

Factors Related to Asian Foreign-Educated Nurses' (FENs) Turnover

by

Hyo Geun Geun

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Nursing)
in The University of Michigan
2012

Doctoral Committee:

Professor Richard W. Redman, Co-Chair
Assistant Professor Marjorie C. McCullagh, Co-Chair
Associate Professor Milisa Manojlovich
Assistant Professor Valerie L. Myers

© Hyo Geun Geun 2012
All Rights Reserved

Acknowledgements

My dissertation would not have been possible without the support of many people.

First of all, I am heartily thankful to my advisor and committee co-chair, Dr. Richard W. Redman, who was abundantly helpful and offered invaluable assistance, supervision, and guidance from the preliminary to the concluding moment. His assistance enabled me to develop an understanding of my initial paper proposal and finish the associated tasks. Whenever I grew confused about the study, Dr. Redman led me to the right direction to complete my journey. Our weekly meetings have been extremely helpful. Dr. Redman consistently found any point I missed so that I can revise and proceed to the next step. In addition, he was very supportive and encouraged me to apply for funding from both Rackham and the School of Nursing at the University of Michigan. With his great advice and comments on proposal review, I was able to receive the Rackham Graduate Student Research Grant and a New Investigator Award as well.

My deepest gratitude also goes to the members of the dissertation committee. Dr. Marjorie C. McCullagh (co-chair), Dr. Milisa Manojlovich, and Dr. Valery Meyer. Especially, in the phase of proposal preparation, I met with them every week or every other week to discuss the issues I faced. They have reviewed the instruments I used and even commented on each single item in detail. I always felt that they were glad to help me figure out the problems and find solutions. Without their knowledge, time and invaluable assistance, this study would not have been successful.

In addition, it is a pleasure to thank those who assisted during the completion of my paper; Ray McDaniel from Sweetland Writing Center initially reviewed my paper, Gissel Kolmic, a consultant from the Center for Statistical Consultation and Research, reviewed and assisted my data analyses, and Nancy Nelson, a professional editor, edited every single paper. Without their help, I could not have gotten such a paper and relevant data.

Last but not the least, I owe my greatest gratitude to my family, especially my mom, younger brother, and aunt. They have been main sources of motivating my journey, and gave me the strength to keep my study despite the fact that I sometime wanted to give up and turn away from the journey.

I will not forget the contributions of all I have mentioned above.

Table of Contents

Acknowledgements	ii
List of Figures.....	viii
List of Tables	ix
List of Appendices.....	xi
Abstract.....	xii
Chapter I Introduction	1
The Problem Statement and Background.....	1
Significance.....	3
Purpose of the Study	5
Chapter II Literature Review	7
International Migration	7
Nurses' Migration	8
The U.S. Context.....	10
Nurse Shortage in the U.S.....	10
Asian Nurses' Migration.....	12
Related Issues.....	15
Summary	19
Foreign-Educated Nurses (FENs)	20

Definition	20
Demographics	22
FENs' Pre-Migratory Expectations.....	23
FENs' Post-Migratory Experiences	25
Summary	34
FENs' Turnover.....	35
Definitions.....	35
Correlates and Determinants.....	36
Related Theories and Concepts.....	39
Foreign-Educated Nurses vs. Domestic Nurses.....	40
Summary	47
Conceptual Framework	48
Migration Studies and Theories	48
Proposed Conceptual Model	49
Chapter III Methods.....	52
Design.....	52
Sample.....	52
Recruitment.....	53
Procedures for Data Collection.....	54
Measures.....	56
Instruments.....	56
Data Analysis	70

Data Preparation.....	72
Human Subjects	74
Chapter IV Results	75
Sample.....	75
Eligibility Testing	76
Sample Characteristics	76
Relationships of Measures	84
Results by Research questions	87
Research Question 1.1;	87
Research Question 1.2;	87
Research Question 1.3;	90
Research Question 1.4;	95
Research Question 2.1;	97
Research Question 2.2;	105
Research Question 3.1;	106
Research Question 3.2;	108
Chapter V Discussion	116
Interpretation of the Study Results and Implications for Nursing Practice.....	116
FENs' Demographic and Career Characteristics	116
Relationships between the Three Gap Subscales and Other Factors	117
Push/Pull Factors for Turnover	119
Predictors of Turnover	121
The Moderator (Gap Subscales)	125

Implications for Practice	126
Limitations	127
Recommendations for Future Research	129
Appendix.....	134
References.....	166

List of Figures

Figure 2.1. Hypothesized Relationships among Relevant Factors	51
Figure 2.2. The Final Conceptual Model	51
Figure 4.1. Differences in Expectations and Experiences by Age at Employment	93
Figure 4.2. Differences in Gap Subscales by Age at Employment and Current Age	94
Figure 4.3. The Final Conceptual Model for Turnover (Organization-Level)	114
Figure 4.4. The Final Conceptual Model (Simplified Version: Organization-Level)	115
Figure 4.5. The Final Conceptual Model (Simplified Version: Unit-Level)	115

List of Tables

Table 3.1. Summary of Methods Used in Data Analyses	72
Table 4.1. Characteristics of the Sample	78
Table 4.2. Distribution of Outcome Categories by Turnover	81
Table 4.3. Relationship between Turnover and Selected Demographic and Career Characteristics.....	83
Table 4.4. Total/Subscale Scores and Reliabilities of Measured Variables	84
Table 4.5. Correlations among the Measures.....	86
Table 4.6. Descriptive Statistics for Gap Subscales	87
Table 4.7. Comparison of Expectation and Experiences Measures (EEM).....	88
Table 4.8. Correlations among EEM Subscales and Corresponding Gap Subscales.....	89
Table 4.9. Independent Sample t-test for Gap Subscales by Gender.....	90
Table 4.10. ANOVA for Gap Subscales by Country of Origin	91
Table 4.11. Two-way ANOVA for Gender and Country of origin	92
Table 4.12. Distribution of Expectations and Experiences by Age at Employment.....	93
Table 4.13. Logistic Regression for Gap Subscales and Turnover (Unit-Level).....	95
Table 4.14. Logistic Regression for Gap Subscales and Turnover (Organization-Level)	96
Table 4.15. Comparison of Level of Language Fluency by Country of Origin.....	98
Table 4.16. Distribution of Self-Rated Health	99

Table 4.17. Operational Definitions for Other Health-Related Variables, Summary Statistics and Relationships with Turnover.....	100
Table 4.18. Chi-Square test for Preceptor’s Country of Origin by Turnover Type.....	101
Table 4.19. Independent sample t-test for Orientation-Related Variables by Turnover type	102
Table 4.20. Independent sample t-tests for Independent Variables and Turnover (Unit- Level)	103
Table 4.21. Independent sample t-tests for Independent Variables and Turnover (Organization-Level).....	104
Table 4.22. Simple Logistic Regression for Independent Variables and Turnover Types	105
Table 4.23. Multi-Variable Logistic Regression for Predictors of Turnover	106
Table 4.24. Standardized Regression Coefficients, F Statistics and R^2 for Gap Subscales and Push and Pull Factors for Turnover	107
Table 4.25. Simple Logistic Regression for Bivariate Associations between Selected Demographic and Career Characteristics and Turnover (Unit-Level).....	109
Table 4.26. Simple Logistic Regression for Bivariate Associations between Selected Demographic and Career Characteristics and Turnover (Organization-Level).....	109
Table 4.27. Generalized Linear Model for Moderating Effect of Gap Subscales on Relationship between Orientation Evaluation and Turnover Type.....	111
Table 4.28. Generalized Linear Model for Moderating Effect of Gap Subscales on Relationship between Affective Commitment and Turnover Type.....	112

List of Appendices

Appendix A FENs' Experiences in the U.S.....	134
Appendix B FENs' Experience in Non-U.S.....	138
Appendix C FENs' Experience in the U.S. (Methods)	142
Appendix D FENs' Experience in Non-U.S. (Methods).....	143
Appendix E Authors' Comments for Pilette's Adjustment Process	144
Appendix F Summary of Survey Questions	146
Appendix G Formal Invitation Letter to the Organizations.....	147
Appendix H Cover letter.....	149
Appendix I Eligibility Testing Questions	150
Appendix J Survey Questionnaire (Demographic and Career Characteristics).....	151
Expectations and Experiences Measures	154
Orientation Evaluation	156
Organizational Commitment.....	156
Language Fluency.....	159
Health Experiences	160
Social Support.....	162
Job Search Behavior	163
Actual Turnover	165

Abstract

Asian Foreign-Educated Nurses' (FENs) Turnover

by

Hyo Geun Geun

Co-Chairs: Richard W. Redman and Marjorie C. McCullagh

Over the past fifty years, while FENs have been adjusting to a new environment, they experienced an inevitable set of challenges very specific to this population. These challenges can prove burdensome to Asian FENs compared to FENs from Western countries because of their cultural differences and lack of language fluency. However, little understanding exists regarding Asian FENs' characteristics and their expectations for future career goals. This study examined their unmet expectations (gap), unique organizational experiences (i.e., orientation, health experiences, job search behaviors) and the relationships of these factors to turnover in their first year of U.S. employment.

A cross-sectional design was employed in this study. A total of 201 Asian FENs working in U.S. health care settings were included. Subjects responded either via web based or mail survey. A series of simple and multi-variable logistic regressions were utilized to determine factors associated with turnover.

Findings indicated that expectations FENs had before migration or organizational entry were significantly higher ($M = 3.4.5 \sim 3.72$) than FENs' actual experiences after

migration or entry ($M = 3.20 \sim 3.39$) ($p < 0.001$). FENs who reported a gap in terms of occupying an important role in the organization (responsibility) were more likely to leave their first employment in order to move to another organization (OR: 1.07, 95% CI: 1.01-1.13, $p = 0.017$) or unit (OR: 1.06, 95% CI: 1.01- 1.12, $p = 0.017$). Perceptions regarding orientation quality and affective commitment predicted organizational level turnover. There was no moderating effect of gap on the relationships between the two predictors and turnover.

Asian FENs' turnover was more dependent on organization-related experiences than on individual nurse's efforts to find other positions (job search behaviors). Future studies including larger sample sizes, a variety of health care settings and Asian FENs from additional countries of origin are recommended.

Chapter I

Introduction

The Problem Statement and Background

Even given the sizable growth in the number of nurses migrating from Asian countries, little understanding exists regarding Asian Foreign-Educated Nurses' (FENs) characteristics, their expectations for future career goals, and their experiences after migration (Kinderman, 2006; Liou & Cheng, 2008). That is, the state of knowledge about Asian FENs' experiences is in its infancy, and knowledge regarding experienced Asian FENs is particularly limited.

Regarding immigration to the U.S., it has been hypothesized that ability to adapt to the losses and demands of immigration affects the immigrant's job performance and ability to master new skills (Beechinor & Fitzpatrick, 2008). In addition, it could be inferred that their abilities might differ depending on their individual and organizational experiences, and even country of origin.

In a similar context, as FENs relocate to work in the U.S. as immigrants, they experience work-related stress as they adapt to their new environment. In this regard, a research question might be explored: does the level of stress experienced (gap of pre-migratory expectations and post-migratory experiences) by FENs affect their ability to perform their jobs, ultimately putting them in need of targeted programs to assist with

integration. However, to date, little information has been provided in the literature on job-related demands (i.e., perceived expectations upon U.S. employment) of Asian FENs in particular, and their responses (actual experiences) to those demands (role and organization-related expectations).

Newly graduated nurses' first work experiences play an important role in shaping their perceptions of the nursing profession and professional growth opportunities (Edwards & Davis, 2006; Mathews & Nunley, 1992). It is likely that these initial experiences influence a new RN's decision to stay in a particular position or in the nursing profession in general. Similarly, new FENs undergo a period of adjustment to their environment during the first year of employment (Edward, 2000; Ryan, 2003; Pilette, 1989). The limited research that is specific to initial organizational programs for FENs working in the U.S. reveals significant gaps regarding the quality and outcomes of these efforts. It is timely to examine FENs' perceptions of the initial organizational experience (i.e. orientation) to help U.S. employers and administrators understand factors influencing FENs' decisions to stay or leave their current organizations (Boylston & Burnett, 2010; Cheng & Liou, 2011).

These preliminary data suggest that valuable additions to the research might include: 1) identification of characteristics which predict FENs' level of adjusted expectations based on actual experiences in the U.S. and then 2) evaluating the effectiveness of organizational programs and experiences on FENs' actual turnover or turnover-related behavior (e.g. job search behavior). Because nurses from Asian countries are becoming the majority of the FENs workforce in the U.S (Aiken, 2007; Xu et al., 2010; Cheng & Liou, 2011), this study will propose a conceptual model based on

the experiences and expectations of Asian FENs that can be captured in both pre and post migration. Overall, it still remains unclear how Asian FENs' personal and organizational experiences influence their decisions to leave their first U.S. healthcare organizations.

Significance

According to some studies, about 15% to 17 % of the U.S. nursing workforce is comprised of FENs, and their numbers are expected to increase because the domestic workforce is insufficient to fill the demand (Bieski, 2007; Brush et al., 2004; Buerhaus et al., 2003). Demand is expected grow by 2-3% each year due to potential reduction in the supply of U.S. domestic registered nurses (AACN, 2009). Recently, the National Sample Survey of Registered Nurses (NSSRN) in 2008 estimated that FENs living in the U.S. account for 5.4 % of all licensed RNs and 5.6 % of the RN workforce in the U.S. (HRSA, 2010). Of these, 50.1 % of total estimated FENs originate from the Philippines, followed by India, Korea and other Asian countries (9.6%, 2.6%, and 6.7%, respectively), representing the largest proportion of FENs working in the U.S.

However, despite the growing number of Asian FENs in the U.S. nursing workforce and their potential contributions relating to quality and sustainability of patient care, their actual experiences after hire in the U.S. have received little systematic study. In particular, relationships between perceived gaps between their expectations before migration and actual organizational experiences after migration, their backgrounds, the work environment, and turnover have not been explored. For example, little research has been done on the unique health experiences of FENs. Several studies have documented that FENs' daily work experiences can affect their health experiences in terms of job-

related illness, physical or mental symptoms (Beechinor & Fitzpatrick, 2008; Brown & James, 2000; Joyce & Hunt, 1982). It can be assumed that FENs' negative health experiences (i.e., job-related injuries) are work and organization-related, eventually contributing to turnover. To date, no study has found a significant relationship between FENs' health experiences and turnover. Consequently, few studies have examined the effects of relevant turnover determinants on actual turnover and retention plans after working in foreign countries.

The retention of FENs is emerging as a critical issue that needs to be addressed by nursing administration experts and policy makers (Kirsch, 1990). Three studies have revealed that Asian FENs consider returning to their homes or moving to another healthcare setting after employment in the U.S. (Cheng & Liou, 2010; Liou & Grobe, 2008; Pizer et al. 1994).

Thus, determination of Asian FENs' unique organizational experiences in relation to turnover is needed to better understand and support their adjustment process to a new environment after starting work in a U.S. hospital setting. The findings from this study will provide a better understanding of personal, organizational, and occupational factors associated with turnover and contribute to the growing body of literature on the impact of work environment on Asian FENs' turnover decisions and future career plans.

In addition, this study may contribute evidence that can be used in the development of organizational programs that will help Asian FENs adjust to their new jobs, thus reducing rapid or early turnover and its accompanying financial burdens to the organization. Overall, this study may contribute to our understanding of the potential

factors that assist or interfere with the organization's administrative retention plan for Asian FENs.

Purpose of the Study

The purpose of this study was to review the nature of Asian Foreign-Educated Nurses (FENs)' pre-migratory expectations (Ex) and post-migratory individual and organizational experiences (Es) from the perspective of the FENs after working in the U.S., and gap between expectations and experiences (Ex-Es Gap) after working in the U.S., and to examine the effect of selected organization and occupation-related experiences on turnover in their first year of employment. This research addressed the three following specific aims with eight research questions (RQ):

Specific Aim 1. Describe the relationship between the Ex-Es Gap and demographic characteristics and turnover

RQ1.1. What is the magnitude of the Ex-Es Gap for Asian FENs?

RQ1.2. What are the associations among the three variables (Ex, Es, and the Ex-Es Gap)?

RQ1.3. How are selected demographic characteristics associated with the Ex-Es Gap?

RQ1.4. Is magnitude of the Ex-Es Gap predictive of turnover?

Specific Aim 2. Describe the relationship of all independent variables with actual turnover

RQ 2.1. What are the univariate relationships (push or pull) between individual independent variables and turnover?

RQ 2.2. Are any push-pull factors predictive of actual turnover?

Specific Aim 3. Examine the associations among the Ex-Es Gap, push factors (positively related), pull factors (negatively related) and actual turnover

RQ 3.1. What are the relationships among the Ex-Es Gap, push & pull factors?

RQ 3.2. Does the Ex-Es Gap moderate the relationship between the predictors and actual turnover after controlling for demographic variables?

Overview of the Dissertation

This dissertation is divided into five chapters. The chapters include the introduction, literature review, methods, results and discussion. The current chapter, the introduction, provides statement of the problem and background, significance and purpose of the study. Chapter 2 presents findings from a literature review and is organized into five main sections: 1) International migration, 2) Nurse shortage in the U.S. context, 3) Foreign-educated nurses' (FENs) experiences and expectations, and 4) FENs' turnover and anticipated correlates, and 5) conceptual framework for this study. Chapter 3 describes the methods employed to answer the seven research questions of this study. Data collection procedure and measures are included. Chapter 4 presents results by each research question and sample characteristics. Chapter 5 presents the discussion with limitations and recommendations for future research.

Chapter II

Literature Review

International Migration

In 2000, the World Health Organization (WHO) formulated eight Millennium Development Goals (MDGs) to combat diseases, hunger, poverty, discrimination against women and environmental degradation worldwide (Kapar Wyss, 2004). Four goals are related to the health of the poor. According to the WHO (2006), countries that have difficulty reaching the health-related goals due to professional health staff shortages seriously limit their potential to respond to basic health needs (Kingma, 2007). International migration and recruitment of health professional workers affects the national healthcare workforce supply. Thus, it is a significant political issue in donor and receiving countries (ICN, 2005).

Migration of health professionals, including nurses, to the U.S. has not only continued but has slightly increased over the past years (Vujicic, Zurn, Diallo, Adams, & Dal Poz, 2004). The U.S. is often considered the most attractive final destination country for foreign doctors and nurses (Kingma, 2001, 2006). Foreign health professionals who can practice in the U.S. are motivated by significant differences between their country of origin and the U.S. in terms of wages, professional and learning opportunities, work and living conditions, children's educational opportunities, and other additional factors (Liou & Cheng, 2011; Hussey, 2005; Lee, 1997; Kingma, 2001, 2006; Vujicic et al., 2004).

The loss of these skilled professionals from their countries of origin is referred to as “brain drain” (Kingma, 2001). However, the extent of actual “brain drain” is limited by training and licensing as well as immigration policy in the U.S. (Hussey, 2005; Kingma, 2006, 2007; Vujicic et al., 2004).

Nurses’ Migration

International nurse migration is defined as the process of nurses’ crossing geographical boundaries from their home countries to foreign countries in search of new employment (Kingma, 2001; Lee, 2007). Although pros and cons exist regarding nurse migration, some studies have indicated that along with buffering nursing shortages, healthcare organizations in destination countries also benefit from a culturally diverse workforce (Beechinor & Fitzpatrick, 2008; Spry, 2009). Aiken et al. (2004) stated that immigrant nurses accounted for significant numbers of the nurse workforce in destination countries: 23% in New Zealand (2002), 6% in Canada (2001), 8% in Ireland (2002), 8% in the UK (2001), and 4% in the U.S. (2000). Overall, the primary donor countries were Australia, Canada, the Philippines, South Africa, and the U.K. Australia, Canada, Ireland, and the U.S. were considered as the primary receiving countries (Kline, 2003).

At current levels, nurse migration is not equally distributed across countries and it is common for the net flow of nurses to move from developing or less developed to developed countries (Ea, Griffin, L’Eplattenier, & Fitzpatrick, 2008; Kingma, 2001, 2007; Klein, 2003). Regardless of direction, however, results of a considerable body of studies on nurse migration make it clear that it will continue (Kingma, 2001, 2007; Little, 2007).

Patterns and trends in nurse migration

As nurse migration continues, the flow appears to be changing; flow was predictable in the past and occurred between relatively rich and/or geographically close countries (North America and Western Europe), poor to rich countries, or among countries sharing a common language. In contrast, current migration predominantly moves from countries in Asia, Africa, and the Caribbean to developed countries (Hussey, 2005; Kingma, 2001, 2007; Vujicic et al., 2004). Specifically, Asian countries, including the Philippines, India, China, and Korea, are actively involved in nurse migration as source countries (Fang, 2007; Kingma, 2001; Muncada, 1995). Accordingly, these governments have engaged more in introducing special immigration policies or negotiating employment contracts for immigrant nurses (Kingma, 2006, 2007). For example, the Philippines is presently experiencing a nurse shortage. Thus, along with losing more and more nurses to other countries, this country is also developing its own recruitment/retention campaigns to offset the net loss of nurses (Kingma, 2001). Another complication is that there may no longer be only net “losing” or “gaining” of nurses from an international context because of increasing “re-migration to their homes” with no permanent movement (Xu, 2003); some migrants from Taiwan returned to their homelands after socioeconomic conditions improved.

From the U.S. perspective, recent trends in nurse migration have been shaped by changes in the demand for hospital nurses and changes in immigration policies. For example, in 1996, additional visas were created for skilled professional workers such as nurses. These policy changes helped more nurses to apply for immigration (Aiken, 2007).

The literature addresses patterns and trends of nurse migration but research is needed to consider specific periods, countries of origin, and situations in donor and receiving countries in order to define how migration trends change over time and what factors influence them and the impact on quality of care.

The U.S. Context

Nurse Shortage in the U.S.

In a number of studies, the nursing shortage has been mentioned as one of the most critical challenges that both developed and developing countries are experiencing in their healthcare environments (Brush, Sochalski, & Berger, 2004; Buchan, 2007; Kingma, 2001). Several characteristics of this shortage have been described across studies: it is not a new phenomenon (Berliner & Ginzberg, 2002; Brush et al., 2004; Ea, Griffin, L'Eplattenier, & Fitzpatrick, 2008); it is cyclical in nature (Flynn & Aiken, 2002; Little, 2007; Xu & Kwak, 2006); and it tends to be chronic (Joyce & Hunt, 1982). Taken together, it is certain that nursing shortages will continue to exist and deepen regardless of any economic trends (Kingma, 2001, 2007; Little, 2007).

As to the reasons for the nursing shortage, several combinations of factors have been highlighted in many studies: for example, the increase in number of older nurses (Kingma, 2001; Murphy & McGuire, 2005), demographic-driven demand for health care (Buchan, 2007), decreased enrollments in nursing schools (Aiken, 2007; Berliner & Ginzberg, 2002; Chaguturu & Vallabhaneni, 2005), faculty shortage (AACN, 2009; Buerhaus, Staiger, & Auerbach, 2003), and deteriorating working conditions (Kingma,

2001; Likupe, 2006). Another reason is nursing's high turnover rates, ranging from 10-30% per year, the highest rate among professional occupational groups in the U.S. (AACN, 2009; Kovner, Brewer, Greene, & Fairchild, 2007).

The consequences of nursing shortages have been investigated as well. For example, it is believed that the shortage has compromised or undermined the quality of patient care and working conditions in health care organizations (Janiszewski Goodin, 2003; Salmon, Yan, Hewitt, & Guisinger, 2007).

Undoubtedly, the U.S. is experiencing a nursing shortage. The U.S. Department of Health and Human Services (DHHS, 2002) estimated a 6% shortage of nurses in 2002 that was expected to increase to 12% in 2010 and 29% by 2020 if current trends continue. According to the National Sample Survey of Registered Nurses (NSSRN) in 2004, immigrant nurses constituted about 3.5% of the estimated 2.9 million U.S. nurse workforce (Polsky et al., 2007; Xu, 2007a; Xu, Gutierrez, & Kim, 2008). Similar estimates were evident in an earlier study that found that in 2000 of the almost 2.7 million registered nurses in the U.S., 3.7% (nearly 100,000) were immigrants (Xu & Kwak, 2005). Other studies suggested much higher proportions, ranging from 5% to 17 % (Aiken et al., 2004; Brush et al., 2004; Buchan, 2004; Kingma, 2006; Polsky, Ross, Brush, & Sochalski, 2007; Spry, 2009). The differences in methods and databases used and in definition of "immigrant nurses" account for these different estimates (Buerhaus et al., 2003; Xu, Gutierrez, & Kim, 2008). More recently, in 2008, NSSRN estimated 165,539 immigrant nurses living in the U.S., accounting for 5.4 % of all licensed RNs (HRSA, 2010).

According to Buerhaus and his colleagues (2003), although there has been a growth in supply of domestic nurses since 2002, interest in recruiting immigrant nurses has increased rather than diminished. In light of assessments of the future nursing workforce, the authors also expected that increased reliance on immigrant nurses would become a long-term trend if a dramatic change does not occur in current nursing career paths. Moreover, the Bureau of Labor Statistics (BLO, 2005) reported that the U.S. will need more than 800,000 new nurses for available nursing positions by the year 2020. As a result, immigrant nurses are expected to grow in numbers to fill the vacant positions. As the above numbers suggest, the U.S. is apparently using immigrant nurses as one strategy to address this problem.

Asian Nurses' Migration

The number of Asian nurses migrating to the U.S. went up dramatically after the Immigration and Nationality Act of 1965 was passed and began to exceed the number of immigrant nurses from Europe (Muncada, 1995). A study using longitudinal data also indicated a trend over time that immigrant nurses from the Philippines and India increased from 36.4% and 9.1% in 1984 to 38.9% and 10.9 % in 2000 respectively, whereas the proportions from Canada and the U.K. decreased during the same period (Xu & Kwak, 2006).

