prairies and Territories	-0.1911 **	(0.0807)	-0.2023 **	(0.0752)	-0.1826 **	(0.0821)	-0.1947 **	(0.0770)
British Columbia	-0.4476 ***	(0.0755)	-0.4215 ***	(0.0758)	-0.4402 ***	(0.0782)	-0.4191 ***	(0.0767)
Observed P	0.3384		0.3384		0.3384		0.3384	
Predicted P	0.2869		0.2786		0.2831		0.2719	
N	265		265		265		265	
Pseudo R ²	0.2742		0.3374		0.2819		0.3466	

Dependent variable is $Y_i = 1$ if the individual is searching for a new job and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Table 4.21: Probit Results examining the probability of searching for a new job from the sample of women whose major field of study was nursing and who are not working as registered nurses or nursing supervisors from the Follow-up Survey Class of 1995 (robust standard errors in parenthesis)

Searching for a new job (Y=1)	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Log annual earnings	-0.1557 **	(0.0734)	-0.1506 **	(0.0703)	-0.1476 **	(0.0713)	-0.1540 **	(0.0708)
Age at graduation	0.0094 **	(0.0045)	0.0083 **	(0.0043)	0.0092 **	(0.0047)	0.0088 **	(0.0044)
Bachelors degree	-0.0428	(0.0906)	0.0141	(0.0969)	-0.0507	(0.0868)	0.0008	(0.0914)
Higher degree	0.0256	(0.1367)	0.0668	(0.1434)	0.0212	(0.1428)	0.0648	(0.1475)
Mostly full time	-0.0563	(0.1199)	-0.1271	(0.1252)	-0.0771	(0.1174)	-0.1326	(0.1226)
Married or common law	-0.3304 ***	(0.1034)	-0.3111 ***	(0.1048)	-0.3217 ***	(0.1040)	-0.3106 ***	(0.1060)
Separated, divorced or widowed	-0.1270	(0.1000)	-0.0967	(0.1106)	-0.1147	(0.1033)	-0.0871	(0.1124)
Dependent children	-0.0375	(0.0876)	-0.0480	(0.0904)	-0.0449	(0.0877)	-0.0563	(0.0883)
Not a visible minority	-0.3417 **	(0.1553)	-0.3672 ***	(0.1578)	-0.3093 **	(0.1607)	-0.3679 ***	(0.1640)
Very satisfied with job			-0.3906 ***	(0.1217)			-0.3906 ***	(0.1209)
Satisfied with job			-0.2556 **	(0.1189)			-0.2389 **	(0.1140)
Very satisfied with pay					-0.0420	(0.1270)	0.0520	(0.1403)
Satisfied with pay					-0.1394 *	(0.0952)	-0.1011	(0.0925)
Would not study again	0.2469 ***	(0.0965)	0.2744 ***	(0.0996)	0.2406 ***	(0.0945)	0.2616 ***	(0.0964)
Overqualified	0.3417 ***	(0.0996)	0.2584 ***	(0.1069)	0.3637 ***	(0.1010)	0.2828 ***	(0.1082)
Experience was required	0.0615	(0.0898)	0.0950	(0.0899)	0.0599	(0.0895)	0.0907	(0.0892)
Training very related	0.2315 **	(0.1251)	0.2513 **	(0.1239)	0.2334 **	(0.1277)	0.2454 **	(0.1251)
Training somewhat related	0.3652 ***	(0.1561)	0.3011 **	(0.1606)	0.3593 ***	(0.1589)	0.2922 **	(0.1600)
Atlantic Provinces	-0.1550 *	(0.0805)	-0.1743 **	(0.0711)	-0.1676 *	(0.0737)	-0.1762 **	(0.0662)
Quebec	-0.2330 ***	(0.0863)	-0.2702 ***	(0.0806)	-0.2126 **	(0.0873)	-0.2521 ***	(0.0794)
Prairies and Territories	-0.1763 **	(0.0697)	-0.1997 ***	(0.0648)	-0.1676 **	(0.0694)	-0.1893 **	(0.0638)
British Columbia	-0.4341 ***	(0.0718)	-0.4368 ***	(0.0722)	-0.4252 ***	(0.0712)	-0.4288 ***	(0.0705)
Observed P	0.3384		0.3384		0.3384		0.3384	
Predicted P	0.2530		0.2505		0.2454		0.2406	
N	265		265		265		265	
Pseudo R ²	0.3739		0.4096		0.3835		0.4193	

Dependent variable is $Y_i = 1$ if the individual is searching for a new job and $Y_i = 0$ otherwise.

Significance indicated by *** for 1%, ** for 5% and * for 10%.

dF/dx is for a discrete change of the dummy variable from 0 to 1 and z is the test statistic for the underlying coefficient being 0.

Chapter 5

Conclusion

Conclusion

5.1 Motivation

The purpose of this concluding chapter is to provide a very brief summary of the main results of this thesis, to describe the contribution it makes to the existing literature and to discuss future research questions that were raised during this process. This thesis involved three individual papers examining various aspects of the labour market for registered nurses in Canada. This study was very interesting to pursue since it focused on a very specific labour market and asked very specific questions of that labour market. It was interesting to see that the results of this study were consistent with the economic theory of labour markets and that many basic results were upheld with this specific group of workers.