Among Asian countries exporting nurses, the Philippines seems to be a relatively unique donor country because the government has actively encouraged training nurses for migration (Kingma, 2006). This is true even though the Philippines is experiencing a shortage of nurses (Perrin, Hagopian, Sales, & Huang, 2007; Vujicic et al., 2004). For

Filipino immigrant nurses, English is the primary language in nursing education, which makes them more attractive to receiving countries (Aiken et al., 2004; Kinderman, 2006). Additionally, the expectation of migration is deeply ingrained in the nursing culture in the Philippines (Kingma, 2001). Thus, nurses migrating from the Philippines are exceptional cases among those from Asian source countries (Muncada, 1995; Vujicic et al., 2004). Of the U.S. nurse workforce, Filipino nurses represented about 40% of all immigrant nurses in the mid-1980s (Muncada, 1995). Twenty years later, due to the increased number of nurses migrating from other countries such as Canada, the U.K. and India (Brush et al., 2004; Sherman, 2007; Xu, Zaikina-Montgomery, & Shen, 2010), the estimates dropped to 32.6 % in 2002 (Perrin et al., 2007; Xu et al., 2010). However, 50.1 % of total estimated immigrant nurses originated from the Philippines in 2008 (HRSA, 2010). Filipino nurses are still the top priority for recruitments by U.S. employers.

China expected to export more nurses to the U.S. after “English nursing programs” were established for the training of immigrant nurses in the 1970s. However, compared to nurses from the Philippines, their value has been less competitive in the global workforce market because their successes are limited due to disadvantages - such as an apparent language deficit (Xu, 2003) - and the fact that Chinese nursing programs are mostly provided at only the secondary level of education (mid-associate degree programs). As a consequence, Chinese nurses are not well prepared to apply for the Commission on Graduates of Foreign Nursing Schools (CGFNS) qualification exam (Fang, 2007; Xu, 2003, 2007a).

Determinants influencing Asian nurses' migration

The motivations for Asian immigrant nurses to work in the U.S. are diverse, but in general they differ from reasons for those of European nurses who work in other countries. Cross-border employments are common for immigrant nurses in Europe due to personal circumstances, such as marriage or a spouse's employment (de Veer, 2004). These factors do not appear to be one of the major reasons for Asian nurses' migration to the U.S.

In general, immigrant nurses consider that the wage premium is the largest benefit of working in the U.S. (Hussey, 2005; Joyce & Hunt, 1982; Lee, 1997; Nguyen, Ropers, Nderitu, Zuyderduin, Luboga, & Hagopian, 2008). However, along with a higher salary, the career opportunities for professional development have become another main reason for migration. A "network effect" created by a group of individuals coming from the same country or cities has also been found as an important factor in the preferred destination of immigrant nurses or other immigrants (Haug, 2008; Vujicic et al., 2004). In other words, financial consideration is no longer the single motivator for leaving the home country to work abroad (Chagaturu & Vallabhaneni, 2005; Kingma, 2007; Thomas, 2006; Vujicic et al., 2004).

For nurses from the Philippines, in addition to income and good working conditions, the ability to send remittance back to their homeland is another key motivation for migration (Joyce & Hunt, 1982; Xu, 2003). The total remittance sent back increased from \$ 6.8 billion in 1999 to \$ 8 or \$ 8.5 billion in 2004 (Corcega et al., 2002). Remittance is part of the economy in the Philippines.

Thomas (2006) examined Indian nurses' career plans and found that 63% of the total subjects expected to migrate. This study also clearly indicated that young and qualified nurses more often than their older peers expressed their intention to migrate. In addition, higher incomes abroad and hope that migration would be beneficial to their children and family were the most important factors influencing their migration decisions. "Too old in age" was the only reason why some did not consider migration.

Defining other significant migration determinants, whether tangible or intangible, can help employers predict and identify immigrant nurses' level of unmet expectations in practice and future career plans.

Related Issues

Language

Language was the barrier first and foremost reported as the primary hurdle immigrant nurses face (Aiken, 2007; Kingma, 2001, 2006). In pre-migration stage, language ability can be a strong disincentive in the migration decision of Asian nurses (Kingma, 2001). Specifically, this communication problem remains an ongoing issue for some Asian FENs (Campbell, 2009; Liou & Cheng, 2011; Xu, Gutierrez, & Kim, 2008; Yi et al., 2000). A lack of language fluency can often provoke anxiety in immigrant nurses' emotional status and substantially affect their nursing practices on a daily basis (Liou & Cheng, 2011; Magnusdottir, 2005; Xu, 2005). CGFNS also found that a FEN's overall competency is strongly related to his/her language skills in the workplace (Guttman, 2004). Accordingly, these communication barriers in relation to their potential risks to patient safety have also been emphasized (Bola et al., 2003; Flynn & Aiken, 2002;

Robinson, 2009; Xu, Gutierrez, & Kim, 2008). The required qualification processes, NCLEX-RN examination and CGFNS certification, do test immigrant nurses' English proficiency, but these procedures do not measure all aspects of their language abilities, because they are only basic tools for screening immigrant nurses' eligibility for immigration application (Bieski, 2007; Bola et al., 2003). In other words, these processes do not fully address communication and other issues for healthcare organizations (Bola et al., 2003; Campbell, 2009).

Learning the new language would be easier for Asian immigrant nurses if it was taught and consistently implemented in the context of actual healthcare communication scenarios (Guttman, 2004; Murphy & McGuire, 2005; Robinson, 2009). However, institutions' efforts to improve immigrant nurses' language skills have not been well defined. It seems that facilities or organizations consider language training beyond their responsibilities (Kingma, 2006; Xu, 2007a).

Regulations

The Illegal Immigration Reform and Immigrant Responsibility Act (1996) mandated that immigrant nurses must go through a visa screening process as a necessary requirement to practice in health care facilities (Brush, 2008; Trossman, 2002; Xu, 2003). However, whereas the U.K. was quick to respond to the question of licensing and regulation with national level policy, the U.S. has not been able to coordinate and control those issues due to lack of centralized national-level mechanisms (Buchan, 2007, Kingma, 2007). Moreover, implementation of current regulations for immigrant nurses is not consistent or predictable and has often been confusing and unrealistic (Xu et al., 2010). For example, the 2002 Nurse Reinvestment Act was passed to increase nurse recruitment

and retention by supporting educational scholarships or grants, but the funding did not actually exist (Janiszewski Goodin, 2003). As a result, this lack of regulation delays the immigration process and even makes it difficult to accurately count the number of immigrant nurses and monitor their actual experiences in the U.S. (Janiszewski Goodin, 2003; Kingma, 2007).

Licensure

Since 1977, the CGFNS has reviewed *Credentialing Requirements* for immigrant nurses prior to their arrival in the U.S. These comprehensive credential reviews were designed to verify immigrant nurses' qualifications and comprise the following (Bieski, 2007; Brush, 2008; CGFNS, 2007; Spry, 2009; Trossman, 2002): 1) a review of nurses' educational backgrounds by comparing their educational preparation with the standard U.S. curriculum, 2) an assessment of their nursing knowledge demonstrated by passing the National Council Licensure Examination for Registered Nurses (NCLEX-RN) or the CGFNS examination, 3) a review of documented English-language proficiency, and 4) an evaluation of all licenses held by applicants in their home countries.

The requirement for taking one or both of the NCLEX-RN and CGFNS depends on each state board of nursing to which immigrant nurses apply (Bieski, 2007; Brush, 2008); therefore, they are required to contact each state board to ensure all requirements are met. According to the National Council of State Boards of Nursing (NCSBN, 2010), since 1983, first time passing rates for the NCLEX-RN exam for immigrant nurses and domestic nurses range between 45-55% and 85-95% respectively, without any significant changes in rates over time. Repeated trials range around 20% and 50% respectively.

Visa requirements are another aspect of the immigration process, taking approximately one year (Bieski, 2007) or more. This process begins by obtaining a labor certificate, submitting a petition, and interviewing successfully, and ends with a Visa Screen (*Credentialing Requirements*), which is also conducted by CGFNS (CGFNS, 2007). All these processes are just the beginning of challenges immigrant nurses must face: their success in the U.S. is not guaranteed (Bola, Driggers, Dunlap, & Ebersole, 2003; Spry, 2009).

Ethical concerns

Immigrant nurses face some ethical issues. In several studies, negative experiences they encountered included: lack of opportunities for career development, unfair assignment to patients in practice, inappropriate appraisal, and being asked to perform work beyond their job descriptions (Alexis, Vydelingum, & Robbins, 2006; Diccico-Bloom, 2004; Kingma, 2001; Seago & Spetz, 2008). For example, Filipino immigrant nurses have reported that they were employed as nurse aids or ancillary workers with less pay (Daniel, Chamberlain, & Gordon, 2001; Klein, 2003).

As the number of immigrants increases, worldwide organizations have cited the potential for “poaching” or “mis-utilization” of immigrant nurses without considering the underlying conditions related to shortage as “unethical” (Murphy & McGuire, 2005; WHO, 2000). In response to these issues, recruiting countries have called for developing ethical guidelines (Kingma, 2001; Kline, 2003). In a similar vein, the International Council of Nurses (ICN, 2002) formed a position statement to persuade governments and employers to adopt principles on ethical recruitment (Kline, 2003). On the national level, the U.K. Department of Health issued ethical guidelines for immigrant nurse recruitment

in 1999, intending to stop recruitment from countries already suffering from their own shortages. However, the ethical guidelines still fail to apply to large private institutions and have been poorly monitored and enforced since they were updated in 2001 (Brush et al., 2004; Buchan, 2004; Chaguturu & Vallabhaneni, 2005).

In 2008, the U.S. American Nurses Association (ANA, 2009) released the “Voluntary Code of Ethical Conduct for the Recruitment of Foreign-Educated Nurses to the United States” to protect them from abusive employment. The voluntary code includes minimum fair labor standards and civil rights, establishes guidelines relating to discrimination, and offers best practices for employers and recruiters. However, this code only applies to recruitment and employment organizations that *voluntarily* agree to the code.

Summary

Generally, immigrant nurses decide to migrate in hopes that incentives they will receive in destination countries will outweigh disincentives and challenges. Overall, new overseas employment seems to guarantee immigrant nurses a higher salary, better quality of life and professional development (Aiken et al., 2004; Kingma, 2001; Lee, 2007). In particular, wage differentials between donor and receiving countries have been identified as the most powerful motivation in the migration decision of nurses (Kingma, 2001; Nguyen et al., 2008). However, it seems that the current immigrant nurses’ migration trends can be characterized as unlike those of the past: besides better income, having opportunities for career development and better family life are now also considered equally important factors.

The current nursing shortage has brought a new wave of immigrant nurses to the U.S. healthcare system (Guttman, 2004), a large number of which comes from Asian countries. However, there is a paucity of research examining Asian immigrant nurses' experiences, and few studies have focused on retaining them (Kinderman, 2006). In addition, the international migration of nurses has not been addressed from a human resource development perspective that impacts the sustainability of the current workforce (ICN, 2007). These gaps reflect a lack of conceptual and theoretical developments in explaining nurse migration. As a result, it remains a relatively unchecked, unorganized and individualized phenomenon (Brush, 2008).

Foreign-Educated Nurses (FENs)

Definition

This study examined nurses who were trained in their home countries, but then register to practice in another country. Across the literature, titles for these nurses overlap and are inconsistently identified: '*international nurses*' (Flynn & Aiken, 2002; Pilette, 1989; Xu et al., 2008), '*internationally-educated nurses*' (Little, 2007; Murphy & McGuire, 2005; Xu & Kwak, 2006, 2007; Xu et al., 2010), '*internationally-recruited nurses*' (Buchan, 2007; Raghuram, 2007), '*internationally-born nurses*' (O'Brien-Pallas & Wang, 2006), '*overseas nurses*' (Alexis et al., 2006; Gerrish & Griffith, 2004), '*immigrant or migrant nurses*' (Beechinor & Fitzpatrick, 2008; Brown & James, 2000; Cummins, 2009; Dickey-Bloom, 2004; Humphries et al., 2009; Janiszewski Goodin, 2003), '*foreign nurses*' (Boylston & Burnett, 2010; Brush et al., 2004; Dijkhuizen, 1995;

Edward, 2000; Kline, 2003; Sherman, 2007; Spry, 2009; Withers et al., 2003), *'foreign-educated nurses'* (Bieski, 2010; Bola et al., 2003; Ea et al., 2008; Lee, 2007; Pizer et al., 1992; Robinson, 2009; Trossman, 2002), and *'foreign-trained nurses'* (Batata, 2005; Polsky et al., 2007). The difficulty is compounded by use of country-specific names: Asian nurse (Liou & Cheng, 2008; Liou & Grobe, 2008; Xu, 2005), Chinese nurses (Xu, 2003), Filipino or Philippine nurses (Berg et al., 2004; Ea et al., 2008; Joyce & Hunt, 1982; Kinderman, 2006; Vestal & Kautz, 2009), Korean nurses (Boylston & Burnett, 2010; Yi & Jezeski, 2000), and Taiwanese nurses (Liou & Cheng, 2011).

Use of such a large number of terms makes it difficult to develop a coherent understanding of the migration phenomenon. In addition, the choice of terms seems to depend on each author's personal preference rather than on each study's purpose. 'Foreign-educated' and 'foreign-nurse' are more frequently used in U.S. publications; however, so far, no universal term with a clear definition has emerged.

In selecting a term for the subjects of this study, defining characteristics that include both 'foreign' and 'educated' seems appropriate. The 'foreign' concept differentiates people by blood, birth and crossing borders (Lee, 2007). 'Educated' conveys more foreign-specific requirements, generally seen as the core dimension in defining characteristics, such as 'completed their professional education in their countries, have a legal licensure and second language' (Cummins, 2009; Lee, 2007, p. 9). Therefore, we selected 'foreign-educated registered nurse (FEN)' to represent our study population, and define a FEN as a nurse who lives in a country (U.S.) other than her/his home country in which she/he holds her/his citizenship and completed her/his professional nursing education (Bieski, 2007; Lee, 2007; Wilkins & Shields, 2009). The

current study assumes that the country of origin is the same as the country of training (Lee, 2007). The American counterparts, nurses who were born and received nursing education in the U.S., will be referred to as 'U.S.-educated registered nurses' (USENs) (Lee, 2007; Xu & Kwak, 2007).

Demographics

In comparison to USENs, there is limited information on FENs in terms of demographic characteristics and how these profiles have changed over time (Xu & Kwak, 2005, 2007). Regarding donor countries of FENs, an updated profile reported characteristics of FENs; the three top countries of origin for FENs in the 2004 NSSRN sample were the Philippines (50.2%), Canada (20.2%), and the U.K. (8.4%), (HRSA, 2007). Most FENs fell into either the Asian or Caucasian race category (Xu et al., 2010). In 2008, NSSRN estimated that FENs living in the U.S. accounted for 5.4 % of all licensed RNs and 5.6 % of the RN workforce in the U.S. (HRSA, 2010). Of these, 50.1 % originated from the Philippines, followed by India, Korea and other Asian countries (9.6%, 2.6%, and 6.7%, respectively); nurses from Asian countries thus have become the largest portion of the U.S. foreign nurse workforce.

According to Martiniano and Moore (2006), FENs tend to reside in highly populated and multicultural states such as California (64%), provide direct patient care (62%), work in medical-surgical units (41.4%) as staff nurses (70.9%) in hospitals (79.5%), and work on a full-time basis (70.9%). These estimates are all higher than those for USENs. A similar trend was also found in another study using NSSRN data: FENs were younger, more experienced and better educated, and worked more hours as staff

nurses in urban hospitals than their USEN counterparts (HRSA, 2007, 2010). The stronger urbanization trend among FENs is most likely attributed to the higher salaries offered by urban hospitals (Xu & Kwak, 2007). In terms of geographic location, the majority of FENs reside in a small number of states. Over 50% of FENs reside in four states; approximately one-quarter of FENs lived in California (28.6%), followed by New York (10.5%), Florida (10.7%), and Texas (7.5%) (HRSA, 2007). A similar trend was found in a later study (26.4%, 11.5%, 9.6%, 10.2%, respectively) (HRSA, 2010). Aside from hospitals, the number of FENs working in nursing home or extended care facilities increased from 7.2% in 1977 to 9.0% in 2000 (Xu & Kwak, 2007). Regarding FENs' education levels, the NSSRN reported that about 60% of them possess baccalaureate degrees or higher, and over 2% of FENs had advanced practice preparation (HRSA, 2005).

FENs' Pre-Migratory Expectations

Studies often refer to FENs' expectations as "motivations or determinants for working in other countries." To date, most studies have focused on FENs' experiences to explain FENs' migration-related phenomena. Across studies, their expectations are not as well described as their experiences (de Veer et al., 2004; O'Brien-Pallas & Wang, 2006; Withers & Snowball, 2003); for example, one study did not define in detail what FENs' 'unmet' expectations meant (Alexis et al., 2005).

Withers and Snowball (2003) classified foreign Filipino nurses' expectations into four broad categories: professional development, financial remuneration, experience living in a developed country and others. Additionally, the authors tried to identify

significant relationships and differences between pre-arrival expectations and actual experiences; for example, in relation to the hospital setting, their expectations were for a 'lighter workload,' availability of 'high tech,' and having qualified nurses as coworkers so that they would not become so involved in basic bedside care. However, the study revealed 67% of FENs responded that their expectations were unmet, and in addition, some actually reported that they experienced racial discrimination or indifference from patients and colleagues.

As to unmet expectations, Withers and Snowball (2003) mentioned that about two thirds of FENs felt that information they had been given in their home country had been inadequate and inaccurate. It is possible that their expectations may have been somewhat 'too high' or 'unrealistic' compared to actual experiences, leading to job dissatisfaction and eventual turnover.

A recent study (Nguyen et al., 2008) attempted to examine the extent to which prospective FENs (nursing students) in Uganda articulated negative expectations about experiences they might have after migration. The respondents in this study said that they would likely experience racism (46%), depression (34%), and even occupational health risks while working abroad and that there would be disincentives as well as incentives associated with migration.

Therefore, prospective FENs need to consider what their actual experiences will be like in destination countries. They need good-quality information about working conditions in the destination countries in order to have appropriate expectations.

FENs' Post-Migratory Experiences

Although FENs' experiences vary according to work setting and demographic characteristics, some common features were found across studies. Investigations of studies pertaining to each experience are summarized in Appendices A and B.

Many preliminary studies were conducted to understand FENs' actual experiences and insights in order to design further research. However, most are qualitative studies with a small number of subjects (see Appendices C and D) and were undertaken in specific areas or groups, thus limiting the ability to recognize similarities and make comparisons across countries and settings (Alexis et al., 2005). Moreover, in qualitative studies, FENs' responses might be biased toward the negative experiences because of open-ended questions and the circumstances surrounding the interview. Thus, some studies noted their lack of generalizability due to methodological limitations (Dicicco-Bloom, 2004; Hagey et al., 2001; Yi et al., 2000). These studies included FENs from different countries who moved to Australia (Omeri et al., 2002), Canada (Hagey et al., 2001; O'Brien-Pallas & Wang, 2006; Turriffin et al., 2002), England (Alexis et al., 2005, 2006), Iceland (Magnusdottir, 2005), and the Netherlands (de Veer, 2004).

Although there is little empirical research addressing FENs' actual experiences specifically in the U.S. (Brown et al., 2000; Cheng & Liou, 2011; Dicicco-Bloom, 2004; Joyce & Hunt, 1982; Liou & Cheng, 2011; Xu et al., 2008; Yi et al., 2000), as shown in Appendices A and B, we believe the general findings from other countries resemble those for FENs in the U.S.

Initial experiences

Definition

The initial experiences that FENs undergo have been named with a variety of terms: adaptation, adjustment, transition, integration, acculturation, and assimilation. No study in nursing research has clearly defined the differences among those terms.

However, there is some similarity among studies; for example, FENs: *adapted* to “new work environment or culture” (Alexis et al., 2006; Beechinor & Fitzpatrick, 2008; Cummins, 2009; Magnusdottir, 2005; Xu et al., 2008; Withers & Snowball, 2003), *transitioned* into “practice” or to “new culture” (Guttman, 2004; Murphy & McGuire, 2005; Polsky et al., 2007; Xu, 2003), *integrated* “into the workforce” (Palese et al., 2007; Xu, Gutierrez, & Kim, 2008) or “workplace” (Cummins, 2009; Xu, 2007), *adjusted* “to U.S. hospitals” (Robinson, 2009; Yi & Jezewski, 2000), and *assimilated* “into the U.S. healthcare system” (Brown et al., 2000). Some studies have even used more than one term (Cummins, 2009; Murphy & McGuire, 2005; Pilette, 1989); unfortunately, the above terms have rarely been used as a real concept or framework. Rather, they are deployed haphazardly in studies. Taken together, no single concept represents the partial or total experience of FENs. However, all the terms generally relate to FENs’ workplace experiences.

Adjustment process

Pilette (1989) was the first scholar to look at the experience of FENs as a process of adjustment, and divided their experiences into four phases: Acquaintance (0-3 months), Indignation (3-6 months), Conflict Resolution (6-9 months), and Integration (9-12 months). The process of adjustment is based on the assumption that individuals can

move through all the steps within the first year. It is suggested that in the integration phase, the organization needs to evaluate all programs, resources, and efforts designed to facilitate FENs' adjustment process, because success in the first few months of employment can affect employee productivity and retention (Dijkhuizen, 1995). Each step of the process was further elaborated by other authors (summarized in Appendix E) (Palese et al., 2007; Ryan, 2003; Spry, 2009; Withers et al., 2003). Withers and Snowball (2003) actually applied this model to Filipino nurses working in the U.K., and found that nurses who had participated in this study appeared to confirm Pilette's model. However, Yi and Jezewski (2000) introduced different phases of the process, which were designed to examine 12 Korean nurses' adjustment to U.S. hospitals. This study reported that total adjustment took 10 years for Korean FENs. Therefore, it was assumed that some other factors might be related to Asian FENs' adjustment to their organization.

Orientation

The literature supports that the first several months or year of employment at a new job have the most important influence on new nurses' (including FENs) perception of the organization and development of commitment (Bumgarner & Biggerstaff, 2000; Cheng & Liou, 2011; Liou & Cheng, 2008). Orientation usually occurs at the time of hiring, so it can be seen as an initial program provided by hospitals.

Hospital orientations are considered the best magnet to attract and retain new nurses and were found to directly influence job satisfaction, retention, productivity and quality of patient care (Bumgarner & Biggerstaff, 2000; Gavlak, 2007; Mathews & Nunley, 1992). Other studies have suggested that one major factor contributing to high turnover rate, absenteeism, and poor job performance was inadequate orientation

(Connelly et al., 1998; Mathew & Nunley, 1992). Specifically, Omeri and Atkins (2002) and Dubois, Padovano and Stew (2006) found that FENs' negative perceptions come from their lack of training; orientation has thus proved to be beneficial and valuable (Cummins, 2009; Withers & Snowballs, 2003). Therefore, effective orientation provides win-win outcomes for the employers and new employees (Gavlak, 2007). To date, very few studies describe specific orientation strategies for Asian FENs working in the U.S. (Boylston & Burnett, 2010; Cheng & Liou, 2011; Edward, 2000; Kinderman, 2006; Robinson, 2009).

Studies found that newly graduated nurses commonly complete a hospital orientation for six to eight weeks or 10 to 12 weeks to promote confidence and feel comfortable in providing safe care (Bumgarner & Biggerstaff, 2000; Gavlak, 2007). Robinson (2009) suggested that the procedure of orientation remains the same for both FENs and USENs. Boylston and Burnett (2010) noted that Korean FENs completed orientations similar to those of USEN. However, the literature shows wide consensus that FENs need extensive and longer orientations beyond the usual hospital orientation process; at least three and up to six months (Bumgarner & Biggerstaff, 2000; Gerrish & Griffith, 2004; Robinson, 2009; Xu, 2003). Moreover, it is suggested that the orientation for Asian FENs in particular should be qualitatively and quantitatively different from those designed for newly graduated USENs (Xu, 2007).

To date, very little literature addresses the development of hospital orientation programs for FENs. Several studies recommended the design of more comprehensive and evidence-based orientations for FENs: for example, offering courses in English as a second language; including a culturally-sensitive curriculum, allowing them to

demonstrate skills; providing opportunities for building a positive self-image and confidence; emphasizing team-building, mind-opening, assertiveness, and collaboration; providing opportunities to network formally and informally; and educating FENs on regulations and associated legal clinical issues such as do-not-resuscitate and advance directives (Bola et al., 2003; Dubois et al., 2006; Edward, 2000; Kawi & Xu, 2009; Kinderman, 2006; Robinson, 2009; Sherman, 2007; Xu, 2005; Xu & Kwak, 2006). Additionally, in order for FENs to be competent to care for patients at the completion of orientation, evaluation of the orientation itself should also occur at the end of the session or at regular intervals (Boylston & Burnett, 2010; Ryan, 2003).

Thus far, we know little about how quality of care could be affected by FENs' poor orientation experiences. It is possible that they might cause differences in patient outcomes (Brush, Sochalski & Berger, 2004). No readily available, easy to use and standardized or validated instrument specifically designed to evaluate orientation programs for FENs exists.

Comparing FENs and new graduate USENs in their initial experiences

It has been found that the challenges new graduate USENs and FENs encounter are similar when they are orienting to a new unit or during their first year of employment, namely: assimilation anxiety, reality or cultural shock, role stress related to unanticipated adjustment, lack of support and social isolation (Casey et al., 2004; Galvak, 2007; Robinson, 2009; Zinsmeister & Schafer, 2009). Casey, Fink, Krugman, and Propst (2004) explained that new graduate USENs similarly experience a transition from nursing student to licensed nurse. In particular, they feel uncomfortable when they need to perform practices that they haven't yet mastered: intravenous (IV) skills, manipulation

and access of central lines, blood administration, chest tubes and code blue; however, after one year of practice, their levels of confidence and comfort in the RN role increased. This discomfort was shared by employers in a survey that found only 11% believed that new graduate USENs are prepared enough to take care of emergency situations (Smith & Crawford, 2002), which might indicate potential risks to patient safety.

The conditions for both new graduate USENs and FENs are similar in some ways and different in others. On the one hand, most FENs have previous experience in nursing (Spry, 2009; Xu & Kwak, 2007). However, they are entering a new environment from a dissimilar culture or with lack of language fluency, which makes them feel stressed to a greater degree compared to new graduate USENs (Robinson, 2009; Xu, 2003). On the other hand, the backgrounds of new graduate USENs vary and they have never been employed in hospitals (Galvak, 2007). However, their lack of confidence and feelings of inadequacy begin to resolve by the end of the first year (Casey et al., 2004), and in this regard they appear to need a shorter period of adjustment in comparison to FENs.

Organizational experiences

FENs' experiences in healthcare settings are related to work and career development, and most experiences are negative (Alexis et al., 2006; Diccico-Bloom, 2004; Likupe, 2006; Magnusdottir, 2005; Omeri et al., 2002; Seago & Spetz, 2008). Many FENs complained that not enough opportunities for promotion and job training were available despite a written equal opportunity policy (Alexis et al., 2006; Diccico-Bloom, 2004; Seago & Spetz, 2008). Omeri and Atkins (2002) indicated that FENs frequently mentioned a lack of recognition of their skills and previous experience and a disregard for their contributions to patient care. FENs hesitated to report and label such

occurrences as racism or discrimination although they felt them to be present (Dicicco-Bloom, 2004; Joyce et al., 1982; Withers & Snowball, 2003).

In addition, when conflict escalated over time due to interpersonal matters, dealing with these conflicts resulted in immeasurable stress, and FENs tended to force themselves to perform professional roles first without resolving sources of stress (Kawi & Xu, 2009; Turritin et al., 2002; Withers & Snowball, 2003; Xu, 2007b). Xu and Davidhizar (2004) suggested that understanding the different conflict management styles of FENs and USENs can facilitate awareness of cultural differences and improve teamwork. This stage can be a time for FENs to decide to stay, transfer to another hospital or return home unless the problems are appropriately and effectively addressed (O'Brien-Pallas & Wang, 2006; Pilette, 1989).

In the U.S., one of the positive experiences some FENs mentioned is that USENs work independently, and are less subservient to doctors than Asian FENs are. They also expressed satisfaction about jobs and initial adaptation/orientation programs a few hospitals provided (Vestal & Kautz, 2009). In several studies regarding Asian FENs' work experiences, clinical skills appeared to be the easiest domain in which to practice compared to management or leadership roles (Xu, 2007a; Xu, Xu, & Zhang, 2002).

Mastering direct and indirect communication and language skills are mentioned as the most challenging issues that remain 'ongoing problems,' taking much longer for some Asian FENs: for example, FENs from China and Korea (Xu, 2005, 2007b; Yi et al., 2000). Consequently, it is believed that poor language fluency affects FENs' management skills such as assertiveness and the ability to delegate and resolve conflict (Boylston & Burnett, 2010; Xu, 2005; Xu, 2007b). One strategy FENs use to cope with

the language barrier is often ‘being silent’ or ‘avoiding direct criticism and open confrontation’. They tend to avoid explanations and work hard instead (de Veer, 2004; Magnusdottir, 2005; Omeri et al., 2002; Xu, 2005; Yi et al., 2000).

Seago and Spetz (2008) noted that Asian FENs were less likely to apply for promotions, although they believed there were enough opportunities for career advancement in their workplace. The authors assumed that Asian FENs consider their ethnicity a barrier to advancement and believe that the employers would not promote them. It seems promotional requirements are still not explained to FENs.

Health experiences

It has been documented that the demands of immigration itself and daily experiences can affect FENs’ physical and mental health (Beechinor & Fitzpatrick, 2008; Joyce & Hunt, 1982). However, this literature review reveals that little research has been done on the unique health experiences of FENs. Very few published studies have investigated FENs’ overall health status change with regard to emotional or physiological symptoms after working abroad (Brown et al., 2000; Hagey et al., 2001; Yi et al., 2000) and self-rated health status (O’Brien-Pallas & Wang, 2006).

Brown and James (2000) reported that Filipino FENs who had stayed longer in the U.S. showed elevated norepinephrine and blood pressure levels in their work and home settings ($p < 0.05$) compared to FENs with shorter stays. The authors assumed that their increased psychological stress was related to adopting a new American life style. It is expected that long-term residents in the U. S. would experience less work-related stress when compared to newly arrived immigrant nurses; however, this result indicates the reverse, which suggests job strain is not related to residence time.

Similarly, Yi and Jezewski (2000) reported that most Korean FENs had experienced severe psychological stress, and were anxious, fearful, angry, self-deprecating and depressed when they began to work in U.S. hospitals. O'Brien-Pallas and Wang (2006) found that FENs in Canada were less healthy than domestic nurses in terms of their physical and mental health, and suggested a change of work environment to improve their health status. Respondents felt that safety and freedom from physical or verbal abuse were just as important to health as basic needs such as food or shelter (Dijkhuizen, 1995; O'Brien-Pallas & Wang, 2006). Taken together, it seems urgent to first conduct a qualitative or quantitative study to capture more precisely which factors in FENs' personal or work experiences contribute to work-related health problems (Castro et al, 2008).

Cultural and social experiences

As might be expected, the cultures of U.S. and Asian countries are at the two ends of a continuum: individualism versus collectivism and high versus low-context communication, contributing to conflict or misunderstanding between Asian FENs and USENs (Liou & Cheng, 2008, 2011; Robinson, 2009; Xu, 2005; Xu & Davidbizar, 2004; Yi et al., 2000). For these reasons, Asian FENs are more likely to experience culture shock, culture stress and cultural impositions which contrast with their established norms and values. Most FENs are trying to adapt to new cultures on a daily basis while preserving their cultural norms and values to an extent equivalent to what they had in their home countries. Initial enculturation can change over time according to their adjustment status (Leininger, 1995; Pilette, 1989). However, cultural differences may

persist and can play an important role in creating workplace misunderstandings or conflicts (Omeri & Atkins, 2002; Yi et al., 2000).

Upon reflection on FENs' experiences with host nurses, most Filipino FENs reported positive feelings toward American co-workers and USENs in general (Joyce & Hunt, 1982). However, being a stranger in the group and fearing to communicate with them were universal experiences (Maze, 2006; Yi et al., 2000), because FENs are more uncomfortable in settings where the attributes of their social and cultural identity differ from those of the people around them (Cummins, 2009; Diccico-Bloom, 2004; Park et al., 2004). These *in-group/out-group* or *us/them* distinctions between FENs and USENs often result in exclusionary attitudes; minorities develop feelings of self-doubt regarding their value or worth to the organization and hesitate to ask for help from USENs, eventually separate from the in-group (Flynn & Aiken, 2002; Park et al., 2004; Williams et al, 1998; Xu, 2007b; Yi et al., 2000), and develop more work-related stresses (Dijkhuizen, 1995).

Some studies have suggested that through culturally-sensitive orientations or social activities, health care organizations should offer opportunities for host nurses and preceptors to learn more about their partners so that FENs can reduce their risk of social isolation from the central society (Campbell, 2009; Gerrish & Griffith, 2003; Vestal & Kautz, 2009; Xu & Kwak, 2006).

Summary

In defining FENs' experiences, there are many limitations and several unrecognized issues in the available literature. For example, FENs' negative experiences

were mainly captured based on what the majority of FENs said and their individual perspectives on individual experiences, or on the report of one nationality without consideration of variations of experience. In addition, recent articles appearing in the professional literature highlight the absence of comprehensive or up-to-date empirical information on FENs' demographic characteristics and their work and life abroad (Dicicci-Bloom, 2004; Kingma, 2001; O'Brien-Pallas & Wang, 2006; Xu & Kwak, 2007).

In brief, FENs' actual experiences can be summarized in two main themes: "*challenges*" and "*peripherality*" in a new world. Their journeys as outsiders seem a long way for FENs to overcome the obstacles; for example, language barriers cannot be mastered overnight. In the pre-migration stage, FENs also seem to have relatively high and unrealistic expectations about what their work will be like and what they will experience. These expectations, if unmet, could affect their attitudes and lead to dissatisfaction in their work (Withers & Snowball, 2003). Thus, how U.S. employers treat FENs' unmet expectations could influence successful integration and retention of FENs in the U.S. health care system.

FENs' Turnover

Definitions

Turnover

Studies have defined turnover with a number of terms: voluntary (employee-initiated) versus involuntary (organization-initiated), avoidable or unavoidable,

anticipated versus unanticipated, job versus organization, and internal versus external turnover (Campion, 1991; Hong & Chao, 2007; Janssen et al., 1999; Parry, 2008; Schwab, 1991). Among these terms, involuntary and voluntary turnover have generally been acknowledged as two main forms (Hong & Chao, 2007). Voluntary turnover means “voluntarily leaving the organization” and is mainly viewed as individually-motivated choice behavior (Campion, 1991). In contrast, involuntary turnover is frequently defined as movement across organizations via withdrawal such as compulsory retirement, downsizing strategy or dismissal (Campion, 1991). However, these binary choice-type turnover forms reflect the limits of viewing turnover only as a decision to leave a current organization or not (Fields et al., 2005; Parry, 2008).

Recently, Fields, Dingman, Roman, and Blum (2005) examined three types of turnover by extending the concept to include decisions not only to leave a current organization but also to move to a different work setting within a same organization: 1) new job in the same organization, 2) same job in a different organization, or 3) different job in a different organization. In the current study, predictors of turnover depend on three different types of employees’ movement.

Correlates and Determinants

In defining determinants or antecedents of turnover, most research has concentrated on work-related variables rather than non-work related (Hong & Chao, 2007): for example, job content, workload, and social support. Others include unmet career expectations, such as lower pay and (to a lesser extent) autonomy with more responsibility and lack of job opportunities (Houkes et al., 2003; Thompson et al., 2004;

van der Heijden et al., 2010). However, it is also true that demographic and other non-work related variables influence turnover or turnover intention, including age, gender, race, number of children, and tenure (Griffeth, Hom, & Gaertner, 2000). Among 150 professional marketing employees in Taiwan, race and number of children were factors affecting withdrawal behavior (Hong & Chao, 2007). In addition, highly educated employees may consider moving on in a positive manner because they have more job opportunities (Schwab, 1991). Employee age and tenure were negatively associated with moving outside a company (Fields, Dingman, Roman, & Blum, 2005). At least one study (Khatri, Fern, & Budhwar, 2001) expresses doubts regarding these observed relationships between demographic factors and turnover behaviors.

Numerous studies have shown that job satisfaction and organizational commitment are consistently and strongly linked to turnover behaviors (Friedman & Holton, 2002; Griffeth et al., 2000; Lee, Lee, & Lum, 2008; Liou & Grobe, 2008; Pizer et al., 1992; van der Heijden et al., 2010). Nevertheless, there are gaps in knowledge with regard to these two factors' roles in explaining turnover. For example, unexpectedly, attitudinal variables such as job satisfaction can explain only 4-5% of the variance in turnover (Friedman & Holton, 2002; Griffeth et al., 2000), which means that the true effect of job satisfaction on turnover is smaller than expected because not all dissatisfied employees actually leave their jobs. As to organizational commitment, issues persist in terms of psychometric properties of the instrument usually used to measure it, relating specifically to convergent and divergent validity with intent to stay (Kong, Wertheimer, Serradell, & McGhan, 1994) and overlap factors between organizational commitment and *occupational commitment* (Chang et al., 2006). The relationships among these work-

related different commitments, including organization, occupation or profession, are not fully understood (Meyer et al., 1993).

Job performance has also become an increasingly popular indicator in relation to turnover. Some studies have shown that high performance - rather than moderate or low performance - is strongly associated with a high degree of voluntary turnover (Hong & Chao, 2007; Schwab, 1991). However, at issue is whether low-performing employees were actually terminated involuntarily or encouraged to leave by their organizations due to threats or punishment, resulting in misleadingly low voluntary turnover rates (Schwab, 1991). In general, the relationship between performance and turnover depends on how internal organizations or external markets recognize and reward employee performance (Griffeth et al., 2000; Schwab, 1991).

Friedman and Holton (2002) found that turnover is also affected by social ties within an organization. In this study, minority employees who joined one of the company's network groups appeared to generate more social embeddedness, resulting in reduced turnover intention compared with the employees who did not. Additionally, growing turnover literature posits that an organization's social supports and employee services are significantly associated with turnover intention (Janssen et al., 1999; Lee, Lee, & Lum, 2008; Houkes et al., 2003; Thompson et al., 2004). Several studies found that employees had greater organizational attachment and less intention to leave when they were provided employee services such as wellness programs that included smoking cessation, health fitness, and stress reduction (Lee, Lee, & Lum, 2008), on-site childcare facilities (Rothausen et al., 1998) and organizational family support (Thompson et al.,

2004). Through these programs, employees reported that they could better balance their work and family responsibilities.

Similarly, a lack of support from co-workers and supervisors has an impact on turnover intention or job search behavior (Houkes et al., 2003; Thompson et al., 2004). Specifically, intangible organizational family support such as emotional support was highly related to affective commitment and job search behavior, and the relationships held over time (Thompson et al., 2004). A meta-analysis of turnover studies (Griffeth et al., 2000) summarizes the best predictors of turnover based on the relative predictive strength of turnover antecedents: these predictors include job satisfaction, organizational commitment, job search, withdrawal cognitions, quitting intentions, and characteristics of the work environment (e.g., job content, stress, work group cohesion, autonomy).

Related Theories and Concepts

During recent decades, researchers have directed considerable attention to the voluntary turnover modeling approach and methodology (Hong & Chao, 2007). Since Mobley (1977) first proposed structural models for representing employee turnover, researchers have added job satisfaction and organizational commitment as intervening or indirectly linked variables in initiating actual voluntary turnover, and confirmed that these attitude-driven factors have consistent and significant negative relationships with turnover (Griffeth et al., 2000; Muller, Boyer, Price, & Iverson, 1994; Muller, Wallace, & Price, 1992). In addition, researchers have realized that other factors might have been unrecognized or neglected in turnover studies (Friedman & Holton, 2002; Moore & Burke, 2002; Schwab, 1991); for example, job performance, social connections within

organizations, environmental influences, and so on. Some studies looking at how job performance became a major influence on decisions related to employee turnover indicated a positive relationship between high performance and turnover. However, there were inconsistencies across studies (Birnbaum & Somers, 1994; Hong & Chao, 2007; Schwab, 1991).

As for modeling, the social sciences increasingly apply discrete choice models to predict choices among two or more options, “*binominal or multi-nominal.*” The choice is binominal when an employee tends to either leave the organization or remain. At present, many studies of employee turnover are criticized because they rely on using simple demographics or job-related variables such as age, race, gender, organizational commitment, job satisfaction and so on (Hong & Chao, 2007). Others are criticized because they were conducted only in the Western organizational context (Khatri, Fern & Budhwar, 2001). In addition, Campion (1991) reviewed past turnover studies and addressed some questionable issues: lack of clarity between voluntary and involuntary turnover, definition of turnover constructs, interrelationships between turnover measures, accuracy of turnover data and so on. There is a need for greater attention to the appropriateness of alternative turnover measures as well (Campion, 1991). It is therefore suggested that studies on turnover or turnover intention should move forward based on new methodologies and evidence (Friedman & Holton, 2002).

Foreign-Educated Nurses vs. Domestic Nurses

Domestic nurses' turnover

As in other professions, nurses leave their workforce voluntarily or involuntarily for a variety of reasons. According to American Organization of Nurse Executives (AONE) reports in 2000, the national average RN turnover rate in the U.S. was 21.3%; some hospitals experienced even higher rates. As a consequence, the average RN vacancy rate in acute care settings was somewhat higher, at 10.2%. Many studies have viewed nurse turnover as coming from two sides of the same coin, and considered the benefits as well as the costs of nurse turnover (Boyle & Miller, 2008; Jones & Gates, 2007; Kovner et al., 2009). Costs include recruitment, training and indirect-costs resulting from reduced productivity (AONE, 2000; Jones & Gates, 2007; Rothberg, Abraham, Lindenauer, & Rose, 2005). A conservative estimate of annual turnover cost per RN is \$10,000, which is quite considerable (AONE, 2000). In contrast, the benefits include introduction of new ideas and practices, which results in a diverse workforce and positive organizational growth (O'Brien-Pallas et al., 2006). However, most hold the view that the costs of nurse turnover outweigh its benefits (Jones & Gates, 2007; Kovner et al., 2009). Moreover, although little evidence supports the relationship between actual costs of nurse retention and its benefits, benefits of nurse retention are considered to far exceed turnover costs (Jones & Gates, 2007).

A considerable volume of studies examine nurse turnover (Ingersoll, 2002; Janssen et al., 1999; Kovner et al., 2009; O'Brien-Pallas et al., 2006; Parry, 2008; Wagner, 2006). Job satisfaction is one of the correlates or determinants of RNs' turnover behaviors. Many studies have shown that a large number of nurses are not satisfied with their jobs (AONE, 2002; Ingersoll, 2002; Janiszewski Goodin, 2003; Pizer et al., 1992; Wilkins & Shields, 2009), and that they considered inadequate job satisfaction one of the

top causes for leaving their current hospital (AONE, 2002). Similarly, a recent study showed that when job satisfaction is low, not even social support from supervisors and colleagues can buffer nurses' intention to leave (van der Heijden et al., 2010). In other words, focusing on job satisfaction seems to be good strategy for reducing nurses' turnover behaviors.

The American Nurses Association (ANA, 2001) conducted a national survey of RNs, in which approximately 50% of those surveyed said that they were not satisfied in their jobs (Janiszewski Goodin, 2003); dissatisfied nurses were less likely to stay in their current organizations than satisfied ones (Ingersoll et al., 2002). Moreover, when compared across countries, dissatisfaction of US nurses is found to be greater than that for nurses in other countries (Aiken et al., 2001).

Job satisfaction is a multi-dimensional concept, and it is affected by other turnover determinants. For example, job satisfaction is related to demographic characteristics including age, job tenure, employment setting, and educational degree (Ingersoll, 2002). Work-related and organizational outcomes are also associated with a lower level of job satisfaction: absenteeism, burnout, insufficient staffing (Janssen et al., 1999; Kalisch et al., 2007).

Foreign-educated nurses' turnover

In general, FENs' turnover behaviors have been overlooked in nursing turnover studies. For experienced domestic nurses or even newly graduated nurses who were educated and work in their home countries, a large number have left nursing to work in other occupations (Berliner & Ginzberg, 2002; Ingersoll, 2002; Newman et al., 2001; Parry, 2008). However, this author has anecdotally found that in their early stages of

employment, FENs do not consider making a career switches to different jobs because they feel their experiences are not transferable and learning new skills would be more burdensome.

Pizer et al. (1994) showed that in the U.S., retention rates for Filipino FENs are higher in comparison to those for USENs. Similarly, Liou and Grobe (2008) reported that 94.3% of Asian FENs disagreed or strongly disagreed that they intended to leave their current jobs. However, in these studies, the target populations were limited to a couple of countries of origin. Few studies have been done on the predictability of turnover or turnover intention amongst Asian nurses (Cheng & Liou, 2011). Following are possible correlates of FENs' turnover.

Anticipated related factors to FENs' turnover

Orientation

A study regarding the effectiveness of orientation programs for Korean FENs, provided by the partnership between a university and hospital, suggested a unit-based consistent preceptorship was a vital component for successful orientation (Boylston & Burnett, 2010).

Initial investigations carried out by Cheng and Liou (2011) found that cultural orientation had a direct effect on intention to leave. This study pointed out that Asian nurses who were more collectivist-oriented were more likely to accept the organizations' values and goals, leading them to maintain their membership and be less likely leave their jobs. Therefore, employers and health administrators need to develop cultural orientation as a strategy to promote organizational commitment as well as reduce the rate of turnover.

Organizational commitment

Organizational commitment is defined as a nurse's strong desire to maintain membership in the organization while accepting its goals and values and expressing willingness to contribute to its benefit (Liou & Grobe, 2008). Thus far, only a few studies have looked at the relationship between FENs' organizational commitment and other organizational factors or turnover correlates. Liou and Cheng (2008) suggested that Asian FENs may have different organizational commitment as well as different needs compared with nurses from Western countries. The authors mentioned three potential antecedents of FENs' organizational commitment: personal characteristics, job and organizational characteristics, and work experience. Of these antecedents, the authors pointed to work experience as the main contributor to Asian FENs' decision to stay in the current organization. Accordingly, the authors recommended developing Asian FENs' organizational commitment shortly after they start to work to improve retention.

Liou and Grobe (2008) also found that organizational commitment was a mediator between professional practice environment (PPE) and the outcome variable (intent to leave) and was positively correlated with PPE ($p < 0.001$). Moreover, organizational commitment could explain 47.7 % of total variation in intent to leave, and was a stronger predictor than PPE for Asian FENs. Similarly, a recent study revealed that organizational commitment mediated the effect of practice environment on intention to leave with 93.98% and was a key predictor of Asian nurses' intention to leave (Cheng & Liou, 2011). In this study, organizational commitment was positively correlated with cultural orientation ($p = 0.001$).

Language fluency

Studies indicate that language is a very big concern for Asian FENs because they come from non-Western cultures (Yi & Jezweski, 2000); it is a strong anticipated disincentive for Asian nurses' migration (Kingma, 2001). Language fluency is a prerequisite of employment and continued work; however, pre-passing the current required language exam does not prove whether FENs will be confident enough to communicate with their coworkers or patients (Bieski, 2007; Bola et al., 2003).

Therefore, language can be highly correlated with, and thus a proxy variable for, Asian FENs' first turnover decision, especially for non-Filipino, an issue not included in any studies. Accordingly, further studies must investigate FENs' experience using language at different stages as well as their total years of language learning: for example, age at migration, age at employment or age of immersion in English in destination countries (Stevens, 2006).

Social support or networks

Social issues are associated with other work-related issues, and thus need to be considered in relation to FENs' turnover. Social networks are an important determinant of migration and ease the migration process (Haug, 2008). It is believed that social networks in destination locations play an important role in turnover decisions as well. Good support from colleagues and managers reduces nurses' perceived level of distress, which leads to better staff retention and alleviation of nursing shortages (AbuAlRub, 2004; Wilkins & Shields, 2009; van der Heijden et al., 2010). These findings also seem to hold true for FENs. For example, FENs who received more social support from coworkers reported that they felt more comfortable asking coworkers for help or less challenged in performing unfamiliar nursing practices in a supportive milieu (Kawi & Xu,

2009; Liou & Cheng, 2011; Withers & Snowball, 2003). However, according to Kawi and Xu (2009), support from staff and supervisors is inadequate for adjustment to a new work place.

A survey of 222 FENs from the Philippines and Canada (Beechinor & Fitzpatrick, 2008) found that Filipino FENs were less stressed by demands of immigration than Canadian FENs. This was an unexpected finding, especially in light of Canadian FENs' Western cultural background. This result was attributed to a significant amount of social and collegial support from the Filipino FENs' families and friends from their country of origin, with whom they worked in their current health care setting. It is therefore assumed that all FENs, regardless of country of origin, would feel less overwhelmed and be more likely to stay in their organizations when they feel that they are strongly linked to social network groups, either formally or informally.

We have not yet investigated whether social support or networks have an effect on FEN's turnover or turnover intention or if they tend to buffer the effects of other variables. It is important to address quality and degree of the social support and networks FENs develop in their organizations, which may contribute to their turnover behaviors.

Health status change

The relationship between nurses' workplace health experiences such as job-related injuries and illness and their turnover behaviors has not been adequately investigated (Brewer et al., 2009). In general, it has been found that when turnover was the result of poor health, employees were not satisfied, since leaving in these cases seemed involuntary and unavoidable (Campion, 1991). For example, university

employees who resigned more often reported that health was one of the main reasons for their turnover. Similarly, using a statewide sample of 3,955 nurses, Palumbo, Ranbur, McIntosh, and Naud (2010) found that nurses with better perceived emotional health (i.e., depression) were less likely to plan to leave their jobs.

It can be assumed that some of FENs' health problems will be work-related as well. Therefore, further research that examines relationship between FENs' health experiences and turnover should include job-related health issues.

Summary

It is believed that turnover in nurses has become so accepted as a natural trend that the phenomenon has been considered a "constant chronic issue." As Moore and Burke (2002) suggest, a specific "turnover culture" may operate within the occupational group, "*nurses*," across organizations. Furthermore, given that turnover studies in FENs have recently appeared, it seems that it is time to raise concern over the particular "turnover culture of Asian FENs" in the U.S. So far, current work has not yet identified in detail why Asian FENs end up resigning from their first jobs and what factors affect the unforgettable first turnover experience. They might originate in individual characteristics, organizational influences, or from other sources. Therefore, describing Asian FENs' unique turnover culture would likely enhance our understanding of how patterns are repeated in their organizational experiences working in the U.S.

Conceptual Framework

Migration Studies and Theories

Different disciplines have developed a variety of models and theories to explain why some people migrate and why migration is sustained over time. Those theories are often considered as variants of the “Push-Pull” theory first developed by Ernest Ravenstein (1989). In this theory, he concluded that favorable or unfavorable conditions (forces) *push* people out from one side and *pull* them in from the other. Thus, two forces, one operating in the country of origin and the other operating in the destination country, jointly create migration. As variations on “Push-Pull” theory, three types of migration models have been used: *micro*, *meso*, and *macro*. For the *micro* model, which is the classical type, an individual’s moving or staying heavily relies on his/her degree of autonomy in migration decision-making (Haug, 2008). For this case, economic disparities appear to be necessary, but not sufficient, for individuals to decide to migrate. For the *macro* level, decisions are made by more upper-level structures such as political, social and cultural influences in both donor and receiving countries which are beyond an individual’s control. Last, the *meso* model focuses more on the form of relationships or ties between individuals or groups. Taken together, these different terms still do not convey clear and valid descriptions, and have been criticized because they seem to oversimplify or heavily categorize migration types or styles (Haug, 2008; Hussey, 2005).

Nurses’ migration

To date, no generally accepted and clear model or theory exists to explain the phenomenon of nurse migration and their experiences once abroad (Kingma, 2007). In order to explain nurses’ migration movement, “Push-Pull” factors have been used in

nurse migration literature (Aiken et al., 2004; Kingma, 2001; Kline, 2003; Joyce & Hunt, 1982; Xu, 2003). The “push” factors that are generally seen in donor countries include low pay, poor benefits, unsafe working conditions, and limited job openings. In contrast, “pull” factors are apparent in the receiving countries: higher salaries, better working and living conditions, opportunities for career advancement, and less risk to their personal safety. In migration, these two forces operate together.

Although this model has improved our insights and stimulated a body of research regarding FENs’ experiences, it also has been shown to have limitations. For example, this model seems to explain only one side of migration: “leaving-decision of the immigrants” rather than “staying-decision of non-immigrants” (Joyce & Hunt, 1982). Second, it tends to oversimplify migration in terms of country-specific cases; it is not able to capture why migration patterns differ for equally less developed or more developed countries (Hussey, 2005; Lee, 2007). A third criticism refers to the fact that the model does not address migration occurring between developed countries: for example, between Canada and the U.S. (Lee, 2007). Therefore, given the current conditions, studies are needed to further develop comprehensive migration models or theories capable of identifying underlying causes and other facilitating forces, predicting consequences, and finally, outlining specific maps of nurse migration.