5.2 Contribution and Implications

The purpose of the first paper in this thesis was to examine if there exists a wage premium paid to Canadian nurses who have graduated from a baccalaureate nurses (BN) program. In keeping with human capital theory, it was hypothesized that nurses who have a Bachelors degree in nursing will earn more than nurses who were trained in a diploma nursing program. A second question that was asked is whether increases in education lead to increases in the probability of promotion and increases in supervisory positions for Canadian nurses.

In general, the results of this study support the hypothesis that attaining a BN significantly increases the wages earned by nurses in Canada. This study concludes that

there is convincing evidence of increased earnings for nurses in Canada who obtain a BN. These results are consistent with results found in several studies of nurses in the United States and also with general studies of human capital theory. This study also finds that there are systematic differences between visible minorities, place of employment and province of employment for female nurses and, to a lesser extent, for the male nurses. Similarly, these results are consistent with general results found in this area of research for nurses and other occupations. Finally, this study shows that increases in education lead to increases in the probability of promotion and an increase in supervisory positions for Canadian nurses.

The results from the first paper led to the motivation for the second paper in this thesis. The second paper in this thesis involved an analysis of the labour market for immigrant nurses in Canada and addressed two questions. First, is there a wage penalty associated with being a foreign born and educated nurse? Second, is a foreign born and educated nurse equally likely or less likely to be employed in the nursing profession as a Canadian born and educated nurse? If there is a difference in the recognition or market valuation of educational credentials of nurses trained in Canada and in other countries, then it is hypothesized that individuals with foreign nursing degrees will attain lower wages than those with a Canadian nursing degree. If the educational credentials are equivalent, then there should be no wage differential seen between a Canadian and a foreign nursing degree. Additionally, if the educational credentials are equivalent we should not see a difference in the probability of working as a nurse between those with foreign and domestic nursing credentials.

The results of this study support the hypothesis that immigrant registered nurses suffer wage penalties in Canada. Wage penalties are seen by both the immigrant nurses who arrived in Canada at a young age and the immigrant nurses who come to Canada with nursing credentials at a later age. Once the various regions of birth are controlled for, it is seen that there is a wage penalty to all of them, except for those from Asia and India. The penalty is the smallest for those from the US, Europe and Australia. It was hypothesized that immigrants from these regions should see the smallest wage penalty because of the broad similarities to Canadian born nurses. The group from Africa and the Caribbean exhibit the largest penalty. Again the results found with foreign educated nurses is consistent with results found in the general population of immigrants to Canada.

Secondly, the results of this study show that there are differing probabilities of attaining nursing employment in Canada for the groups with different nursing educational credentials. Nurses with foreign credentials are less likely than Canadian born and trained nurses to be employed as registered nurses in Canada. This again implies that their credentials are not being recognized and valued.

Since we are seeing a shortage of nurses in Canada, recruitment and retention of nursing staff is an area that is important to examine. The focus of the final chapter of this thesis was on the retention of nurses and on examining the various aspects that impact an individual's intention to search for a new job. This study involved a detailed analysis of the issue of retention of those who are trained as nurses and it added to the limited existing literature in the area, particularly in Canada.

The results of this study demonstrated that two of important variables that influence the probability of a nurse searching for a new job are annual earnings and satisfaction with pay. Socio-economic variables and individual attitudes have an effect for some groups of individuals, but these variables are not as important. There are however significant differences between women who are and are not currently employed as nurses. Earnings and satisfaction with pay have a lesser effect on those who are already in the nursing profession, but this is an area that could be used to attract women who are not currently working as nurses. These variables have a much stronger effect on the women who are working in non-nursing jobs. Improved wages could potentially induce a substantial number of trained nurses who are planning to look for other employment to remain in nursing jobs or to draw more nurses into the labour market.

5.3 Future Work

The research and analysis done throughout this thesis has also led to a variety of potential research topics and areas for further research. An extension to the first paper that I wish to pursue involves an examination of the returns and premiums associated with a BN over time. Have the premiums associated with a BN been changing over time or have they remained relatively stable. Another interesting way to examine this question involves using Canadian census data to develop a series of quasi cohorts to investigate what factors in the wage determination for registered nurses in Canada have been changing or remaining stable over time.

This type of analysis would also be interesting to examine in terms of immigrant nurses in Canada. This study shows that immigrant nurses see a wage penalty in Canada and an obvious avenue for further research asks if this penalty been stable over time or are recent immigrant nurses catching up with their Canadian counterparts?

Additionally, it would be interesting to see what factors determine job satisfaction for Canadian nurses. In the third paper in this thesis I found that job satisfaction has an effect on the job search decisions for Canadian nurses however, it would also be beneficial to empirically determine what influences job satisfaction.

Finally, this research also leads to the question about how the labour market for registered nurses in Canada compares to registered nurses in other countries. Do immigrant nurses in other countries face similar wage penalties? Similarly, are the job search decisions and the determinants of job satisfaction for nurses in Canada and the United States the same? These are further questions that I wish to examine in the future.

This thesis has addressed several questions related to the labour market for registered nurses and it has also led to further questions that will provide for continual study of this specific group of people.