Proposed Conceptual Model

The conceptual model for this study used Push-Pull theory as its foundation. In this theory, favorable or unfavorable conditions (forces) *push* people out from one country and *pull* them in from another. As such, it is expected that two composite forces,

one operating at the current organization and the other operating at a destination (or current) organization, bring pressure and jointly create “turnover”. This theory is uniquely suited to explain pre-migratory expectations (incentives or disincentives) and post-migratory experiences (positive or negative) of Asian FENs. It is expected that the theory will be able to adequately describe the gap between their expectations and actual post-migratory experience and the effect of gap on Asian FENs’ turnover.

As shown in Figure 2.1, all components are connected through turnover (the bar). Between the two main components, push factors and pull factors, there is a relationship similar to a *see-saw effect*; the forces on the left side (*Push*) lift the other side (bring in more turnover). Two supportive components, the Ex-Es Gap and *controlling* factors (i.e., demographics) can affect both push factors and pull factors. These two components can shift to either side, and can therefore influence other components of the model either negatively and positively. Based on the relationships mentioned above, the final conceptual model is shown in Figure 2.2.

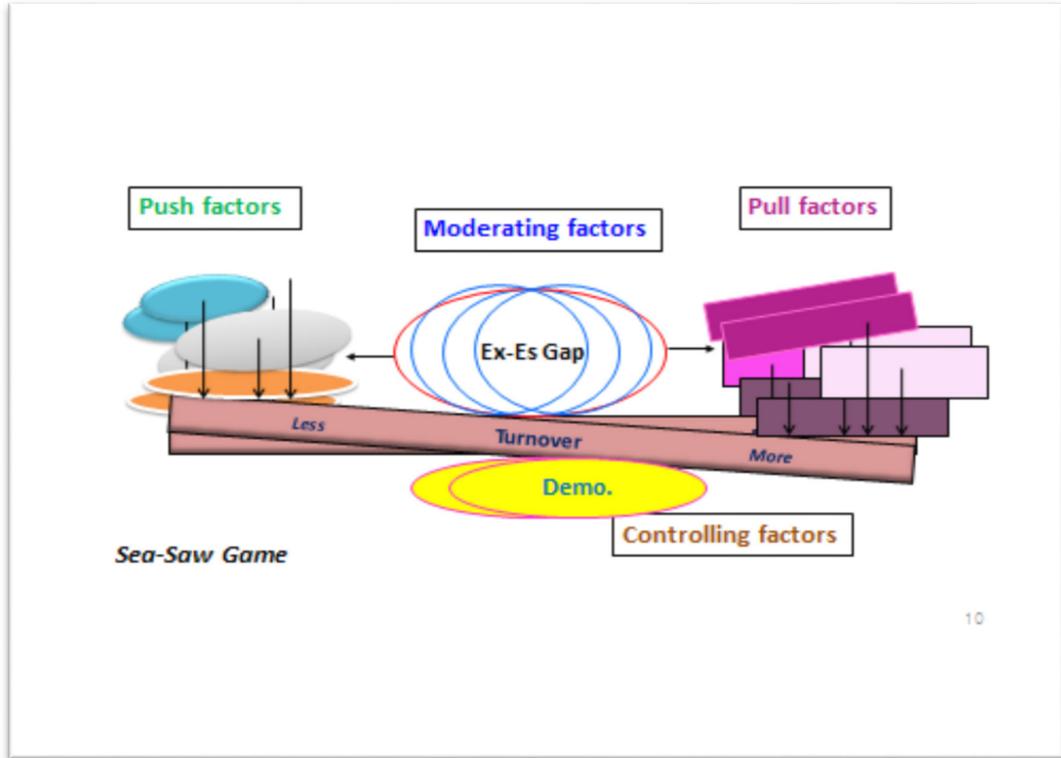


Figure 2.1. Hypothesized Relationships among Relevant Factors

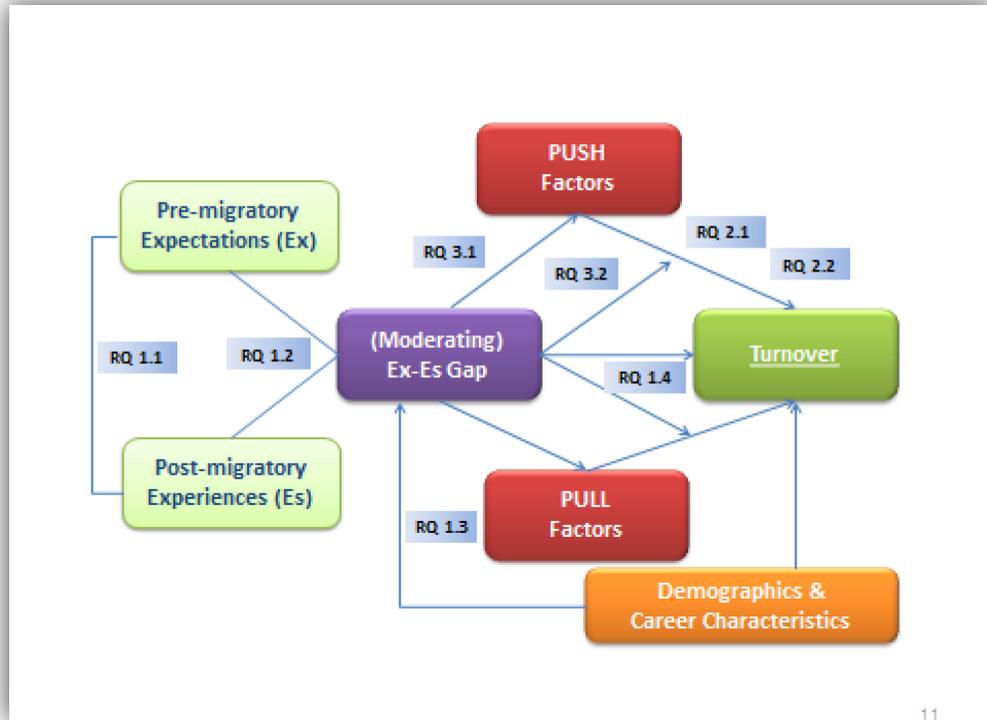


Figure 2.2. The Final Conceptual Model

Chapter III

Methods

Design

This retrospective, exploratory cross-sectional study used quantitative methods to answer the research questions associated with each specific aim. This study determined the Asian FEN' gap between pre-migratory expectation and post-migratory experience (Ex-Es Gap) (Aim 1), clarified push and pull factors (Aim 2) as well as facilitating factors (moderating effects of the Ex-Es Gap) relative to turnover among Asian FENs (Aim 3).

Sample

Prior to data collection, power calculations were conducted to determine an adequate sample size. A power analysis performed by the University of Michigan Statistical Consulting Center using NQuary Advisor 7.0 demonstrated that when the sample size is 208, the logistic regression test of $\beta=0$ ($\alpha=0.050$, two-sided) will have 80% power to detect a β of 0.531 (an odds ratio of 1.7). This assumes one normally distributed covariate x is being added to the model after adjustment for prior covariates, that its multiple correlation with covariates already in the model is 0.531, and that the proportion of successes at the mean of x is 0.300. The power analysis focuses on Aim 3, as this aim addresses the test of the main final model. Considering the number of

variables tested in the current study, and a study design featuring a web survey as well as a postal survey that might have had high nonresponse rates, we contacted as many potential participants as we could reach within the data collection period in order to reach our goal of 208.

Recruitment

The sample for this study included FENs from Asian countries. Based on literature considering the current demographic composition of Asian FENs in the U.S., the researcher contacted four Asian American Nurses' Organizations (the Philippines, China, India, and Korea) to encourage survey participation, and sent a letter to the presidents of each organization explaining the study's purpose and indicating potential benefits for participants (see Appendix G). Of the four, two organizations responded with willingness to participate in this survey. One organization participated in both a web and a mail survey, while the other association participated in a mail survey only. A total of 175 FENs were obtained from two Asian countries of origin (the South California Korean-American Nurses' Association and the National Association of Indian Nurses of America).

Inclusion and exclusion criteria

Initially, the target population consisted of foreign-educated nurses (RNs) who had relocated to the U.S. from Asian countries. Further inclusion criteria for the subjects included: (a) having completed her/his professional nursing education in the home country; and (b) having worked at least six months in one U.S. healthcare setting, enough

time for nurses to become familiar with their current practice environment (Alexander, 1995).

The intent of the study was to determine FENs' voluntary turnover, thus, any individuals who was fired or retired in their first year of employment was excluded. In addition, in consideration of language barriers' influence on this study, FENs were excluded if they had worked or currently worked in a healthcare setting where the patients and healthcare professionals used only the FENs' first language exclusively, not English. These persons were excluded through a series of eligibility questions prior to the survey (see Appendix I).

Procedures for Data Collection

Approval to conduct the study was obtained from the institutional review board (IRB) at the University of Michigan. The survey design methods were taken from Dillman (2000), and a modified tailored design was used to increase participants' response rates.

The subjects were able to participate in either a web-based survey or a mail survey. First, we started with a web survey. The researcher created a web survey link by using Qualtrics. One week prior to survey, organization leaders were asked to introduce the survey purpose and encourage their members to participate in this study. In addition, the leaders announced the upcoming survey in their formal or informal meetings as appropriate, along with sending member emails and referring questions to the authors as necessary. The survey link was sent to the members by organization leaders. Three weeks after the survey process began, two reminder emails were sent to the members

with a one week interval. The web survey was available for six weeks and eighty-nine participants responded. The participant numbers by web survey were not adequate for the study's purpose. From one organization, we were able to collect a total of 800 home addresses. In consideration of the fact that usual response rates for postal surveys are as low as 30 % (Waltz, Strickland & Lenz, 2005), potential subjects were approached in numbers three times the required sample size. For a mail survey, a packet containing a cover letter (Appendix H), questionnaires (Appendices I and J), and a self-addressed and stamped envelope for return was mailed to 400 potential participants (randomly selected - 250 for the 1st trial and 150 for 2nd trial) - currently working in a healthcare setting; confidentiality and anonymity of responses were assured. If a survey was not returned within two weeks, a second survey was mailed. No further contact was made. Fifty-five surveys were returned by the postal service because of failed delivery with wrong address. Eighty-six participants who met basic recruitment criteria completed and returned the study questionnaires, providing a response rate of 21.5 percent. Four participants replied that they did not meet the inclusion criteria for participation in the study. All returned envelopes were shredded after the questionnaires were removed and the participants were given a reward (a \$5 Starbucks gift card) by email.

In addition, we supplemented the sample by contacting "already known" members by the researcher. FENs throughout the U.S. were identified by personal contacts and snowballing procedures. Sixty-one participants responded either via web based or mail survey. A total of 236 Asian FENs completed questionnaires.

Instrument development

Prior to initiation of this study, a pilot study was conducted with eight FENs to test the instruments, particularly the newly-developed and modified instruments (related to demographics and career characteristics, orientation evaluation, health-related experiences, language fluency and actual turnover). Comments and issues relating to each question were addressed and reviewed by the researcher and the researcher's committee members. An appropriate modification was then made to obtain proper data pertaining to each research question.

Measures

For this study, all instruments were written in English. A summary of all the instruments are listed (see Appendix F).

Instruments

Demographic and career characteristics

The demographic and career characteristics consisted of three parts: 1) general characteristics of FENs (4 questions), 2) questions related to experiences from their home countries (2 questions), 3) and questions related to their *first year* of employment in the U.S. (13 questions). The demographic and career characteristics were pilot tested by eight FENs currently working in the U.S. Modifications were made to the demographic and social profile based on their input (Appendix J).

Gap of pre-migratory-expectation and post-migratory-experience (Ex-Es Gap)

For the purposes of the study, the following three terms are conceptually and operationally defined.

Conceptual definition in original studies:

- *Pre-entry-expectation*: newcomers' pre-entry expectations are their estimations for the future about their job in the organization and other related affairs (Yao et al., 2010, p.288).
- *Post-entry-experience*: newcomers adjust their behaviors to new environments with the help of organizational socialization tactics. Based on their actual experiences, they make new judgments about their jobs and related affairs (Yao et al., 2010, p.288).
- *Met expectation*: the discrepancy between encounters on the job in the way of positive and negative experiences and expectations to encounter (Porter & Steers, 1973, p.152).

Conceptual definition in this study:

- *Pre-migratory-expectation (Ex)*: Asian FENs' expectations regarding work in the U.S., formed prior to migration and the first organizational entry
- *Post-migratory-experience (Es)*: FENs' organizational experiences or perceptions of work during the first year of employment in the U.S
- *Ex-Es Gap*: differences between FENs' pre-migratory-expectations (Ex) and post-migratory-experiences (Es)

The FENs' Ex-Es Gap was measured using the Expectations and Experiences Measures (EEM) as modified by Irving and Meyer (1994, 1995). (Appendix J). The Expectations and Experiences Measures consists of three subscales: 1) Comfort (5 questions), 2) Reward (7 questions), and 3) Responsibility (8 questions). First, pre-migratory-expectations were assessed by asking the FENs, before they started to work in a US hospital setting, how likely they believed their first employment in the U.S. would provide the 20 attributes. Responses were rated on a 5-point scale from “*extremely unlikely*” (1) to “*extremely likely*” (5). Second, as other studies have recommended (Irving & Meyer, 1994; Yao et al., 2010), information on post-migratory-experiences was collected using commensurate measures by asking the FENs, by the end of their first year of employment, how likely they believed their first employment actually resulted in each of the attributes (1 = *not at all*, to 5= *a great deal*). Third, the Ex-Es Gap was assessed by calculating the difference score (algebraic) between pre-migratory-expectations and post-migratory-experiences.

Reliability for this measure, as determined by Cronbach's alpha coefficient, ranged from 0.65 to 0.85 (Irving & Meyer, 1994, 1995) and from 0.74 to 0.80 for a similar tool (Yao et al., 2010). Irving and Meyer (1994) have conducted factor analyses of expectations and experiences, demonstrating that the three subscales (Comfort, Reward, and Responsibility) accounted for about 38% of variance. Items with loading greater than .40 in principal components analysis were selected to create the composite measure of expectations and experiences with corresponding items.

Regarding FENs' expectations, the International Nurses' Council (ICN) initiated a survey to determine incentives and disincentives for nurse migration from their home

countries to another country (Kingma, 2001). This survey found about 10 factors that FENs considered as incentives or disincentives, which might be called positive or negative expectations: pay, language, learning opportunities, career opportunities, working conditions, job security, living conditions, opportunities for family members, cultural similarities/differences, and religious similarities/differences. Except for three factors (living conditions, opportunities for family members, and religious similarities/differences), the other factors are well matched with the Expectations and Experiences Measures. It was expected that the magnitude of the Ex-Es Gap among FENs would moderate the relationship between the other organization-related factors (i.e., orientation, organizational commitment) and turnover in their first year of employment.

Organization-related: Orientation evaluation

The FENs' orientation experiences were measured using a tool which was newly developed by the investigator and proposal committee members for this study (Appendix J). This tool is divided into two sections. The first section consists of six statements specific to hospital (or healthcare setting) orientation programs, which are designed to elicit respondents' general opinions about their satisfaction with program content, duration, preceptor, and respect. The instrument focuses on general satisfaction with orientation rather than specific orientation content. The degree to which the respondent agrees with a statement was listed on a 5-point Likert scale, with possible responses ranging from "*strongly disagree*" (1) to "*strongly agree*" (5). The second section includes three more questions: preceptor's country of origin, total number of preceptors during orientation, and number of weeks spent in orientation. The internal consistency of

the orientation evaluation for FENs using Cronbach's alpha coefficient was 0.93 in a pilot sample, and this estimate was deemed adequate for use in this study.

Organization-related: Organizational commitment

Organizational commitment is defined as a strong desire to maintain membership in the organization, accepting the organization's goals and values, and being willing to contribute its welfare (Liou & Grobe, 2008). Several studies indicate that organizational commitment was one of the best single predictors among organization-related variables in relation to turnover or turnover intention (Cheng & Liou, 2011; DeCicco et al., 2006; Ingersoll et al., 2002; Sourdif, 2004; Wu & Norman, 2006).

Until now, few studies have examined the relationship between FENs' organizational commitment and other organizational factors or turnover correlates. Liou and Cheng (2008) suggested that Asian FEN may have different organizational commitment as well as different needs in comparison to nurses from Western countries. The authors' recent study (2010) revealed that organizational commitment was a key predictor of Asian nurse's intention to leave.

For this study, organizational commitment was measured using the Organizational Commitment Questionnaire (OCQ), which was developed by Allen & Meyer (1990). This tool consists of three distinct components: commitment as an affective attachment to the organization, commitment as a perceived cost associated with leaving the organization, and commitment as an obligation to remain in the organization (Chang & Haung, 2006). The three components are referred to as the affective, continuance, and normative commitment scales respectively (ACS, CCS, & NCS). This instrument is a

self-administered scale composed of 24 items as shown in Appendix J and rated on a 5-point scale from “*strongly disagree*” (1) to “*strongly agree*” (5).

In previous research, the OCQ has been found to be internally consistent ($\alpha = 0.64 - 0.88$), and to be stable over time ($\alpha = 0.53 - 0.75$ at 2 to 4 months) (Ingersoll et al., 2002). With very few exceptions, all reliability estimates exceeded 0.70 (Allen & Meyer, 1996; Chang et al., 2006; Wu & Norman, 2006). Validity was supported by examining the strong relations between OCQ and other attitude measures (Allen & Meyer, 1996). A number of studies have conducted factor analyses and demonstrated that each subscale loaded appropriately on three factors (Allen & Meyer, 1996; Meyer, Allen & Smith, 1993), and that organizational commitment is different from occupational commitment in an RN sample (Chang et al., 2006).

The reasoning behind not using “organizational commitment at time of hire” is based on the premise that the respondent’s level of organizational commitment may be dependent on pre-experience or preconceptions of the job (Muller & McCloskey, 1990), and it develops slowly as the employee begin to internalize to their organizations (Cheng & Liou, 2011) . According to the conceptual framework of this model, after one year the FENs would have settled into the work environment, and their responses to the organizational commitment items would better represent their reactions to the work context. To date, no specific patterns have been discovered in relation to FENs’ organizational commitments.

Organization-related: Social support

Social integration is defined as the degree to which individuals have supportive relationships with coworkers, and is sometime mentioned in the literature as “social

support” (McCloskey, 1990). In regard to the impact of social supports on other organization-related variables, literature shows that social support has been associated with job satisfaction, stress, job performance, and staff retention. For example, nurses’ perceived level of social support from coworkers enhanced their level of job performance and decreased job stress (AbuAlRub, 2004; Amarneh et al., 2009). McCloskey (1990) reported that when nurses perceived low support from their coworkers, they were less likely to commit to their organization and stay at their jobs. However, not all the results are consistent throughout relevant studies: European female nurses’ intention to leave was not buffered by direct colleague’s social support (van der Heijden et al., 2010).

As expected, FENs who received support from their workplace colleagues were more likely to feel that they were comfortable in asking for and getting help from their coworkers when attempting unfamiliar nursing practices. Similarly, FENs are less overwhelmed and more intent on staying in their organizations when they feel that they are strongly linked to their coworkers either formally or informally (Beechinor & Fitzpatrick, 2008; Liou & Cheng, 2011). Still, few studies have investigated the impact of social support from coworkers on FEN’s organizational behavior outcomes.

For this study, Asian FENs’ perceived social support from coworkers was measured with the McCain and Marklin Social Integration Scale. This scale was originally developed by McCloskey (1990) to assess the relationship between social support and other indicators of job contentment for a group of newly employed nurses in the 6th and 12th month of work. The scale contains eight items measuring relationships with coworkers as rated on a five-point scale (1 = *strongly disagree*, 5 = *strongly agree*) with higher scores representing higher levels of social support. For this study, the eight

items were summed and the mean was taken. As instructed, items 4, 5, 7, and 8 were reversely coded.

This scale has been found to have good construct validity in many previous studies. In a study with a sample of 23 nurses (McCloskey, 1990), the reliability reported at two different times (6 and 12 months) resulted in alpha coefficients of 0.75 and 0.72. Test- retest reliability was 0.77. The alpha coefficient of the scale reported by AbuAlRub (2004, 2006), for an internet sample of American and non-American staff nurses was 0.70.

Occupation-related: Language fluency

Given that patient care relies heavily on direct verbal communication, language barriers are especially important in healthcare settings. Specifically, FENs from Asian countries may face distinct difficulties due to their lack of English fluency compared to newly graduated U.S. nurses.

A single question, "would you say you speak English very well, well, not well or not at all?" was adapted from the 2000 Census to assess English proficiency (Gee et al., 2010). Other studies have also used this question as a proxy variable for acculturation or barriers to health services use by a minority population whose second language is English (Kim et al., 2011; Lee, Nguyen, & Tsui, 2009). However, the psychometric properties of this scale have not been provided in studies. In addition, one of the measurement problems investigators have recognized is that this scale is likely to be influenced by a respondent's subjectivity because it is a self-rated evaluation (Lee et al., 2009). Thus, in consideration of 'self-reported subjective evaluation,' this question may be more appropriately named "self-confidence" rather than "self-proficiency" because "self-

proficiency” is more likely to be evaluated from communication partners, but “self-confidence” derives from the speakers’ self-evaluation. For this study, FENs’ English language self-confidence (ELSC) was measured using a single question; "How well would you say you spoke English in your first year of employment?" (Appendix J).

In previous studies, respondents have been categorized as having limited English self-confidence (LESC) if they responded either '*fair*' or '*poor*'. The remaining respondents were considered as having high English confidence if they reported they spoke English '*very well*' or '*well*'.

In addition to self-assessment of English skills, we developed a question measuring whether FENs perceived communication challenges in carrying out their daily work with the team: “How comfortable did you feel when you communicated with your co-workers in your first year of employment?” The responses were rated on a five-point scale (1 = *very uncomfortable*, 5 = *very comfortable*). In this study, we considered two questions as continuous variables, not categorical ones. We summed two questions- confidence and communication- and took the mean score. A high score indicated that FENs were more confident and felt comfortable when they communicated in English with their teams.

Regarding a language barrier, our underlying assumption was that FENs with self-reported limited English self-confidence and communication skills would be more likely to consider job-searching behavior or actual turnover compared to those FENs with high English self-confidence and communication skills. While the literature has devoted considerable attention to language barriers with respect to FEN’s likelihood of being

hired, their particular relevance to FEN's organizational experiences and future career plans remain relatively understudied.

Occupation-related: Health experiences

It has been documented that the demands of immigration itself and FENs' daily experiences can affect their physical and mental health (Beechinor & Fitzpatrick, 2008; Joyce & Hunt, 1982). However, few published studies have investigated FENs' overall health status changes or experiences (emotional or physiological symptoms) after working abroad (Brown et al., 2000; Hagey et al., 2001; O'Brien-Pallas & Wang, 2006; Yi et al., 2000). This study plans to investigate FEN's overall health experiences in their first year of employment in terms of three outcomes: 1) general health status, 2) job-related injury, and 3) physical and psychological symptoms and barriers to symptom management. All three aspects were examined based on FEN's self-evaluation (Appendix J).

FEN's general health status in their first year of employment was measured using the General Self-Rated Health (GSRH) instrument (DeSalvo et al., 2006; Tucker et al., 2010; Palumbo et al., 2010). General Self-Rated Health is the single item "In general, how would you rate your health?" with a five-point Likert-type scale (*excellent, good, fair, poor* and *very poor*). This one-item measure reflects the overall state of a person's physical and emotional health, and therefore can serve as a reasonable substitute for other multi-scale measures of self-rated health (DeSalvo et al., 2006; Lundberg et al., 1996).

Previous studies measured this instrument's reliability and validity (DeSalvo et al., 2006; Lundberg et al., 1996; Pappas et al., 2005). Lundberg et al. (1996) found that the reliability of General Self-Rated Health was as good as or even better than those of other

health measures having multiple, more specific questions. There is evidence of the validity of General Self-Rated Health in terms of its relationship with actual health behaviors, conditions and diseases that respondents experience (Lundberg et al., 1996; Pappas et al, 2005). Similarly, this tool has significant validity ($r = .56$ to $.65$) when correlated to physical functioning and emotional health measures, showing strong discriminant scale performance in relation to multi-item scales of self-rated health (DeSalvo et al., 2006).

FENs' job-related injuries were assessed using the Self-Report of Employee Occupational Health Outcomes (Stone, Du & Gershon, 2007). This tool was originally an 18-item instrument, and the respondents were asked to indicate *yes* or *no* to each question. The purpose of the tool was to estimate hospital nurses' health in terms of their history of occupational injury in the prior four months (Stone et al, 2007). Occupational injuries included job-related musculoskeletal injuries, blood exposures and violent assaults. As used in previous studies, reasons why nurses did not report the injury occurrence to the organization, although the injury occurred on the job are also included as a barrier to injury management in this study. Several studies reported that health employees' injury outcomes were significantly ($p < 0.05$) associated with organizational climate or similar factors (MacDavitt et al., 2007; Stone et al., 2007; Stone & Gershon, 2009; Tucker et al., 2010).

For this study, the time period is limited to FENs' first year of employment. This study's focus was not to examine injuries in detail, but rather to clarify the relationship between injuries and turnover. Thus, all injuries and barriers to reporting that the FENs

experienced were summed, and items were re-grouped into three questions: total number of injuries, total number of injury reports, and total number of barriers to injury report.

Two additional questions were used to measure symptoms and barriers to symptom management. These two items were based on a pilot study with Asian FENs working at a hospital in California, and were created to assess the number of physical or psychological symptoms the FENs experienced and determine what they considered barriers to their symptom management. This tool revealed that Asian FENs with more symptoms and barriers were less likely to manage those symptoms.

Turnover-related: Job-search behavior

Employee behavior related to searching for potential job opportunities has recently received considerable attention in turnover studies (Griffeth et al., 2000). Job search methods have been included infrequently in studies because of the perception that they are less likely to predict turnover. However, several studies indicate that job searching has direct effects on voluntary turnover as well as other variables (e.g., intention to quit) (Blau, 1993; 1994). Consequently, measures for job search methods have proved to be relatively accurate turnover predictors (Griffeth et al., 2000). As with other employees, it was expected that job search behavior by FENs, even if it may not result in subsequent turnover, distracts FENs from their work and reduces their commitment.

Many previous studies have used a one-item job search measure which focuses more on active search behaviors. For this study, FENs' job search behaviors were assessed using both "*preparatory*" and "*active*" job search behaviors (Blau, 1993, 1994; Blau et al., 2006) (Appendix J). *Preparatory* search represents the efforts to gather

information for job search (e.g., prepare a resume), while *active* search refers to various means of seeking jobs (e.g., mailing out a resume, interviewing) (Griffeth et al., 2000). Empirical data supports that this two-dimensional measure of job search behavior (preparatory versus active) allows better understanding of the turnover process (Blau, 1994).

Respondents were asked to indicate how frequently they performed these job search behaviors during their first year of employment. Each item was rated on a five-point Likert scale anchored at 1 = *never* (0 times); 2 = *rarely* (1 or 2 times); 3 = *occasionally* (3 to 5 times); 4 = *frequently* (6 to 9 times); and 5 = *very frequently* (at least 10 times) during their first year of employment. A frequency range for each response choice is given based on the assumption that respondents would be more likely to recall the number of times they carried out each behavior approximately rather than exactly (Blau, 1994).

This tool was chosen because of its documented accuracy and proven psychometric properties. The internal consistency of this scale has ranged from 0.79 to 0.82 and from 0.76 to 0.89 for preparatory and active job search behavior respectively; estimates were consistent among samples and studies (Blau, 1993, 1994).

Some studies (Blau 1993, 1994; Blau et al., 2006) showed that the pattern of factor loadings for each measure corresponded with conceptual preparatory and active job search dimensions across samples. In addition, these confirmatory factor analysis results indicated related-but-distinguishable dimensions of job search behavior. These studies supported positive relationships between active job search (but not preparatory) and voluntary turnover. Similarly, with regard to predictions of turnover, active job

search behavior accounted for significant turnover variance beyond preparatory job search behavior, demographics, and other work-related variables.

Turnover-related: (Actual) turnover

For this retrospective study, the construct “*actual turnover*” refers to either the respondent resigning from the first organization or voluntarily moving to other clinical areas in the same organization.

Binary choice-typed turnover questions reflect the limitations of viewing turnover only as a decision to leave a current organization or not (Fields et al., 2005; Parry, 2008). Recently, Fields, Dingman, Roman, and Blum (2005) examined three types of turnover by extending the concept of turnover to include decisions not only to leave a current organization, but also to move to a different work setting within the same organization. As such, actual turnover should be viewed as a two sub-model process: FENs not only leave their job (organization, or *external turnover*), but can also move to an alternative clinical areas (within organization, or *internal turnover*).

Actual turnover was measured using five items (Appendix J). Respondents were asked whether they stayed in their first organization or moved to another organization, and whether they stayed in the same department or moved to another department within or across organizations at the end of their first year of employment. Thus, the answer was coded 1 if a respondent is (or was) still in the same department within the same organization, coded 2 if a respondent switched to another department within the same organization, coded 3 if a respondent left to work for another organization and works (or worked) in a similar department to that in the first organization, coded 4 if a respondent left to work for another organization and works (or worked) in a department different

from that where a respondent worked in the first organization, and coded 5 if a respondent was not employed at the end of the first year.

We excluded the respondent's change of profession from nursing to another because, for FENs in their early stage of employment, it was assumed that making a career switch to something other than nursing was not true alternative position decision. Their experiences are not readily transferable to different jobs, and it would a considerable burden for FENs to learn skills and practices for new professions.

To test eligibility of respondents for this survey, we included a question asking whether they left nursing at the end of the first year. Respondents who had been fired or retired were also excluded based on eligibility testing. Thus, this instrument was deemed appropriate for this study because it does not make reference to turnover related to a change in professions or involuntary turnover.

Regarding the validity of this tool, previous studies indicate that this broader measure of turnover was better predicted by work-related variables when compared to binary choice-type turnover (Fields et al, 2005; Kirschebaum & Weisberg, 2002). In addition, these studies found that different sets of variables predicted likelihood of a respondent's leaving and moving to each type of turnover alternative, leading to better explanations for variation in turnover predictors across samples.

Data Analysis

Statistical Package for the Social Science (SPSS) software, version 18.0.3, was used to analyze these data. General statistical methods included use of frequency distributions, percentages, means, ranges, and standard deviations. In this report, percentages were used to examine characteristics of the study population overall and by

outcome (turnover). Measured variables are summarized descriptively using mean, range, and standard variations. For multi-item variables, reliabilities, scale and item means, and ranges were assessed. The magnitudes and directions of the relationships among measured variables were examined using Pearson-product moment correlations.

The difference (Gap) between Ex-Es was created by calculating difference scores between Ex and Es ($\text{Gap} = \text{Ex} - \text{Es}$) and taking means of the differences across the questions. Pearson-product moment correlation was used to evaluate linear relationships among the three variables (Ex, Es, and Ex-Es Gap) (Aim 1). Bivariate associations were estimated using simple logistic regression to examine whether each independent variable was related to actual turnover positively (push factors) or negatively (pull factors). Only those push or pull factors that showed statistically significant relationships with actual turnover ($p \leq 0.05$) were included in the final model (Aim 2). Existence of moderating effects of Ex-Es Gap was tested by a series of interactive logistic regression models. A set of product terms for interactions between Ex-Es Gap and each push and pull factor were entered respectively. Each product term was created by multiplying the two variables: for example, push factor A* Ex-Es Gap, as predictors (two-way interactions). The transformed mean of product terms was interpreted with a coefficient, corresponding odds ratio, and p value (≤ 0.05) to define the magnitude of the moderating effect of Ex-Es Gap on the relationship between each push and pull factors with actual turnover (Aim 3). The variables and methods used for each research question in this study are listed in Table 3.1.

Table 3.1. Summary of Methods Used in Data Analyses

Research Questions	Methods Used	Variables Included	Tables & Figures Presented
RQ 1.1	Descriptive	Gap subscales	4-6
RQ 1.2	Paired <i>t</i> -test	Expectations, Experiences	4-7
	Correlations	Expectations, Experiences, Gaps	4-8
RQ 1.3	Independent sample <i>t</i> -test	Gender, Gap	4-9
	One-way ANOVA	Country of origin, Gap	4-10
	Two-way ANOVA	Gender, Country of origin	4-11
	Descriptive, One-way ANOVA	Expectations, Experiences, Gaps, Age at employment	4-12, Fig.4-1
	Descriptive	Current age, Age at employment, Gap	Fig. 4-2
RQ 1.4.	Simple & Multi-variable logistic regression	Gap, Turnover	4-13 ~ 14
RQ 2.1.	Chi-square, Descriptive, Independent sample <i>t</i> -test	Language, Health experiences, Orientation-related	4-15 ~ 19
	Independent sample <i>t</i> -test & Simple logistic regression	Push/Pull factors, Turnover	4-20 ~ 22
RQ 2.2.	Multi-variable logistic regression	Predictors of Turnover	4-23
RQ 3.1.	Multiple regressions	Push/Pull factors, Gap	4-24
RQ.3.2.	Simple logistic regressions	Demographic and career characteristics, Turnover	4-25 ~ 26
	Generalized Linear Model	Predictors, Gap (moderator), Turnover	4-27 ~ 28

Data Preparation

Before conducting statistical analyses, each questionnaire was reviewed for completeness. Initially, questionnaires were excluded from further analysis according to the eligibility testing questions (N = 35). For responses from the web-based and mailed surveys, all data were double-checked before merging into a database.

Missing data

At completion of data entry, missing data were identified prior to data analysis. Missing data diagnostics were employed at various levels, depending on the number of missing values for a specific variable and case level.

With regard to demographic information, three questions were missed by more than 10 % of the participants. It is assumed that participants who did not work in their home countries as an RN were not eligible to answer the following questions: RN experience in their home countries and whether they were placed in the same clinical unit as where they had worked last in their countries. In addition, participants who were hired in a healthcare setting other than a hospital (i.e., academic education program) as their primary employment in the U.S. could not answer the question: primary clinical practice in their first year of employment in the U.S. We did not exclude these cases because of the small sample size. Instead, we excluded the three questions from further analysis.

Except for the demographic data, a mean substitution approach was taken to impute the missing score with individual mean responses for Likert type scales (Kneipp & McIntosh, 2001). The items missing one or two values per variable level were replaced with mean values. Cases with no gap because they were missing all expectations or all experiences or zero gap because all expectations and experiences were recoded with same scale throughout all 20 questions were excluded for study purposes (N = 3, 6, respectively). These values were not appropriate to be included.

Human Subjects

Approval of the study was obtained from the University of Michigan Institutional Review Board-Health. There were minimal risks to subjects who participated in this study. Participation in the study was completely voluntary and the respondents were informed that they could log-out from the web-based survey at any time. In addition, all participants were given written instructions and notification of the time required to complete the survey through electronic mail in advance. Consent to participation was implied by completion of the survey. A participant's rights, privacy, and confidentiality were protected: the questionnaire did not ask for the participant's name, address, or private workplace. Confidentiality was guaranteed by using a participant code, rather than real names, for the data collected.

Chapter IV

Results

Sample

During the three and half month data collection period from November, 2011 to February 15, 2012, a total of 236 Asian FENs completed questionnaires. The response rate by mail survey was 21.5%, consistent with usual survey response rates (Waltz, Strickland & Lenz, 2005). Of 236 responses, 35 responses were excluded according to eligibility requirements and inappropriate answers (i.e., no gap, zero gap). Therefore, a total of 201 Asian FENs were identified as participants for this study.

Initially, we planned to include subjects who had their first experience recently (using less than 5 years as the cut-off point) in consideration of recall bias. However, due to the small sample size ($N = 201$) for the selected statistical methods, we could not apply this rule.

There were significant differences between respondents whose results included in analyses and excluded respondents in current age and age at employment; respondents' current ages were older (46.0 ± 10.9 , 41.2 ± 12.3 , $p < 0.05$) and at time of employment (32.2 ± 7.68 , 28.8 ± 6.6 , $p < 0.05$) than those for excluded respondents. Thirty-two (94.1%) of the excluded respondents were female and two (5.9%) were male. Almost 80% of the excluded-respondents were FENs from Korea, followed by the Philippines (8.8%). There was no statistically significant difference between the two groups of respondents

according to turnover. Though these differences may indicate a response bias, it is not clear that this bias would result.

Eligibility Testing

Since beginning work in a U.S. health care setting, thirty-six percent of Asian FENs ($n = 72$) were currently working in their first organization, followed by second (18.4%), third (17.4%) and fourth (19.9%) organizations. Twelve nurses were no longer in the nursing profession. Of nurses not currently working in their first health care setting, thirteen nurses left involuntarily, while other nurses retired ($n = 6$), resigned ($n = 89$) or changed to non-nursing jobs ($n = 3$). Nurses who left their first health care setting, except for those who resigned, were excluded from this study. In addition, nurses who worked in a health care setting that required use of their first language exclusively were excluded ($n = 17$). These exclusion criteria overlapped in some cases, thus, 35 respondents in total were initially removed from further analyses.

Sample Characteristics

Overall

Sample characteristics are described in Tables 4.1 and 4.2 by overall and outcome variable level. Overall, there were 182 female and 19 male FENs among respondents; their average current age was 46.0 ($SD = 10.8$). Over half of the FENs were from Korea ($n = 148$), while 44 were from the Philippines, followed by India, Taiwan, and China ($n = 4, 3, \text{ and } 2$, respectively). One hundred and three were single, 82 were married and lived with a spouse, and 17 were married but lived alone in the U.S. A high percentage of

respondents (57.5%) in the sample completed BSN education for their initial licensure. One gave no response to the two questions: on marital status and education.

Asian FENs said that they had worked in their countries of origin as RNs an average of 4.7 years ($SD = 5.3$); 19 gave no information on past nursing experiences. Of respondents who had RN experience in their home countries, 62.0% were able to be placed in the same clinical unit where they had worked in their countries (80 individuals did not respond to this question), and 51.3% on the same unit with at least one nurse from their own countries of origin (4 individuals did not respond).

The average age at employment in the U.S. was 32 years ($SD = 7.6$). Over half of nurses (55.6%) started to work in a hospital and 47.3% worked in medical-surgical units in their first job. Respondents were more likely to work as staff (87.1%), on a full-time basis (86.1%), for an 8 hour shift length (63.7%), and on the day shift (45.0%). A total of 16.9% of respondents worked in more than one health care setting, and 31.0% had a contract specifying the number of years they were expected to remain with that agency or organization.

Three questions relating to demographic and career characteristics that had more than 10% missing values were excluded from further analyses: RN experience, whether working on the same clinical unit as in home country, and primary clinical practice.

Table 4.1. Characteristics of the Sample

Demographic and Career Characteristics	Overall (N = 201) N (%)
Age in years (mean ± sd)	46.0 ± 10.8
Gender	
Male	19 (9.5)
Female	182 (90.5)
Country of origin	
China	2 (1.0)
India	4 (2.0)
Korea	148 (73.6)
The Philippines	44 (21.9)
Taiwan	3 (1.5)
Marital status (N = 200)	
Single/divorced/widowed/separated	103 (51.5)
Married and with spouse in the U.S.	82 (40.0)
Married and without spouse in the U.S.	17 (8.5)
Education (N = 200)	
Less than Baccalaureate degree	44 (22.0)
Baccalaureate degree	115 (57.5)
Graduate (Master or Doctorate)	41 (20.5)
Years working as RN in home countries (mean ± sd) (N = 182)	4.72 ± 5.3
Age at employment (years) (mean ± sd)	32.0 ± 7.6
Same clinical unit as in home country (N = 121)	
Yes	75 (62.0)
No	46 (38.0)
coworker from own country of origin (N = 197)	
Yes	101 (51.3)
No	96 (48.7)
Primary employment setting (N = 196)	
Hospital	109 (55.6)
Nursing home/extended care facility	60 (30.6)
Academic education program	1 (0.5)
Home health care setting	5 (2.6)
Public/community/school/occupational health	3 (1.5)
Ambulatory care setting	5 (2.6)
Other	13 (6.6)

Table 4.1. (Continued). Characteristics of the Sample

Demographic and Career Characteristics	Overall (N = 201) N (%)
Primary clinical practice (N = 131)	
General(medical/surgical)	62 (47.3)
Specialty/Critical care	26 (19.8)
OR/PACU/Recovery	15 (11.5)
Labor/delivery	2 (1.5)
ER	0
Other	26 (19.8)
Role	
Staff nurse	175 (87.1)
Non-staff nurse	26 (12.9)
Employment status	
Full time	173 (86.1)
Part time	26 (12.9)
Other	2 (1.0)
Length of shift	
8 hours	128 (63.7)
12 hours	61 (30.3)
Both	5 (2.5)
Other	7 (3.5)
Shift (N = 200)	
Day	90 (45.0)
Evening	40 (20.0)
Night	59 (29.5)
Rotating	11 (5.5)
Multi-jobs	
Yes	34 (16.9)
No	167 (83.1)
Contract (N = 200)	
Yes	62 (31.0)
No	138 (69.0)

In 2008, NSSRN reported (HRSA, 2010) most FENs did not obtain their first U.S. nursing license until 4 or more years after completing their initial RN education. Half of FENs arrived in the United States to work at least 6 years after completing their primary nursing education in their home country. In this report, FENs' median current age was

46, one year younger than that of USENs. Male FENs licensed after 2004 comprised a slightly higher percentage of respondents (10.1%) than that of male USENs (9.8%). More than 68% of FENs had at least a bachelor's degree in nursing, appearing to be better educated than USENs (49.2%). Almost 93.7% of FENs worked on a full time basis, and 17.2 percent of FENs who were employed full time held at least one simultaneous nursing position, while 12.2 percent of USENs had additional positions nationwide. Hospitals were the employment setting for most FENs in 2008 (72.9%), quite a bit higher than that for USENs (61.6%), suggesting that FENs have a greater tendency to stay in hospital employment than USENs. More than 78 percent of FENs had staff nurse positions. Thus, the NSSRN results are similar to our findings but not exactly comparable because our data are limited to Asian FENs only, and not FENs in general.

By outcome categories

Table 4.2 presents the distribution of outcome variables by turnover type: original, any movement (unit-level), and external or organizational turnover (organization-level).

For all three types of turnover, over half of the respondents stayed in their first organizations and initial department until the end of their first year of U.S. employment. In consideration of the small number of respondents who switched to other units within the same organization (8.5%), we continued further analyses based on two turnover types, unit-level or organization-level, not original turnover type.

Table 4.2. Distribution of Outcome Categories by Turnover

Options	Turnover Types, N (%)		
	Original ^a	(Unit-Level) ^b	(Organization-Level) ^c
		any movement	external
1. Stayed within the same dept. with my first employer	120 (59.7)	120 (59.7)	137 (68.2)
2. Switched to another dept. within the same org.	17 (8.5)	81 (40.3)	
3. Left for another org., and worked in a similar dept. from which I worked initially (first employer)	24 (11.9)		64 (31.8)
4. Left for another org., and worked in different dept. from which I worked initially (first employer)	40 (19.9)		
Total	201 (100)	201 (100)	201 (100)

Note. ^aOriginal survey question. ^bTurnover includes categories 2, 3, and 4. ^cTurnover includes categories 3 and 4.

Table 4.3 shows those demographic and career characteristics that were statistically significantly related to either turnover (unit-level) or turnover (organization-level). Current age is significantly related to both turnover types. The mean ages of FENs in stay and turnover groups ranged from 43.9 to 44.6 versus 49.1 to 48.9 years with significant differences between the groups in both types (unit-level) and (organization-level) ($p = 0.001, p = 0.008$). For both turnover types, there were significant differences in marital status ($p = 0.013, p = 0.020$), primary employment setting ($p = 0.010, p < 0.001$), and having more than one job ($p < 0.001, p < 0.001$).

Organization-level turnover had significant findings regarding country of origin and length of shift ($p = 0.045, p = 0.027$). The stay group is slightly more diverse, with 29.2% in a category other than Korean FENs as compared to the turnover group (20.3%). The two groups also differed significantly in shift length, with eight-hour-shift respondents making 76.6 % of the turnover group as compared to 57.7% of the stay

group. For both types of turnover, FENs in the stay group were younger than the nurses in the turnover group, fewer lived alone, worked in a hospital, or had only one job in their first year of U.S. employment.

Table 4.3. Relationship between Turnover and Selected Demographic and Career Characteristics

Demographic and Career Characteristics	Turnover (Unit-Level)			Turnover (Organization-Level)		
	Stay (N = 120)	Turnover (N = 81)	<i>p</i> [*]	Stay (N = 137)	Turnover (N = 64)	<i>p</i> [*]
Age in years (mean ± sd)	43.9±10.5	49.1±10.6	0.001 ¹	44.6±10.7	48.9±10.5	0.008 ¹
Country of origin						
China	0	2 (2.5)	0.534 ²	0	2 (3.1)	0.045 ²
India	2 (1.7)	2 (2.5)		2 (1.5)	2 (3.1)	
Korea	88 (73.3)	60 (74.1)		97 (70.8)	51 (79.7)	
The Philippines	28 (23.3)	16 (19.8)		35 (25.5)	9 (14.1)	
Other Asian countries (Taiwan)	2 (1.7)	1 (1.2)		3 (2.2)	0	
Marital status (N = 200)						
Single/divorced/widowed/separated	54 (45.4)	49 (60.5)	0.013 ²	64 (47.1)	39 (60.9)	0.020 ²
Married and with spouse in the U.S.	50 (42.0)	30 (37.0)		56 (41.2)	24 (37.5)	
Married and without spouse in the U.S.	15 (12.6)	2 (2.5)		16 (11.8)	1 (1.6)	
Primary employment setting (N = 196)						
Hospital	74 (63.8)	35 (43.8)	0.010 ²	85 (64.4)	24 (37.5)	0.000 ²
Nursing home/extended care facility	26 (22.4)	34 (42.5)		30 (22.7)	30 (46.9)	
Academic education program	0	1 (1.3)		0	1 (1.6)	
Home health care setting	2 (1.7)	3 (3.8)		2 (1.5)	3 (4.7)	
Public/community/school/occupational health	1 (0.9)	2 (2.5)		1 (0.8)	2 (3.1)	
Ambulatory care setting	3 (2.6)	2 (2.5)		3 (2.3)	2 (3.1)	
Other	10 (8.6)	3 (3.8)		11 (8.3)	2 (3.1)	
Length of shift						
8 hours	69 (57.5)	59 (72.8)	0.103 ²	79 (57.7)	49 (76.6)	0.027 ²
12 hours	44 (36.7)	17 (21.0)		50 (36.5)	11 (17.2)	
Both	3 (2.5)	2 (2.5)		3 (2.2)	2 (3.1)	
Other	4 (3.3)	3 (3.7)		5 (3.6)	2 (3.1)	
Multi-jobs						
Yes	11 (9.2)	23 (28.4)	0.000	15 (10.9)	19 (29.7)	0.001
No	109 (90.8)	58 (71.6)		122 (89.1)	45 (70.3)	

Note. ¹Independent t-test. ² Fisher exact test. ^{*}Comparison of differences. Chi-square test unless otherwise indicated

Relationships of Measures

The scores for the total/subscales and reliabilities for continuous variables are presented in Table 4.4.

Table 4.4. Total/Subscale Scores and Reliabilities of Measured Variables

Scale/Sub Scale		Scale mean ± SD	Item mean ± SD	Possible scale range	Study scale range	Reliability
Expectation Experience Measures (EEM)						
Expectation	Comfort	18.6±3.63	3.7±0.90	5-25	5-25	0.798
	Reward	25.6±4.98	3.7±0.87	7-35	11-35	0.906
	Responsibility	27.5±5.25	3.5±0.87	8-40	13-40	0.892
Experiences	Comfort	17.0±3.97	3.4±0.99	5-25	5-25	0.846
	Reward	22.6±5.81	3.4±1.02	7-35	7-35	0.915
	Responsibility	25.5±6.31	3.2±1.02	8-40	11-40	0.906
Orientation evaluation		19.6 ±5.36	3.3±1.08	6-30	6-30	0.910
Organizational commitment						
Affective		24.0±3.81	3.1±1.03	8-40	13-33	0.716
Continuance		26.1±5.30	3.3±1.10	8-40	10-38	0.748
Normative		23.7±3.90	3.0±0.96	8-40	11-33	0.557
Language fluency		5.0±2.16	2.5±1.13	2-9	2-8	0.888
Social support		27.2±3.78	3.4±0.90	8-40	18-37	0.615
Job search behavior						
Preparatory		13.7±5.30	2.3±1.10	6-30	6-30	0.887
Active		12.4±4.99	2.1±6.17	6-30	6-26	0.895

The overall internal consistencies of the variables are higher than expected and adequate. The Cronbach's alpha for the three subscales for expectations and experiences were: 0.798 and 0.846 for 'comfort', 0.906 and 0.915 for 'reward', 0.892 and 0.906 for 'responsibility' subscales, indicating adequate internal consistency at the subscale level. These reliabilities are higher than those reported from the original studies (approximately 0.56 ~0.85) (Irving & Meyer, 1994, 1995).

Table 4.5 shows correlations for all study variables measured on a continuous scale. Of the three gap subscales, the correlation between gap-reward and gap-

responsibility ($r = .771, p < 0.01$) was higher than the relationship between gap-comfort and gap-responsibility ($r = .577, p < 0.01$). There were weak to moderate negative linear relationships between all three gap subscales and two variables (orientation and affective commitment). A weak positive linear relationship was observed between the gap-comfort subscale and preparatory job search behavior ($r = .170, p < 0.05$). Other weak negative correlations were found between gap-reward and language fluency ($r = -.151, p < 0.05$), and between gap-responsibility and continuance commitment ($r = -.155, p < 0.05$) and social support ($r = -.201, p < 0.01$).

Table 4.5. Correlations among the Measures

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
EEM											
(1) Gap-Comfort	1										
(2) Gap-Reward	0.623 ¹	1									
(3) Gap-Responsibility	0.577 ¹	0.771	1								
(4) Social support	-0.112	-0.100	-0.201 ¹	1							
Job search behavior											
(5) Preparatory	0.170 ²	0.101	0.120	-0.124	1						
(6) Active	0.092	0.030	0.036	-0.128	0.738 ¹	1					
(7) Orientation evaluation	-0.312 ¹	-0.348 ¹	-0.392 ¹	0.346 ¹	-0.135	-0.125	1				
(8) Language fluency	-0.067	-0.151 ²	-0.062	0.222 ¹	0.135	0.220 ¹	0.136	1			
Organizational commitment											
(9) Affective	-0.306 ¹	-0.319 ¹	-0.381 ¹	0.489 ¹	-0.116	-0.079	0.469 ¹	0.137	1		
(10) Continuance	-0.079	-0.069	-0.155 ²	-0.097	-0.139 ²	-0.053	0.023	-0.145 ²	0.175 ²	1	
(11) Normative	-0.049	-0.062	-0.027	0.139 ²	-0.022	-0.028	0.142 ²	0.113	0.219 ¹	0.085	1

¹Correlation is significant at the 0.01 level (2-tailed).

²Correlation is significant at the 0.05 level (2-tailed).

Results by Research questions

Research Question 1.1;

“What is the magnitude of the Ex-Es Gap for Asian FENs?”

Gap magnitudes for each subscale are presented in Table 4.6.

Table 4.6. Descriptive Statistics for Gap Subscales

Subscale	N	Minimum	Maximum	Mean	Std. Deviation
Gap-Comfort	201	-10.00	14.00	1.62	4.18
Gap-Reward	201	-10.00	28.00	3.01	6.67
Gap-Responsibility	201	-13.00	26.00	1.94	6.93

FENs’ most highly perceived gap between their pre-migratory expectations and post-migratory experiences appeared to be in terms of reward ($M = 3.01$, $SD = 6.67$), followed by responsibility ($M = 1.94$, $SD = 6.93$) and comfort ($M = 1.62$, $SD = 4.18$).

Research Question 1.2;

“What is the magnitude of the Ex-Es Gap for Asian FENs? What are the associations among the three variables (pre-migratory expectation (Ex), post-migratory experience (Es), and the Ex-Es Gap)? ”

As seen in Table 4.7, the mean of each EEM subscale ranged from 3.20 to 3.72. Paired t -tests showed significant differences between expectations and experiences in all three subscales: mean of expectation was higher than mean of experience ($p < 0.001$).

Table 4.7. Comparison of Expectation and Experiences Measures (EEM)

	EEM	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pair 1	Expectation-Comfort	3.72	0.70	0.049	5.604	200	0.000
	Experience-Comfort	3.39	0.79	0.056			
Pair 2	Expectation-Reward	3.68	0.70	0.049	6.570	200	0.000
	Experience-Reward	3.24	0.83	0.059			
Pair 3	Expectation-Responsibility	3.45	0.65	0.046	4.019	200	0.000
	Experience-Responsibility	3.20	0.79	0.056			

The associations among expectations, experiences and gap in each subscale are presented in Table 4.8. Pearson-product moment correlation was used to evaluate the degree of linear relationship among the three variables. Gap was positively related to expectations, and negatively related to experiences in all subscales. Relationships between gap and experiences ($r = -.604 \sim -.689, p < 0.01$) were stronger than those between gap and expectations ($r = .491 \sim .536, p < 0.01$). This finding is consistent with the ‘experience main effect model’ derived from the original studies (Irving & Meyer, 1994, 1995).

Table 4.8. Correlations among EEM Subscales and Corresponding Gap Subscales

Scales	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Expectation-Comfort (1)	1								
Experience-Comfort (2)	.397*	1							
Gap-Comfort (3)	.492*	-.604*	1						
Expectation-Reward (4)				1					
Experience-Reward (5)				.242*	1				
Gap-Reward (6)				.536*	-.689*	1			
Expectation-Responsibility (7)							1		
Experience-Responsibility (8)							.293*	1	
Gap-Responsibility (9)							.491*	-.689*	1

* Correlation is significant at the 0.01 level (2-tailed)

Research Question 1.3;

“How are selected demographic and career characteristics associated with the Ex-Es Gap?”

First, we used Pearson product-moment correlation (for continuous variables), *t*-tests, and ANOVA (for categorical variables) to calculate the bivariate relationships between all possible variables related to gap from demographic and career characteristics and each gap subscale. Of these, significant differences were observed only for gender and country of origin with the gap-reward subscale.

Gap and gender

The two-tailed *t*-test revealed that male FENs’ mean gap in regard to reward was significantly lower than that of females [$t(200)=3.11, p = 0.002$] (Table 4.9). In other words, male FENs perceived less of a gap between reward expectation and actual reward experiences.

Table 4.9. Independent Sample *t*-test for Gap Subscales by Gender

Gap subscale	Female	Male	<i>t</i> -value	<i>p</i> (2-tailed)
	N, Mean (SD)	N, Mean (SD)		
Gap-Comfort	182, 1.68 (4.31)	19, 0.94 (2.72)	0.73	0.468
Gap-Reward	182, 3.48 (6.49)	19, -1.42 (6.70)	3.11	0.002
Gap-Responsibility	182, 2.08 (7.11)	19, 0.63 (4.80)	0.87	0.388

Gap and country of origin

A one-way ANOVA was used to examine differences in each gap subscale by country of origin. Table 4.10 indicates a significant difference only for gap-reward by country of origin [$F(4, 196) = 3.874, p = 0.005$]. The result of a significant *F* value for

gap-reward was followed by a post hoc test to determine which specific pairs of countries were significantly different. A *Bonferroni* post-hoc test showed that Chinese FENs were significantly different than Korean and Filipino FENs: the perceived gap in reward was statistically significantly lower in Chinese FENs ($M = -10.0, p = 0.043$) compared to Korean ($M = 3.33, p = 0.079$) and Filipino FENs ($M = 3.39, p = 0.094$). There were no other significant differences between the other demographic and career characteristics and gap subscales.

Table 4.10. ANOVA for Gap Subscales by Country of Origin

Subscales		Sum of Squares	df	Mean Square	<i>F</i>	Sig.
Gap-Comfort	Between	92.733	4	23.183	1.334	0.259
	Within	3406.998	196	17.383		
	Total	3499.731	200			
Gap-Reward	Between	652.746	4	163.187	3.874	0.005
	Within	8256.209	196	42.124		
	Total	8908.955	200			
Gap-Responsibility	Between	164.957	4	41.239	0.857	0.491
	Within	9432.326	196	48.124		
	Total	9597.284	200			

Furthermore, to identify any interactions between gender and country of origin on gap-reward, we conducted a Two-way ANOVA. As Table 4.11 shows, the interaction between gender and country of origin was not significant [$F(1, 193) = 2.108, p = 0.124$], suggesting that the relationship between country of origin and gap-reward was not moderated by gender (i.e., the relationship did not differ significantly for males and females). We also considered that there might still be evidence of a significant

interaction between gender and country of origin after re-grouping country of origin into two levels (Korean FENs versus non- Korean FENs). In the re-analysis, no interactions were found.

Table 4.11. Two-way ANOVA for Gender and Country of origin

Tests of Between-Subjects Effects

Dependent Variable: Gap-reward

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	951.340	7	135.906	3.296	.002
Intercept	3.101	1	3.101	.075	.784
gender	252.594	1	252.594	6.126	.014
country	226.393	4	56.598	1.373	.245
gender * country	173.817	2	86.908	2.108	.124
Error	7957.615	193	41.231		
Total	10736.000	201			
Corrected Total	8908.955	200			

Note. R Squared = .106 (Adjusted R Squared = .074)

Expectations, experiences and age at employment

Ninety-two FENs started to work in a US health care setting in their 20's (Table 4.12). These FENs had more expectations in terms of reward ($M = 3.74$) than comfort ($M = 3.69$) and responsibility ($M = 3.44$). Expectations for rewards were significantly different by age group [$F(3, 197) = 3.042, p = 0.03$]. Except for FENs in their 20's, 'comfort' was the highest expectation that FENs had before starting to work ($M = 3.31 \sim 3.87$). Except for FENs over 50, FENs reported lower experience scores than those for expectations in all subscales. Figure 4.1 presents how expectations and experiences were differently distributed by age at employment.

Table 4.12. Distribution of Expectations and Experiences by Age at Employment

Age at employment	Comfort					Reward				Responsibility			
	Ex.		Es.			Ex*		Es.		Ex.		Es.	
	N	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
23-29	92	3.69	0.68	3.45	0.82	3.74	0.66	3.24	0.85	3.44	0.65	3.20	0.78
30-39	75	3.75	0.74	3.39	0.77	3.67	0.72	3.28	0.84	3.44	0.69	3.20	0.83
40-49	27	3.87	0.67	3.27	0.81	3.68	0.64	3.14	0.86	3.57	0.59	3.17	0.79
50 higher	7	3.31	0.45	3.20	0.35	2.92	0.99	3.08	0.34	3.14	0.51	3.27	0.51
Total	201	3.72	0.70	3.39	0.79	3.68	0.70	3.24	0.83	3.45	0.65	3.20	0.79

* $F(3,197) = 3.042, p = 0.03$

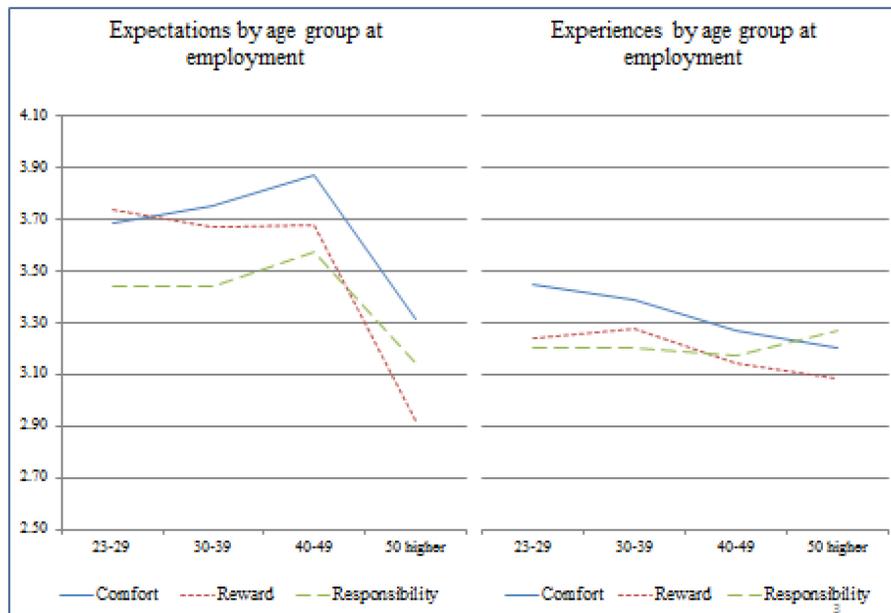


Figure 4.1. Differences in Expectations and Experiences by Age at Employment

Current age, age at employment and gap

Regarding distribution of gap subscales by age at employment, study results showed that, except for the oldest age group, younger nurses perceived larger differences in reward. ‘Comfort’ was the main gap perceived by FENs in their 50’s and over. To a lesser extent, FENs perceived gaps in responsibility related to taking risks, having

permission to work independently, or having opportunities for variety in their duties and activities. It is assumed that a smaller gap in responsibility occurred not because their experiences were good but because their expectations about responsibility were initially low.

As Figure 4.2 shows, for both age stages (current and at employment), FENs perceived gaps in terms of reward, followed by responsibility and comfort. In general, the three gap scores reported by FENs when they were describing their experiences at first employment were higher than scores reflecting their current age. In terms of reward, FENs who were currently over 50 reported relatively higher gap scores than FENs over 50 at initial employment. It is assumed that these differences are caused by memory error and effects of current organizational experiences.

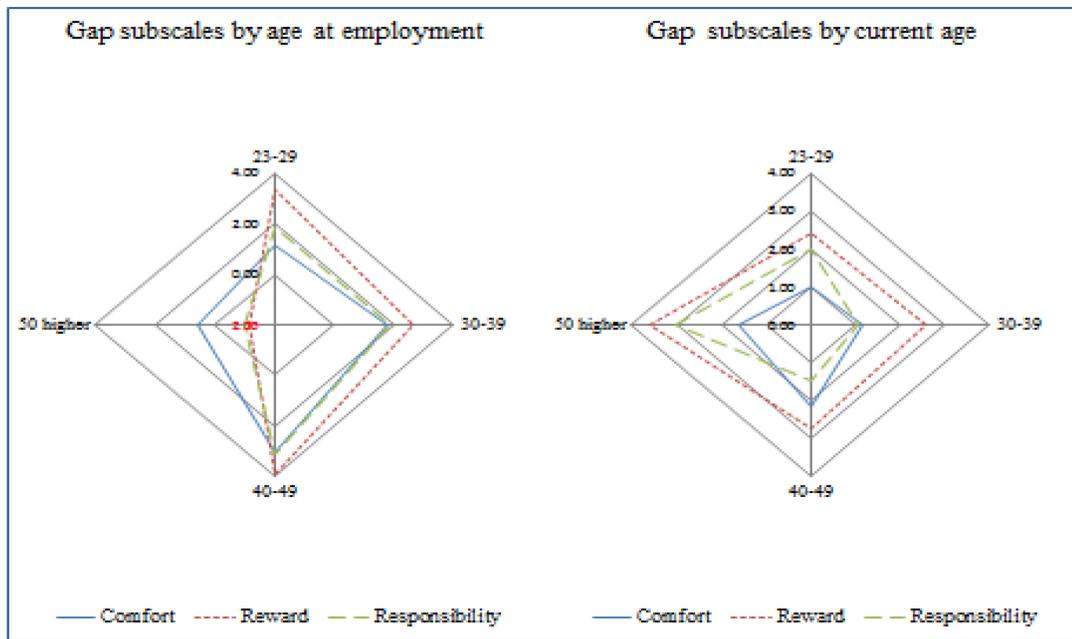


Figure 4.2. Differences in Gap Subscale by Age at Employment and Current Age

Research Question 1.4;

“Is magnitude of the Ex-Es Gap predictive of turnover?”

We conducted separate regression analyses to explore whether each subscale of gap was a predictor for turnover. Using actual turnover as the dependent variable, logistic regression described the relationship between the Ex-Es Gap and the odds of actually being moved to another area (unit-level) or organization (organization-level).

First, simple logistic regression analyses were done to estimate the bivariate associations between each gap subscale and both types of turnovers. The results are summarized in Tables 4.13 and 4.14. The odds of both type (unit-level) and (organization-level) turnover were increased with increasing gap between expectations and experiences related to responsibilities (unit-level - OR: 1.05, 95% CI: 1.00-1.09, $p = 0.033$; organization-level - OR: 1.06, 95% CI: 1.01-1.10, $p = 0.015$). There were no other significant relationships between other gap subscales and turnover outcomes.

Table 4.13. Logistic Regression for Gap Subscales and Turnover (Unit-Level)

Parameter	Turnover (Unit-Level)					
	Simple		Multi-Variable			
			Step 1		Step 2 (Backward)	
	Odds ratio (95% CI [†])	P^*	Odds ratio (95% CI)	P^*	Odds ratio (95% CI)	P^*
Gap-Comfort	1.01 (0.94-1.08)	0.798	0.95 (0.87-1.04)	0.293	0.95 (0.88-1.04)	0.255
Gap-Reward	1.03 (0.99-1.07)	0.184	1.00 (0.93-1.07)	0.968		
Gap-Responsibility	1.05 (1.00-1.09)	0.033	1.07 (1.00-1.14)	0.058	1.06 (1.01-1.12)	0.017

Note. CI denotes confidence interval. ^{*}P values of less than 0.05 were considered to be associated with a significantly increased odds of turnover.

Table 4.14. Logistic Regression for Gap Subscales and Turnover (Organization-Level)

Parameter	Turnover (Organizational-Level)					
	Simple		Multi-Variable			
	Odds ratio (95% CI ⁺)	<i>P</i>	Step 1		Step 2 (Backward)	
Odds ratio (95% CI)			<i>P</i>	Odds ratio (95% CI)	<i>P</i>	
Gap-Comfort	1.03 (0.96-1.11)	0.429	0.97 (0.88-1.06)	0.469	0.97 (0.89-1.06)	0.476
Gap-Reward	1.04 (1.00-1.09)	0.075	1.01 (0.93-1.08)	0.873		
Gap-Responsibility	1.06 (1.01-1.10)	0.015	1.06 (0.99-1.14)	0.077	1.07 (1.01-1.13)	0.017

Note. CI denotes confidence interval. **P* values of less than 0.05 were considered to be associated with a significantly increased odds of turnover.

In further analyses, a multiple logistic regression (manual backward selection) was used to identify predictors of turnover. Backward stepwise regression was used for exploratory analyses, where analysis began with a full model and variables were eliminated from the model in an iterative process (Steyerberg et al., 1999). First, all three gap subscales were included in one final model (step 1). Then, the variable with the least significant *p* value in step 1 was removed for step 2. For these analyses, we planned to control for the effects of selected demographic variables (gender and country of origin) within the model. However, we did not include these because there were not enough responses in each category for the model to run successfully.

As to the relationship with turnover (unit-level) (Table 4.13), the final model indicates that when gap-responsibility increased, the odds of turnover increased by a factor of 1.06 (95% CI: 1.01-1.12; *p* < 0.05). In other words, when holding the other two gaps (comfort and reward) constant, responsibility was the unique predictor of turnover. Gap-responsibility was the only predictor found both for turnover (unit-level) and

(organization-level), suggesting that gap-responsibility is sensitive to turnover at the clinical area level (department) as well as the organizational level.

Research Question 2.1;

“What are the univariate relationships (push or pull) between individual independent variables and turnover?”

Of all independent variables, some were not included in further analyses due to a small number of responses. Instead, they are briefly described below.

Language-related

Regarding the level of language fluency by country of origin, we re-grouped five different countries into two groups based on whether FENs were educated in English in their own countries. This study found that Korea, China, and Taiwan (group A) had statistically significant lower levels of language fluency ($M = 2.13$, $SD = 0.83$) compared to the Philippines and India (group B) ($M = 3.73$, $SD = 0.87$) [$t(199) = 11.456$, $p = < 0.001$]. The findings in Table 4.15 suggest that FENs from non-English speaking countries such as Korea, China and Taiwan might have experienced more problems in language acquisition and communication than FENs from English speaking countries such as the Philippines and India.

Table 4.15. Comparison of Level of Language Fluency by Country of Origin

Country of Origin		N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Group A	Korea, China, and Taiwan	153	2.13	0.83	0.067	11.456	199	0.000
Group B	Philippine and India	48	3.73	0.87	0.126			

Health experience-related

First, self-rated health was assessed on a five-point scale, ranging from ‘excellent’ to ‘very poor’ with the following question: “think about your first year of employment in the U.S., would you say that in general your health was...” Over 80% of respondents reported that they were in good or excellent health (Table 4.16). After re-grouping self-rated health to the two categories, good and poor health (Pappas et al., 2005), the re-grouped variable was included in univariate analysis with turnover (see Table 4.22).

Table 4.16. Distribution of Self-Rated Health

Original			Re-grouped		
Categories	Frequency	Percent	Categories	Frequency	Percent
Very poor	2	1	Poor	30	15.1
Poor	8	4			
Fair	20	10.1			
Good	78	39.2	Good	169	84.9
Excellent	91	45.7			
Total	199	100		199	100

Summary statistics for occupational health outcomes, health symptoms and barriers to symptom management are displayed in Table 4.17. For both turnover types, FENs in the stay group reported more injuries, injury reports and physical and psychological symptoms than those in the turnover group. For these variables, the only significant relationship was between average number of job-related illness or injuries (i.e., back injury, strain/sprain of arms, blood or body exposure from needle stick or splash, violence or abuse) and turnover (organization-level) ($p < 0.05$).

Table 4.17. Operational Definitions for Other Health-Related Variables, Summary Statistics and Relationships with Turnover

Variables	Operational Definitions	Summary Statistics		By group	Turnover (Unit-Level)			Turnover (Organization-Level)		
		N	Mean		N	Mean	<i>p</i> *	N	Mean	<i>p</i> *
Self-Report of Employee Occupational Health Outcomes (injury)	The average number of job-related illnesses or injuries	88	1.6	Stay	51	1.8	0.077	59	1.7	0.033
				Turnover	37	1.4		29	1.3	
	The average number of reports about job-related illness or injuries to the organization	88	0.4	Stay	51	0.5	0.508	59	0.5	0.592
			Turnover	37	0.4	29		0.4		
	The average number of reasons for not reporting job-related illnesses or injuries to the organization	39	1.6	Stay	24	1.5	0.215	29	1.5	0.209
				Turnover	15	1.9		10	2.0	
Health Symptoms and Barriers to Symptom Management	The average number of physical or psychological symptoms FENs experienced	132	2.6	Stay	75	2.8	0.142	88	2.8	0.120
				Turnover	57	2.4		44	2.3	
	The average number of barriers to management of the symptoms above	117	1.6	Stay	66	1.6	0.595	76	1.6	0.862
			Turnover	51	1.5	41		1.6		

* Independent sample t-test

Orientation-related

Beyond multi-items scales measuring FEN's level of orientation satisfaction, we developed three questions about orientation: preceptor's country of origin, number of preceptors FENs worked with during orientation, and number of weeks spent in orientation. Regarding preceptor's country of origin, 61.7% of FENs worked with a preceptor whose country of origin was different from theirs. Table 4.18 indicates that there is no statistically significant relationship between either turnover type and preceptor's country of origin [$\chi^2(2, N = 196) = 4.654, p = 0.098$.; $\chi^2(2, N = 196) = 3.113, p = 0.211$, respectively].

Table 4.18. Chi-Square for Preceptor's Country of Origin by Turnover Type

Preceptor's country of origin	Frequency (%)	Turnover (Unit-Level)			Turnover (Organization-Level)		
		Stay	Turnover	<i>p</i>	Stay	Turnover	<i>p</i>
Always from my own country of origin	13 (6.6)	4 (3.4)	9 (11.3)	0.098	6 (4.5)	7 (11.1)	0.211
Sometimes from my own country of origin	62 (31.6)	38 (32.8)	24 (30.0)		44 (33.1)	18 (28.6)	
Never from my own country of origin	121 (61.7)	74 (63.8)	47 (58.8)		83 (62.4)	38 (60.3)	
Total		116	80		133	63	

Table 4.19 shows that FENs had worked with two different preceptors on average during orientation. The number of weeks FENs received in orientation was significantly higher in the stay group compared to those in both turnover groups ($p < 0.001$). The average number of weeks ($M = 5.4$) FENs spent in orientation was shorter than previous studies suggested (at least three and up to six months) (Bumgarner & Biggerstaff, 2000; Gerrish & Griffith, 2004; Robinson, 2009; Xu, 2003).

Table 4.19. Independent Sample t-test for Orientation-Related Variables by Turnover Type

Orientation-Related Variables	Summary Statistics			By group	Turnover (Unit-Level)			Turnover (Organization-Level)		
	N	Mean	SD		N	Mean	<i>p</i>	N	Mean	<i>p</i>
Number of Preceptors	193	2.3	1.25	Stay	118	2.4	0.124	134	2.4	0.081
				Turnover	75	2.1		59	2.0	
Number of weeks spent in orientation	194	5.4	4.55	Stay	117	6.2	0.001	133	6.3	0.000
				Turnover	77	4.1		61	3.5	

Other independent variables

Bivariate associations were estimated using a series of *t*-tests and simple logistic regression to examine whether independent variables and turnover were related positively (push factors) or negatively (pull factors). As seen in Table 4.20, significant differences between stay and turnover group were found in terms of preparatory and active job search behavior, orientation evaluation, and affective commitment.

Table 4.20. Independent Sample t-tests for Independent Variables and Turnover (Unit-Level)

Independent variables	Group ⁺	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Social support	Stay	3.45	0.47	0.043	1.600	199	0.111
	Turnover	3.34	0.46	0.051			
Preparatory Job search behavior	Stay	2.18	0.91	0.083	-2.035	199	0.043
	Turnover	2.44	0.82	0.091			
Active Job search behavior	Stay	1.97	0.86	0.079	-1.986	199	0.048
	Turnover	2.21	0.77	0.085			
Orientation evaluation	Stay	3.44	0.82	0.075	2.949	199	0.004
	Turnover	3.06	0.95	0.106			
Language fluency	Stay	2.60	1.07	0.098	1.293	199	0.197
	Turnover	2.40	1.09	0.122			
Affective commitment	Stay	3.16	0.59	0.053	2.600	199	0.010
	Turnover	2.94	0.59	0.066			
Continuance commitment	Stay	3.28	0.63	0.057	0.343	199	0.732
	Turnover	3.25	0.71	0.079			
Normative commitment	Stay	2.98	0.50	0.045	0.217	199	0.828
	Turnover	2.96	0.46	0.051			

Note. ⁺ N=120 (stay group), 81 (turnover group)

For turnover (organization-level), preparatory [$t(199) = -1.447, p = 0.150$] and active job search behaviors [$t(199) = -1.536, p = 0.126$] were not significantly different in the two groups (Table 4.21).

Table 4.21. Independent sample t-tests for Independent Variables and Turnover (Organization-Level)

Independent variables	Group ⁺	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Social support	Stay	3.44	0.47	0.040	1.822	199	0.070
	Turnover	3.32	0.45	0.056			
Preparatory Job search behavior	Stay	2.22	0.90	0.077	-1.447	199	0.150
	Turnover	2.42	0.83	0.104			
Active Job search behavior	Stay	2.01	0.87	0.074	-1.536	199	0.126
	Turnover	2.20	0.73	0.092			
Orientation evaluation	Stay	3.44	0.82	0.070	3.753	199	0.000
	Turnover	2.95	0.95	0.119			
Language fluency	Stay	2.60	1.08	0.093	1.681	199	0.094
	Turnover	2.33	1.06	0.132			
Affective commitment	Stay	3.18	0.58	0.049	3.658	199	0.000
	Turnover	2.86	0.59	0.073			
Continuance commitment	Stay	3.28	0.63	0.054	0.453	199	0.651
	Turnover	3.24	0.72	0.090			
Normative commitment	Stay	2.99	0.49	0.042	0.944	199	0.347
	Turnover	2.92	0.46	0.057			

Note. ⁺N=137 (stay group), 64 (turnover group)

Table 4.22 indicates that the coefficients are negative for orientation evaluation and affective commitment, meaning that these two variables are negatively associated with turnover (pull factors) ($p < 0.01$, $p < 0.05$) for both turnover types. In addition, we have evidence of significant relationships (positively related, push) for both job search behaviors with turnover (unit-level); the odds of experiencing turnover type (unit-level) are multiplied by 1.39 and 1.41 with every one-unit increase in preparatory and active job search behaviors respectively. These job search behaviors were not related to organizational level turnover.

Table 4.22. Simple Logistic Regression for Independent Variables and Turnover Types

Independent variables	Turnover (Unit-Level)			Turnover (Organization-Level)		
	B	Odds ratio (95% CI)	P	B	Odds ratio (95% CI)	P
Orientation evaluation	-0.478	0.62 (0.45-0.86)	0.004	-0.631	0.53 (0.37-0.76)	0.000
Language fluency	-0.175	0.84 (0.64-1.10)	0.197	-0.244	0.78 (0.59-1.04)	0.095
Affective commitment	-0.641	0.53 (0.32-0.87)	0.012	-0.961	0.38 (0.22-0.66)	0.001
Continuances commitment	-0.075	0.93 (0.60-1.42)	0.731	-0.105	0.90 (0.57-1.41)	0.649
Normative commitment	-0.065	0.94 (0.52-1.69)	0.827	-0.298	0.74 (0.40-1.38)	0.345
Social support	-0.498	0.61 (0.33-1.12)	0.112	-0.597	0.55 (0.29-1.05)	0.072
Preparatory job search behavior	0.332	1.39 (1.01-1.93)	0.045	0.246	1.28 (0.91-1.79)	0.150
Active job search behavior	0.343	1.41 (1.00-1.99)	0.050	0.276	1.32 (0.92-1.88)	0.127
Self-rated health (poor)	0.470	1.60 (0.73-3.49)	0.238	0.599	1.82 (0.82-4.03)	0.139

Research Question 2.2;

“Are any push-pull factors predictive of actual turnover?”

For this question, all associations between turnover and independent factors (push and pull factors) that were found to be statistically significant in the bivariate analyses ($p < \text{or equal to } 0.05$) were introduced in the multi-variable model. Table 4.23 presents a number of predictors for turnovers.

Table 4.23. Multi-Variable Logistic Regression for Predictors of Turnover

Push or Pull factors	Type (Unit-Level) (Step I)		Type (Unit-Level) (Step II) [†]		Type (Organization-Level)	
	Odds ratio (95% CI)	<i>P</i>	Odds ratio (95% CI)	<i>P</i>	Odds ratio (95% CI)	<i>P</i>
Orientation evaluation	0.72 (0.50-1.04)	0.083	0.70 (0.48-1.01)	0.056	0.64 (0.44-0.95)	0.027
Affective commitment	0.68 (0.39-1.20)	0.181	0.68 (0.39-1.18)	0.165	0.52 (0.28-0.95)	0.033
Preparatory Job search behavior	1.16 (0.72-1.88)	0.543				
Active Job search behavior	1.20 (0.72-2.00)	0.487				

Note. [†] Backward manual selection method was used.

The model in table 4.23 indicates that the pull factors (orientation evaluation and affective commitment) were the only significant predictors of turnover (organization-level). A one-unit increase in orientation evaluation reduced the odds of experiencing turnover at the organizational level by 36%, holding the other predictor constant ($p = 0.027$). Similarly, affective commitment was significantly associated with a decreased odds of turnover (organization-level) (reducing turnover likelihood by 48%, $p = 0.033$). In this step, the push factors (preparatory and active job search behaviors) defined in previous analyses were no longer associated with turnover (unit-level).

Research Question 3.1;

“What are the relationships among the Ex-Es Gap, push & pull factors?”

In the previous question 2.1., we found orientation evaluation and affective commitment to be pull factors (negatively related) and preparatory and active job search

behaviors to be push factors (positively related) for turnover. To answer this question, multiple regression analyses were conducted to estimate the relationship between each gap subscale and push/pull factors. Summaries of the tests are presented in Table 4.24.

Table 4.24. Standardized Regression Coefficients, *F* Statistics and *R*² for Gap Subscales and Push and Pull Factors for Turnover

Factors	Pull Factors		Push Factors	
	Orientation evaluation	Affective commitment	Preparatory job search behavior	Active job search behavior
FEN's Characteristics				
Current age	.059	.032	-.105	-.120
Gender	-.059	-.074	.202**	.260***
Country of origin	.077	.092	-.005	.017
Marital status	-.010	.119	-.104	-.150*
Shift length	.016*	.085	.215	.137
Role	-.156	-.099	.031**	-.034
Employment status	-.096	-.031	.194**	.155*
Gap subscales				
Comfort	-.161	-.035	.002	-.003
Reward	-.079	-.125	.120	.081
Responsibility	-.235*	-.275**	.096	.025
N	199	199	199	199
Constant	3.531	2.744	1.819	2.093
<i>F</i> statistic	4.99***	4.52***	5.47***	4.48***
<i>R</i> ²	0.209	0.193	0.224	0.191

* p< .05 **p< .01 ***p< .001

After controlling for selected demographics and career characteristics (i.e., current age and gender), when each pull factor (orientation evaluation and affective commitment) was predicted it was found that gap-responsibility was a significant

predictor ($\beta = -.235, p < 0.05$; $\beta = -.275, p < 0.01$). The overall model fit (R^2) was $0.19 \sim 0.22$. Neither push factor (preparatory and active job search behavior) was predicted by gap subscales.

Research Question 3.2;

“Does the Ex-Es Gap moderate the relationship between predictors and actual turnover after controlling for demographic variables?”

First, we assessed bivariate associations between turnover types and selected demographic and career characteristics defined in Table 4.3. We re-coded three variables (marital status, primary employment setting, and shift length) into binominals, coding the highest percent of values defined in Table 4.1 as 0 and 1 otherwise. The associations are presented in Tables 4.25 and 4.26. For turnover (unit-level), there were significant relationships with current age, primary employment setting, shift length, and having multiple jobs involving turnover. FENs were more likely to experience turnover when their age increased by one unit (OR: 1.04, 95% CI: 1.01-1.07, $p = 0.009$), they worked in a health care setting other than a hospital (OR: 2.72, 95% CI: 1.48-5.03, $p = 0.001$), and were employed by more than one health care setting (OR: 3.43, 95% CI: 1.61-7.33, $p = 0.001$) during the first year of employment. The odds of experiencing turnover (unit-level) were decreased when FENs worked for shifts longer than 8 hours (OR: 0.42, 95% CI: 0.21-0.82, $p = 0.011$). Similar relationships with these variables were found for turnover (organization-level).

Table 4.25. Simple Logistic Regression for Bivariate Associations between Selected Demographic and Career Characteristics and Turnover (Unit-Level)

Demographic & Career Characteristics	Turnover (Unit-Level)							
	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.	
							Lower	Upper
Current age	0.038	0.014	6.755	1	0.009	1.038	1.009	1.068
Marital status								
Other than married & with spouse in the U.S. ^a	0.154	0.311	0.245	1	0.621	1.167	0.634	2.148
Primary employment								
Other than hospital ^b	1.002	0.313	10.285	1	0.001	2.724	1.477	5.027
Shift length								
Other than 8 hours ^c	-0.875	0.342	6.542	1	0.011	0.417	0.213	0.815
Multi-setting								
Yes	1.234	0.387	10.167	1	0.001	3.434	1.609	7.331

Note. ^aSingle/divorced/widowed/separated, married without spouse in the U.S. ^bNursing home, extended care facility, academic education program, home health setting, and public/community. ^c12 hours, 8/12 hours both, others.

Table 4.26. Simple Logistic Regression for Bivariate Associations between Selected Demographic and Career Characteristics and Turnover (Organization-Level)

Demographic & Career Characteristics	Turnover (Organization-Level)							
	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.	
							Lower	Upper
Current age	0.046	0.014	10.841	1	0.001	1.047	1.019	1.077
Marital status								
Other than married & with spouse in the U.S. ¹	0.209	0.296	0.497	1	0.481	1.232	0.69	2.199
Primary employment								
Other than hospital ²	0.749	0.293	6.552	1	0.001	2.114	1.192	3.751
Shift length								
Other than 8 hours ³	-0.684	0.311	4.851	1	0.028	0.504	0.274	0.927
Multi-setting								
Yes	1.369	0.401	11.647	1	0.001	3.929	1.791	8.623

Note. ¹Single/divorced/widowed/separated, married without spouse in the U.S. ²Nursing home, extended care facility, academic education program, home health setting, and public/community. ³12 hours, 8/12 hours both, others.

To assess the moderating effect of each gap subscale on the relationship between predictors and turnover after controlling the selected demographic variable (current age), a series of Generalized Linear Models were created.

Gaps' moderating effects on the targeted relationships were not found in any model. For example, for turnover (unit-level), when including both the pull factor - orientation evaluation- and gap-responsibility in the final model, there were no moderating effects of gap-responsibility because the relationship between orientation and turnover (main effect) was stronger ($p = 0.006$) than the relationship between gap-responsibility and turnover ($p = 0.331$). Since gap and orientation were correlated (see Table 4.5), the effect of gap was not significant. Similar results were found in the model looking at the gap's moderating effects on the relationship between affective commitment and turnover (Table 4.28).

Table 4.27. Generalized Linear Model for Moderating Effect of Gap Subscales on Relationship between Orientation Evaluation and Turnover Type

Parameters	Turnover (Unit-Level)		Turnover (Organization-Level)	
	Odds ratio (95% CI)	<i>P</i>	Odds ratio (95% CI)	<i>P</i>
Current age	1.05 (1.02-1.08)	.001	1.04 (1.01-1.07)	0.007
Orientation evaluation	0.60 (0.40-0.89)	.010	0.53 (0.35-0.80)	0.003
Gap-comfort	1.02 (0.80-1.31)	.885	1.03 (0.80-1.34)	0.805
Orientation evaluation * Gap-comfort	0.99 (0.91-1.07)	.725	0.99 (0.91-1.07)	0.727
Current age	1.05 (1.02-1.08)	0.001	1.04 (1.01-1.07)	0.009
Orientation evaluation	0.55 (0.36-0.83)	0.004	0.48 (0.31-0.74)	0.001
Gap-reward	0.93 (0.80-1.09)	0.364	0.94 (0.80-1.09)	0.431
Orientation evaluation * Gap-reward	1.03 (0.98-1.08)	0.313	1.03 (0.98-1.08)	0.326
Current age	1.05 (1.02-1.08)	0.001	1.04 (1.01-1.07)	0.010
Orientation evaluation	0.57 (0.38-0.85)	0.006	0.49 (0.32-0.75)	0.001
Gap-responsibility	0.94 (0.82-1.07)	0.331	0.94 (0.81-1.08)	0.347
Orientation evaluation * Gap-responsibility	1.03 (0.99-1.08)	0.188	1.03 (0.99-1.08)	0.187

Table 4.28. Generalized Linear Model for Moderating Effect of Gap Subscales on Relationship between Affective Commitment and Turnover Type

Parameters	Turnover (Unit-Level)		Turnover (Organization-Level)	
	Odds ratio (95% CI)	<i>P</i>	Odds ratio (95% CI)	<i>P</i>
Current age	1.05 (1.02-1.08)	0.001	1.04 (1.01-1.07)	0.007
Affective commitment	0.47 (0.26-0.86)	0.014	0.34 (0.17-0.66)	0.001
Gap-comfort	0.92 (0.65-1.31)	0.648	0.90 (0.62-1.31)	0.587
Affective commitment * Gap-comfort	1.02 (0.91-1.15)	0.712	1.04 (0.91-1.18)	0.609
Current age	1.05 (1.02-1.08)	0.001	1.04 (1.02-1.07)	0.007
Affective commitment	0.43 (0.22-0.81)	0.010	0.29 (0.14-0.61)	0.001
Gap-reward	0.86 (0.68-1.09)	0.221	0.85 (0.66-1.10)	0.207
Affective commitment * Gap-reward	1.06 (0.97-1.15)	0.182	1.07 (0.97-1.17)	0.162
Current age	1.05 (1.02-1.08)	0.001	1.04 (1.01-1.07)	0.011
Affective commitment	0.54 (0.29-0.97)	0.040	0.41 (0.21-0.78)	0.007
Gap-responsibility	0.97 (0.78-1.20)	0.761	1.02 (0.81-1.28)	0.869
Affective commitment * Gap-responsibility	1.02 (0.95-1.09)	0.596	1.00 (0.93-1.08)	0.969

The proposed conceptual model (organization-level turnover) was revised based on the findings above and is presented in Figure 4.3. For organization-level turnover, preparatory and active job search behaviors were neither defined as push factors (positively related) nor predictors of organizational turnover while orientation evaluation and affective commitment were significantly negatively related to turnover. Only gap-responsibility predicted turnover. None of the gap subscales moderated relationships between predictors (i.e., orientation evaluation) and organizational level turnover.

Figure 4.4 and 4.5 are simplified versions of the final models for both turnover types. Aside from having push and pull factors, stay groups had significantly different orientation durations than those in turnover groups for both turnover types. Regarding

organizational turnover, FENs in stay group reported relatively higher numbers of job-related illnesses or injuries compared to FENs in turnover group.

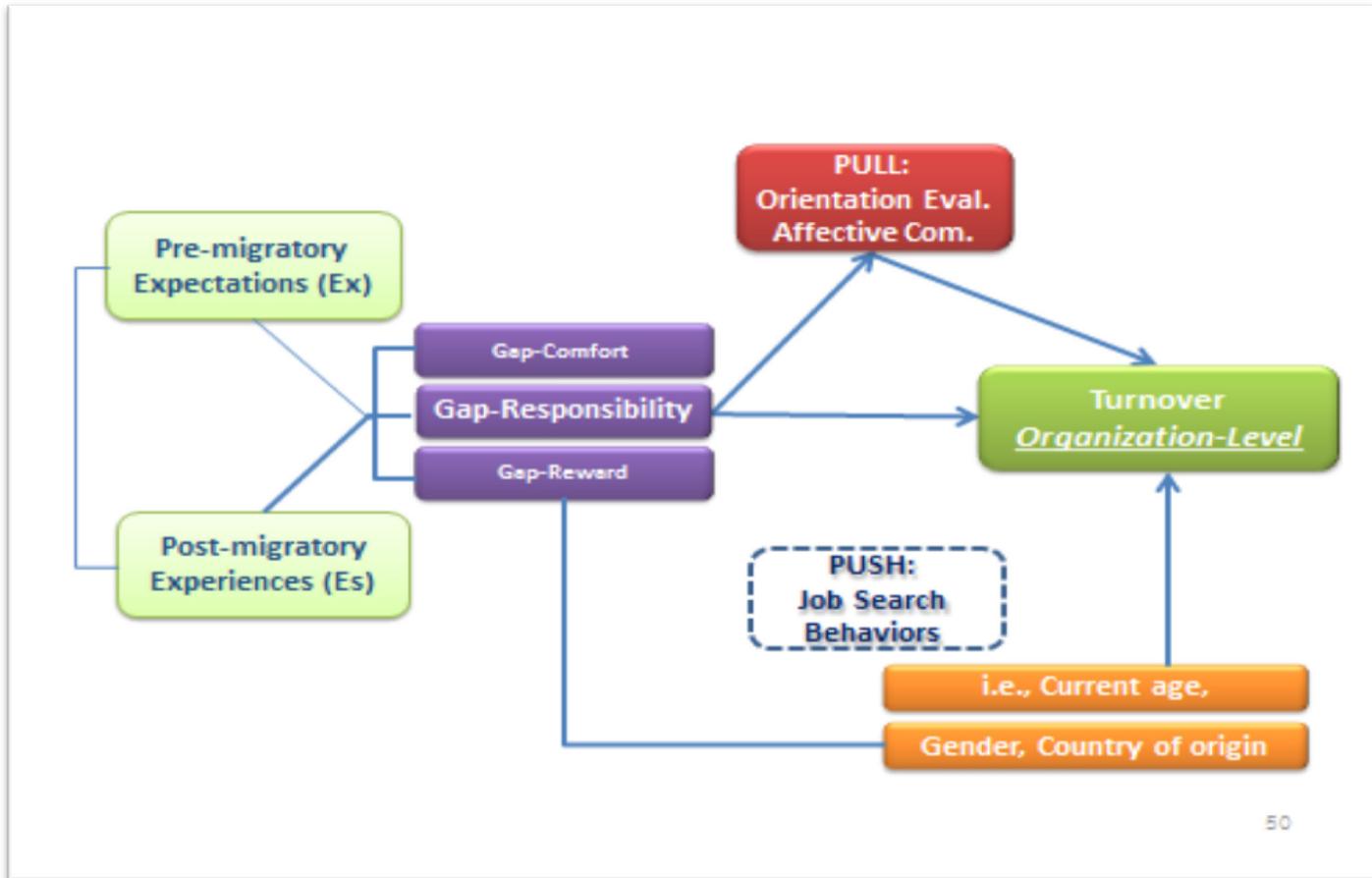


Figure 4.3. The Final Conceptual Model for Turnover (Organization-Level)

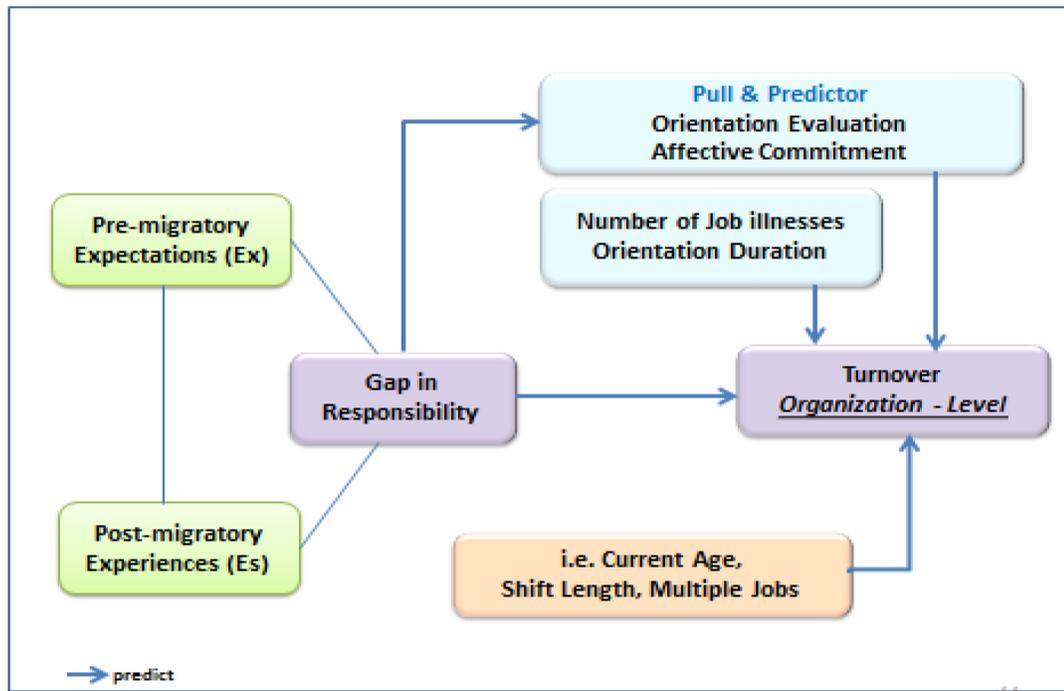


Figure 4.4. The Final Conceptual Model (Simplified Version: Organization-Level)

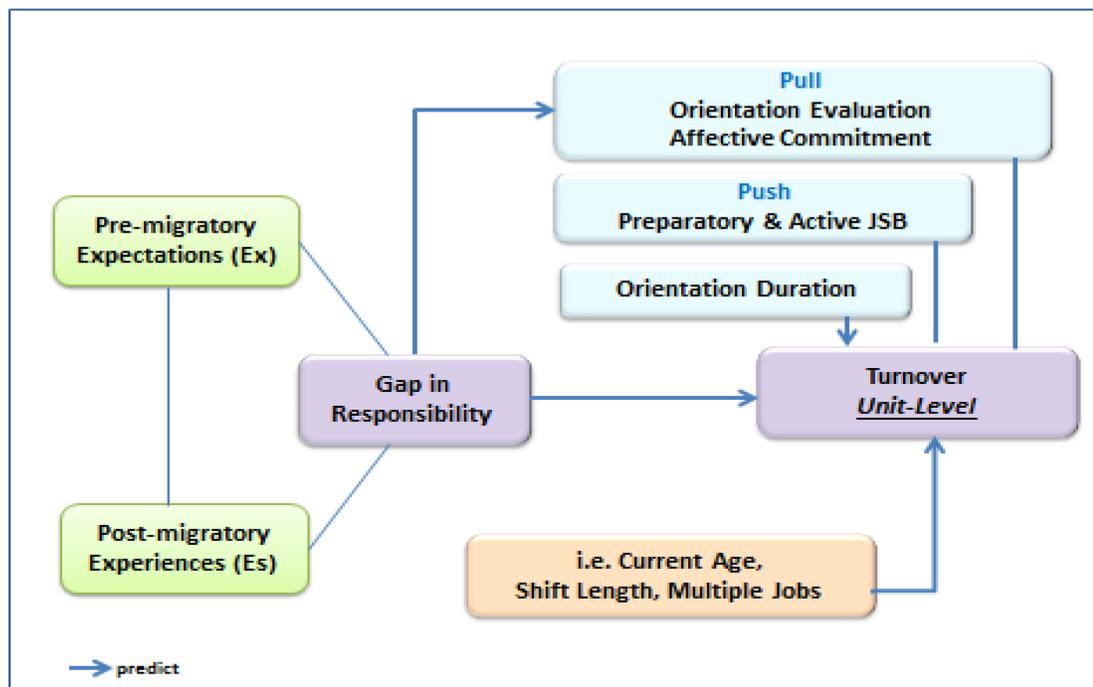


Figure 4.5. The Final Conceptual Model (Simplified Version: Unit-Level)

Chapter V

Discussion

Interpretation of the Study Results and Implications for Nursing Practice

FENs' Demographic and Career Characteristics

It is known that Asian FENs' experiences cannot be fully understood without looking at their gender, race, and culture, which frame their identities and interpersonal interactions, particularly given the foreign context (Xu, 2007b). These demographic factors have consistently been significant predictors for nurse migration (Joyce & Hunt, 1982; Kingma, 2007; Lee, 2007; Thomas, 2006). For example, Kingma (2007) noted that age of the migrant facilitates and plays an important role in migration and employment processes in destination countries. Similarly, Thomas (2006) indicated that young Indian nurses more often express their intention to migrate, and "too old in age" was the only reason why some did not consider migration. In a similar sense, we expected that FENs' age at employment would be related to turnover because we assumed that older nurses were more likely to stay than younger nurses in their first organization during the first year of employment. Turnover requires going through another employment process, and certainly this process would be an added burden to them. Our study findings showed that FENs who started to work in their 20's through 40's reported a significantly higher gap in reward while FENs over 50 perceived gap more in terms of a comfort issue. However,

age at employment was not related to turnover in this study. Instead, FENs' current age, primary employment status, shift length, and having multiple jobs were related to turnover both in unit-level and organization-level.

In relation to the three gap subscales, one of the significant findings was that male Asian FENs perceived less a gap in reward than females did. To date, no study has compared male FENs' salaries in their own countries to those in the U.S. This result might be a good predictor for recruitment and retention of male FENs in the future. FENs' level of perceived gap in reward was also significantly different by country of origin. Specifically, Filipino FENs perceived more gaps in rewards than FENs from other Asian countries. It is assumed that the higher gap in reward reported by Filipino FENs was initially caused by their expected familial roles - to send remittance back to their country - which was their key motivation for migration (Joyce & Hunt, 1982; Xu, 2003). We do not have enough evidence about how FENs adjust to a new environment according to their demographics and other career characteristics. These findings will be a foundation for future studies looking at the relationships with other organizational outcomes.

Relationships between the Three Gap Subscales and Other Factors

With regard to the measure of gap (met or unmet expectations), Irving and Meyer (1994, 1995) directly measured this using two items. Other studies used a single index by calculating difference scores between pre-entry expectations and post-entry perception of the job (Fisher, 1985; Wanous et al., 1992). It has been argued that use of direct measures or algebraic difference score measures to assess organizational outcomes (i.e.,

job satisfaction, turnover intention) may contribute to creation of artificial correlations with the component parts of the outcomes. Regardless of the methods, Edwards (1991) noted that use of commensurate measures of expectations and experiences are important to determine whether expectations have been met.

The present study shows that, across all three subscales, scores for pre-migratory expectations were on average higher than those for post-migratory experiences and positively related to its gap while post-migratory experiences were negatively related to gap. Pre-migratory expectations were positively related to their commensurate measures of post-migratory expectations. This is consistent with earlier findings (Irving & Meyer, 1994, 1995; Sutton & Griffin, 2004). In earlier studies with 427 newcomers to business, Irving and Meyer (1994, 1995) found that the variances in gap (met or unmet expectations) were largely accounted for by recent work experiences rather than by pre-entry expectations.

Unlike these studies, we were not able to determine the relative contributions of expectation and experience to gap because they were highly correlated due to the calculation methods of gap production (expectation – experience). However, as the authors noted, it was believed that FENs' ratings on expectations might be influenced disproportionately by their post migratory or recent work experiences.

One of the revealing findings was related to the ability of gap subscales to predict turnover. As mentioned earlier, FENs reported that gap in reward was more important than those for comfort and responsibility. The degree to which FENs expected to occupy an important role in the organization (responsibility) was initially lower than the other two subscales (comfort and reward). Consequently, this gap was not as high as those for

reward and comfort. However, only the gap in responsibility predicted turnover, while controlling for the other two gap subscales. This finding is similar to results from Irving and Meyer's study (1994); reward experiences had a strong impact on newcomers' intention to leave, whereas responsibility experiences predicted intentions to leave at the end of the first year. Given the fact that Asian FENs were not familiar with some questions related to responsibility (i.e., gives you responsibility for taking risks, requires working on problems of central importance to the organization, permits working independently), one possible explanation of this finding is that the measure of gap in responsibility reflects something about expectations and experiences that were not common to Asian FENs, leading to turnover. In addition, results of the current study demonstrated that gap in responsibility explained a significant percent of variance in orientation and affective commitment.

In sum, this study provides a number of insights into the role of gap in the early careers of the FENs in this sample. First, identification of the three distinct subscales of gap provided the opportunity to explore how they were related to organization-related variables and turnover. Second, with these findings, we could revise programs for FEN retention from organizational perspectives, helping with decision-making regarding whether to provide positive work experiences or reduce initial high expectations FENs formed prior to migration or employment.

Push/Pull Factors for Turnover

A number of independent variables were found to be related to turnover. Orientation evaluation and affective commitment appeared to be significantly negatively

(pull) related to both turnover (unit-level) and (organization-level). Preparatory and active job search behaviors were push factors (positively related) only for unit-level turnover, but not of organization-level turnover.

Social support was not significantly related to both turnovers. FENs in the stay groups reported higher satisfaction with co-workers' support than those in the turnover groups.

According to reviews on Asian FENs working in Western countries (Xu, 2007b; Yi et al, 2000), with very few exceptions, most studies have documented Asian FENs' painful experiences in relation to language difficulties, especially during the initial period following their arrival or first employment in a new country. Xu (2007b) also noted that language skills vary depending on the individual and country of origin. Our study supports evidence that language fluency in those FENs from Korea, China, and Taiwan was significantly lower than that of FENs from the Philippines and India. However, English fluency was not strong enough to pull FENs' to stay in their first organization.

Like language fluency, health experience was another factor that was expected to show significant relationships with turnover. In this study, it was found that FENs in the stay group reported a higher mean number of job related illnesses, injuries, and physical or psychological symptoms than FENs in the turnover group. One possible explanation for this unexpected finding is that, as FENs in the stay and turnover groups reported a similar number of barriers to management of symptoms and job-related illnesses or injuries, in general they did not seem to pay too much attention to health related issues during the first year of employment regardless of what they experienced. In other words, FENs may be willing to tolerate some health issues with regard to working conditions,

since they view their time for adjustment as being limited in duration. Over 80% of FENs in both stay and turnover group perceived their health status was good or excellent in general.

Predictors of Turnover

According to the American Organization of Nurse Executives (AONE) in 2000, the national average RN turnover rate in the U.S. was 21.3%; some hospitals experienced even higher rates. Very few studies have mentioned FENs' turnover-related rates. FENs have reported less intention to leave their current jobs compared to USENs. Pizer et al. (1994) showed that in the U.S., retention rates for Filipino FENs were higher in comparison to those for USENs. In 2008 NSSRN reports, nearly one-quarter of FENs intended to leave their current nursing position within the next 3 years, compared to 30.1 percent of USENs. Recently, two studies also demonstrated that Asian FENs were less likely to leave their current jobs (Cheng & Liou, 2011; Liou & Grobe, 2008). However, the target populations in these studies were limited to two countries of origin (China and the Philippines). Our study reported higher turnover rates, 40.3% for turnover (unit-level) and 31.8 % for turnover (organization-level). To date, there is no other study that has calculated actual turnover rates for Asian FENs after a one-year work experience.

Orientation evaluation

FENs' initial experiences are not clearly defined by a specific concept. However, it is certain that their experiences in workplaces are unique and influenced by the initial

orientation programs provided by organizations (Dubois et al., 2006; Omeri & Atkins, 2002; Palese et al., 2007). In terms of FENs' adjustment, orientation has been considered as an important facilitator or barrier as other factors (i.e., social support) (Kawi & Xu, 2009). Studies suggest that Asian FENs need longer orientations to be self-confident co-workers with USENs (Bumgarner & Biggerstaff, 2000; Gerrish & Griffith, 2004; Robinson, 2009; Xu, 2003). FENs reported that their orientation was not long enough and inadequate in content for them to be completely aware of all the required information about nursing practice and related regulations. FENs complained that the programs did not deal with their unique cultural and organizational needs (Allan & Larsen, 2003; Matiti & Taylor, 2005). Rather, it seems that orientation programs are most often provided to FENs on a "facility-favored" basis rather than a "FENs-centered" basis, which has not met their specific needs (Meyer & Meyer, 2000; Xu, 2007b). Regarding a group of Korean FENs' orientation experiences, Bolyston and Burnett (2010) suggested that the use of several preceptors can confuse Korean FENs who are trying to adjust to a new organization, therefore, a unit (or department) based and consistent preceptor is a crucial component of effective orientation.

Not surprisingly, in this study, orientation appeared as the most significant predictor of both unit-level and organization-level turnover. Number of weeks spent in orientation was also significantly different in stay and turnover groups: FENs in stay groups reported orientation durations about 2 weeks longer. Therefore, it is clear that orientation has significant effects on retention of FENs. Orientation for FENs may be an important retention strategy.

Organizational commitment

Regarding the structure of organizational commitment, Meyer and Allen (1991) argued that the three components of commitment could have quite different consequences in these analyses. Specifically, affective commitment, which is an affective attachment to the organization, is expected to develop when an employee's experiences within the organization are consistent with their expectations and the employee's needs are satisfied (Meyer et al., 1993). Affective commitment has been shown to be positively related to attendance, job involvement, and perceptions of the work group (Allen & Meyer, 1996), but negatively related to 1 and 5- year intent to leave (Ingersoll et al., 2002). Ingersoll et al. (2002) have explored the relationship between affective commitment and job satisfaction. It was significant.

Liou and Cheng (2008) suggested that as the potential antecedents of FENs' organizational commitment, work experience is the main contributor to Asian FENs' decision to stay in the current organization. This study supports evidence from earlier studies by Irving and Meyer (1994, 1995): affective commitment was influenced by employees' early work experience independent of the pre-entry expectations. Moser (2005) and Padgett et al. (2005) also showed that when employees' unmet expectations increased, organizational commitment decreased.

Recently, studies have found that organizational commitment was a stronger and key predictor for Asian FENs' intention to leave (Cheng & Liou, 2011; Liou & Grobe, 2008) and that it was positively correlated with cultural orientation or professional practice environment (PPE). In this regard, our study findings are similar in terms of the relationships between affective commitment, orientation, gap and turnover. We examined how FENs' three types of commitment to the organization differ and how those

commitments affect their decisions to leave their first employment setting. With orientation evaluation, affective commitment was found to be a pull factor (negatively correlated to turnover) in unit and organization-level turnover and a predictor of turnover for organization-level only. There is a possible explanation for the absence of a relationship between turnover (unit-level) and affective commitment; as previous studies have shown, the result suggests that affective commitment is related to organizational level turnover rather than unit-level turnover. Organizational commitment has been widely considered as an organizational outcome variable.

Focusing on affective commitment rather than turnover may help in clarifying which specific strategies might be implemented in work settings to improve FEN's willingness to work for the employer, and subsequently remain in the workplace (Ingersoll et al., 2002). A possible link between high affective commitment and retention might in turn lead to a long term career in this profession (Wu & Norman, 2006). Therefore, it might be helpful for administrators and researchers to monitor consistencies between organizations' and FENs' expectations.

The difference between two predictors

Another revealing finding in this study is the comparison of predictability of affective commitment and orientation evaluation for each turnover type. While affective commitment was a predictor of organizational turnover only, orientation evaluation predicted organizational turnover and trended towards predicting unit-level turnover ($p = 0.056$). This distinction between the two predictors demonstrates that orientation evaluation is a stronger indicator and could determine level of satisfaction with orientation programs provided on the unit as well as on organizational level. Within an

organization, it is assumed that orientation evaluation has an effect on a FEN's decision to move to another units or departments as well as organizations, based on the adequacy of orientation experienced on his or her first unit.

In sum, only two pull factors were predictors of turnover (organization-level). It seems that FENs' turnover may have been more dependent on organization-related experiences (orientation evaluation and affective commitment) rather than individual FENs' efforts to find other positions (preparatory and active job search behaviors).

Given the findings of this study, orientation experiences can leave an important impression on FENs. In addition, this experience is critical for FENs to convert "challenges" into "opportunities" in their organizational experiences. Because adequate orientation is directly correlated with nurse retention, further studies are needed to develop FENs-centered orientation and evaluation programs on a regular basis in order to ensure that FENs' new experiences are successful.

The Moderator (Gap Subscales)

The moderator role of gap has not been tested in previous studies. Unfortunately, in our study, none of the gaps in three subscales moderated the prediction of push or pull factors on turnover. There are two possible explanations. First, the main effect of orientation was strong enough that gap has no influence on its relationship with turnover. Second, gap and turnover were correlated themselves independent of other variables.

Implications for Practice

This study indicated that Asian FENs' turnovers were more dependent on their actual organizational experiences, orientation evaluation and affective commitment, than their individual efforts such as new jobs searches. In a similar sense, one recent study supported the importance of inter-relationships among orientation, organizational commitment, and intention to leave; culturally-sensitive orientation for Asian nurses predicted organizational commitment positively and intention to leave negatively (Cheng & Liou, 2011). In particular, having a FENs-centered, specifically unit-based orientation with a consistently designated preceptor was considered as a crucial component of effective orientation for Asian FENs. In addition, this type of orientation has been perceived as effective when both preceptors to Asian cultures as well as FENs were combined in training sessions (Bolyston & Burnett, 2010).

Additionally, the current study provides evidence that Asian FENs' perceived gaps vary according to their demographics and career characteristics. For example, male FENs perceived smaller gaps in reward than females did, and Filipino FENs perceived more gaps in rewards than FENs from other Asian countries. Therefore, as more diverse workforces are recruited, differences across sub groups of Asian FENs may require tailored approaches to address concerns related to organizational experiences and turnover that are unique to each group. Findings from this study will be a foundation for organizational leaders and managers who are interested in improving Asian FENs' adjustment in their units or organizations, ultimately reducing their initial turnovers. At the organizational level, intervention strategies to support Asian FENs' successful initial adjustment are recommended, for example: language training in the context of daily work

to improve their conversational skills, formal or informal social networking with other co-workers after work-hours, cross-cultural training to facilitate understanding of diversity in groups, and one to one or community-based mentoring or preceptorship programs. Implementation of these strategies will not only promote confidence in their abilities to provide safe patient care but also translate to stronger attachments to their current organizations (Kinderman, 2006). At the institutional level, collaborations between State Boards of Nursing and Asian American Nurses Associations is needed to provide more practical supports related to actual nursing practice guidelines (i.e., conflict management skills) as well as norms and other related regulations for employment.

Those supports for FENs' adjustment to new environments may create a positive culture of caring that contributes to their organizational experiences and strong commitments to their organizations, thus reducing turnovers. These strategies may need to be tested and enhanced through empirical studies.

Limitations

While this is the first known study that relates the concept of gap and several other previously unstudied variables (e.g., having multiple jobs, language fluency, orientation evaluation) to Asian FENs' turnover, there were a number of limitations associated with this study.

First, because of the retrospective cross-sectional nature of the current study, we were not able to find any cause/effect claims about relationships. In addition, it is quite likely that the recollections of pre-migratory expectations were influenced by post-migratory experiences and filtered even more by recent experiences and conditions

(Irving & Meyer, 1995). For some FENs, pre-migratory expectations were assessed long after organizational entrance, not independent of organizational reality. These recall error effects cannot be completely excluded. Moreover, there was no mechanism to account for underestimation of the true relationship between pre-migratory expectation and post-migratory experiences (Moser, 2005). Thus, the error by memory effect cannot be ruled out.

Second, the generalizability of our findings may be somewhat limited by the nature of our sample and by our choice of expectation and experience measures. For example, the participants in this study were mostly Koreans (73.6%), thus, the influence of reward and responsibility experiences on the perceptions of gap might have been enhanced by their shared concerns when they were in Korea.

Third, the difference in magnitude between turnover (unit-level) and turnover (organization-level) was only 17 responses (8.5%), thus variability in these variables might not have been sufficient to result in significant findings for each. In particular, the outcomes related to demographics, career characteristics, and gap subscales were similar in two turnover types. In addition, the respondents in turnover (unit-level) and organization-level) (81 vs. 64) may have also impacted our ability to explore the potential interaction effects between outcomes and other potential predictor variables in our model. We were not able to include all potential variables in Generalized Linear Models (multi-variable logistic regression) to control their effects on major relationships. In general, small total sample size (N = 201) hampered ability to find effects if they present.

Last, the relative contribution of pre-migratory expectation and post-migratory experiences in the prediction of turnover or gap were not investigated. Considering that

gap can be compromised by either pre-migratory expectation or post-migratory experience, it was noted that including both expectations and experiences in the regression equation might enhance predictability of the outcome variable (Irving & Meyer, 1994).

Recommendations for Future Research

The results of this study provided evidence that Asian FENs' perceived gap between their pre-migratory expectations and post-migratory experiences played an important role in turnover during their first year of employment. The present study is an exploratory investigation of the relationships between gap and turnover; many issues are worthy of further research.

First, our study results suggested that the contribution of expectation to gap might be compromised by recent organizational experiences due to the cross-sectional data collection procedures. For future studies, we recommend assessing whether expectations account for variance in gaps while controlling for recent experiences (or vice versa).

Second, variables related to met or unmet expectation concepts are generally regarded to become inadequate measures as new employees become socialized into the organization. Thus, future studies are needed to develop special tools capturing Asian FENs' adjusted expectations based on time-varying experiences and the effect of their trends on turnover. These studies would help in defining how predictive effects of post-migratory experiences (initial) and the experiences close to the time when recording turnover are different, and which type of experiences predicts more effectively than the

other. In addition, we recommend examining the separate and joint effects of expectations and experiences on turnover.

Third, in terms of methodology, use of longitudinal survival analysis design is recommended to model algebraic differences in gap and confirm the existence of any causal relationship. Survival analysis is recommended for research on turnover because this method can describe the manner in which an event happens and whether survival time is influenced by other covariates (Yao, Ma, & Yue, 2010).

Asian FENs working in the U.S. probably differ in terms of their responses to unmet expectations and turnover. Thus, a sample with more variety in country of origin would allow us to have greater confidence in the generalizability of our results.

Fourth, some demographic and career-related characteristics can be significant predictors for FENs' turnover as well as migration. In this study, we assessed the relationship between having multiple jobs and turnover, but could not verify the magnitude of effect on turnover and gap after controlling other variables. No study had examined whether being employed at more than one organization would be a problem for nurse retention. However, it is believed that the effect of having multiple jobs in the first year of employment on Asian FENs' turnover is an issue for further research. Thus, the potential contribution of these previously unrecognized factors should continue to be emphasized by researchers.

Fifth, this study confirmed, as previously has been shown, that pull and push factors (or facilitators and barriers to stay) for Asian FENs' turnover always co-exist during the employment adjustment periods. This study differentiates push/pull factors; orientation and affective commitment are pull factors, and preparatory and active job

search behaviors are push factors. It seems that pull factors can be improved by organizational level policies and staff (i.e., supervisors, co-workers), and push factors are controllable by FENs (Kawi & Xu, 2009). This categorization may help in developing 'FENs-tailored' programs for adjustment. Further studies are needed to explore unrecognized potential push/pull factors.

Sixth, this study has not fully investigated the interaction effects that could exist between potential push and pull factors. Adding these interaction effects to analyses might assist in identifying more factors that are related to outcome variables. In this study, language fluency and health experiences were neither push/pull factors nor predictors of turnover. However, it was assumed that there might be a relationship between language fluency and health experiences that might lead to turnover. Xu (2007b) described that language serves as a fundamental instrument for survival and adaptation at work in a new culture. In this regard, the author pointed out the potential domino effect of language barrier, which could affect FENs' experiences in every related aspect; for example, having problems in communication could eventually lead to somatic symptoms and result in job termination at its worst (Lopez, 1990; Yi, 2003). Thus, future research should investigate the value of these potential explanatory variables (i.e. language fluency, health status change).

Seventh, staff development programs and policies for Asian FENs that take into account their expectations-experiences gap may contribute to increased retention. Studies noted that instruments specific to evaluation of orientation for FENs, which could assess FENs' "unmet" expectations, have not been developed yet (Houkes et al., 2003; Meyer & Meyer, 2000). The instrument for orientation evaluation used in this study was

designed to capture only general satisfaction with orientation provided from their organizations. However, based on these findings and reviews, this issue has important practical implications for human resources management of nurse retention. Thus, it is apparent that a more comprehensive approach is necessary for orientation to be successful for FENs.

To date, many studies have focused extensively on the relationship between organizational commitment and outcome variables, not on the investigation of the process by which each type of commitment develops in a targeted population (Meyer, Allen & Smith, 1993). In relation to FENs' turnover, future studies need to investigate how FENs' commitment to the organization changes as they adjust to a new environment in comparison with when they begin to work in the U.S., and how those changes affect their decisions to stay or move to other organizations.

Last, in this study, we applied push and pull theory to explain FENs' initial turnover. Our results revealed that the moderating effect of gap was not valid in Asian FENs' organizational context. Research directed at further extensions of the current study's conceptual model is needed to understand Asian FEN's turnover pattern in a variety of populations and settings, and to improve the validity of the concepts and relationships defined.

In conclusion, Asian FENs perceived a certain magnitude of gap between pre-migratory expectations regarding their jobs and actual organizational experiences after beginning to work in the U.S. After one year of experience, a considerable number of Asian FENs moved from their first U.S. health care settings to another unit or organization. Their turnover was predicted by organization-related experiences

(orientation evaluation and affective commitment) rather than individual FENs' efforts to find other positions (i.e., job search behaviors).

Appendix

Appendix A FENs' Experiences in the U.S.

Authors & Year	Title	Source Country	Methods
Joyce & Hunt, 1982	Philippine Nurses and The Brain Drain	The Philippines, N=75	Interview, 3 groups, Questionnaire
Pizer et al., 1992	Nurses' Job Satisfaction: Are There Differences Between Foreign and U.S.-Educated Nurses?	The Philippines, N=322	Comparison, (US nurses=535)
Brown & James, 2000	Physiological Stress Responses in Filipino-American Immigrant Nurses	The Philippines, N=31	Experimental, Cross-sectional
Yi & Jezewski, 2000	Korean nurses' adjustment to hospitals in the United States of America	Korea, N=12	Grounded theory
Berg et al., 2004	Demographic Survey of Filipino American Nurses	The Philippines, N=327	Non-experimental, Descriptive
Dicicco-Bloom, 2004	The Racial and Gendered Experiences of Immigrant Nurses from Kerala, India	India, N=10	Semi-structured, In-depth interview
Beechinor & Fitzpatrick, 2008	Demands of immigration among nurses from Canada and the Philippines	The Philippines, N=41/ Canada, N=32	Comparative, Descriptive
Ea et al., 2008	Job satisfaction & Acculturation Among Filipino RNs	The Philippines, N=96	Descriptive, Correlational
Liou & Grobe, 2008	PPE, OC, and intent to leave among Asian nurses working in U.S. hospitals	Asia, N=35	Cross-sectional, Correlational
Xu & Kim, 2008	Adaptation and Transformations through (Un) learning : lived experiences of immigrant Chinese nurses in US environment	China, N=9	Phenomenological.

Vestal & Kautz, 2009	Responding to Similarities and Differences Between Filipino and American Nurses	The Philippines, N=44	3 focus groups
Xu et al., 2010	Characteristics of Internationally Educated Nurses in the U.S.: update	The Philippines, N=1,041	Comparison,

Appendix A (Continued).

Authors & Year	Experiences or Findings (Outcomes)
Joyce & Hunt, 1982	<p>predictors of nurses' migrant decisions</p> <ol style="list-style-type: none"> (1) socioeconomic background - little difference (2) linkage to or anchorage in Philippine society (3) perceived relative opportunity was related to migration behavior (4) ideological commitment did not appear to influence migration decisions
Pizer et al., 1992	<p>demographic, education and work difference, but no differences in level of satisfaction were found between the two groups Cultural and work status may have affected these results</p>
Brown & James, 2000	<p>long-term immigrants had elevated nor-epinephrine levels in their work and home settings ($p < .05$), even when age was controlled. Job strain measures were not related to BP, catecholamine, excretion rates, or residence time in the U.S.</p>
Yi & Jezewski, 2000	<p>5 basic adjustment process</p> <ol style="list-style-type: none"> (1) relieving psychological process (2) overcoming the language barrier (3) accepting USA nursing practice (4) adopting the styles of USA problem-solving strategies (5) adopting the styles of USA interpersonal relationships
Berg et al., 2004	<p>91 2% of nurses ($n=290$) rated their job satisfaction as good & very good during the last year Job satisfaction was positively associated with age ($p=.004$), years of practice ($p=.05$) They planned to retire from the profession in approximately 12 years</p>
Dicicco-Bloom, 2004	<p>dominant themes emerged</p> <ol style="list-style-type: none"> (1) cultural displacement- a foot here, there, nowhere

	(2) racial experiences/alienations in the work place and at home (3) intersections of categories-being a female nurses, an immigrant, non-White
Beechinor & Fitzpatrick, 2008	There was a significant difference between the means of the two groups: the Canadian group reported significantly higher total distress due to the demands of immigration than did the Philippine group. This finding might be attributed to a social preponderance of and collegial support available to the Philippine nurses in Hawaii
Ea et al., 2008	Moderate positive correlation between JS & Acculturation closer to American (p=.001). Age, length of U.S. residency, acculturation significantly predicted job satisfaction among this group of Filipino RNs (p<.001)
Liou & Grobe, 2008	Participants were generally collectivist oriented. organizational commitment is a mediator of professional practice environment and intent to leave Overall 94.3% of participants -'disagree/strongly disagree in their intent to leave current job
Xu & Kim, 2008	5 primary themes emerged (1) communication as the most daunting challenge, during initial transition of their first job (2) conflicting professional values and roles/expectations (3) marginalization, inequality, and discrimination (4) transformation through clinging to hope, resilience, (un)learning (5) cultural dissonance
Vestal & Kautz, 2009	Liaison nurses supported new employees in finding housing. The Filipino nurses found that technology and nursing practice are different. In general, the nurses reported being very satisfied with their jobs. The nurses were especially frustrated by the need to constantly prove themselves
Xu et al., 2010	Differences were found between IENs and US RNs in age, education, employment. IENs are still less satisfied with their jobs on average than U.S. nurses (p<0.001)

Appendix B FENs' Experiences in Non-U.S.

Authors & Year	Title	Destination Country	Source country	Methods
Hagey et al., 2001	Immigrant Nurses' Experience of Racism	Canada, N=9	7 countries	Exploratory, Descriptive,
Omeri et al., 2002	Lived experiences of immigrant nurses in New South Wales, Australia: searching for meaning	Australia, N=5	5 countries	Phenomenology, Interview
Turriffin et al., 2002	The experiences of professional nurses who have migrated to Canada: cosmopolitan citizenship or democratic racism?	Canada, N=9		Open-ended interview,
Withers & Snowball, 2003	Adapting to a new culture: A study of the expectations and experiences of Filipino nurses in Oxford Radcliffe Hospitals NHS Trust	UK, N=45	The Philippines	Semi-structured, interview
Veer et al., 2004	Experiences of foreign European nurses in the Netherlands	Netherlands, N=987	The Europe Union(EU)	Questionnaire
Alexis & Vydelingum, 2005	The experiences of overseas black and minority ethnic registered nurses in an English hospital	England, N=12	Philippines, Africa, Caribbean	Phenomenological study, Semi structured interview, Thematic analysis
Magnusdottir, 2005	Overcoming strangeness and communication barriers: a phenomenological study of becoming a foreign nurse	Iceland, N=11	7 countries	Phenomenology, Unstructured interview
Alexis et al., 2006	Overseas nurses' experiences of equal opportunities in the NHS in England	England, N=12	Philippines, Africa, Caribbean, Africa	Semi-structured interview
Gloria Likupe, 2006	Experience of African nurses in the UK National Health Service: a literature review	England, N=19		Literature review
O'Brien-Pallas & Wang, 2006	Innovations in Health Care Delivery: Responses to Global Nurse Migration - A Research Example	Canada, N=6,477	multiple countries	Correlational study

Cummins, 2009	Migrant nurses' perceptions and attitudes of integration into perioperative setting	Ireland, N=220	Asian origin	Quantitative,
Humpries et al., 2009	A qualitative study on the retention of migrant nurses in Ireland	Ireland, N=21	Philippines, India	Qualitative, Interview

Appendix B (Continued).

Authors & Year	Experiences or Findings (Outcomes)
Hagey et al., 2001	<p>Recurring themes were;</p> <ol style="list-style-type: none"> (1) being marginalized and naming the racist experiences (2) experienced physical stress and emotional pain (3) strategizing to cope and survive (4) recommending policy changes
Omeri et al., 2002	<p>3 categories</p> <ol style="list-style-type: none"> (1) professional negation - experienced as lack of support, direction (2) otherness - experienced in cultural separateness & loneliness (3) silencing - experienced in language and communication difficulties
Turriffin et al., 2002	<p>Dealing with conflicts</p> <ol style="list-style-type: none"> (1) perceived different treatment (2) recognition of being problematized and marginalized (3) labeling nurses as aggressive, unmanageable (4) full reprisal and punishment for conflicts
Withers & Snowball, 2003	<p>Use <u>Pilette</u> (1989)' Phase of adjustment - by months</p> <ol style="list-style-type: none"> (1) acquaintance(0-3 months)- anxiety, feeling of euphoria, fascination (2) indignation(3-6 months) - awareness of difference such as profession, cultural and psychological between two countries (3) conflict(6-9 months) - tendency to speak out the conflicts (4) integration(9-12 months) -getting adjusted
Veer et al., 2004	<ol style="list-style-type: none"> (1) problem with law and regulations (2) unfamiliarity with job application procedure (3) compatibility between pre & required knowledge and skills (4) limited working conditions
Alexis & Vydellinguml. 2005	<p>8 themes</p> <ol style="list-style-type: none"> (1) not feeling appreciated (2) feeling inadequate (3) feeling unwelcome (4) lack of opportunities for skill development (5) unfairness in nursing practice

	(6) performance review - inappropriate appraisal (7) absence of support from white British counterparts (8) proving self to gain recognition in their workplace
Magnusdottir, 2005	5 main themes (1) tackling the initial, multiple challenges (2) becoming an outsider and the need to be let in (3) struggling with the language barrier (4) adjusting to different to work culture (5) overcoming challenges to win through
Alexis et al., 2006	2 main themes discussed (1) unequal opportunities in career advancement (2) unequal opportunities for skill development & training
Gloria Likupe, 2006	negative experiences in general (1) discrimination in pay and conditions of service (2) exploitation by managers (3) ethical issues surrounding recruitment (4) unlawful and unfair treatment of nurses entering the U.K.
O'Brien-Pallas & Wang, 2006	Internationally born nurses (IBN) & Canada born nurses (CBN) (1) significantly more work in direct care, overtime hours (2) experience more physical, verbal and emotional abuse (3) IBNs were less physically healthy than CBNs (4) not overly satisfied than CBN in direct care or current positions (5) experience of violence higher than CBN (6) inequity between the opportunities to attend educational activities
Cummins, 2009	96% respondents found the support of preceptors beneficial and hospital orientation programs valuable. 49% of migrant nurses found that work practices were different from those in their home countries.
Humpries et al., 2009	over half (11) of migrant nurses interviewed intended to leave the country within the next five years

Appendix C FENs' Experiences in the U.S. (Methods)

Authors &Year	Method & Framework	Instruments used	Data Analysis	Outcome Variables
Joyce & Hunt, 1982	Interview Questionnaire	Scale of anchorage in Philippine society, Scale of perceived relative opportunity in the Philippines		
Pizer et al., 1992	Comparison	Nurse Job satisfaction Survey (NJSS) - Atwood & Hinshaw (1986). Demographics, education, work characteristics	t-test, Chi-square, Multivariate Regression	Job satisfaction - quality, enjoyment time
Brown & James, 2000	Experimental, Cross-sectional	Job Content Questionnaire including psychological demand, blood pressure, BMI, nor-epinephrine level	t-test, ANOVA	
Berg et al., 2004	Non-experimental, Descriptive	Questionnaire designed specifically for this study	Descriptive statistics, Chi-square, Pearson's correlations	
Liou & Grobe, 2008	Cross-sectional, Correlational	Collectivist Orientation Scale(COS) Organizational Commitment Questionnaire(OCQ) The Practice Environment Scale of the Nursing Work Index(PES-NWI), Anticipated Turnover Scale(ATS)	Hierarchical Regression Correlation	
Ea et al., 2008	Descriptive, Correlational	A Short Acculturation Scale for Filipino Americans(ASASFA) Part B of the Index of Work Satisfaction Scale (IWS)	Pearson Correlation Multiple Regression	Acculturation
Beechinor & Fitzpatrick, 2008	Comparative, Descriptive	Demands of Immigration (D.I.) Scale - Loss, Novelty, Occupational adjustment, Language accommodation, Discrimination, and Not feeling at home in the receiving country		D.I. score
Xu et al., 2010	Comparison,	use 2004 National Sample Survey of Registered Nurse	t-test, Chi-square, Uni & Bivariate	Employment, Job satisfaction

Appendix D FENs' Experiences in Non-U.S. (Methods)

Authors & Year	Methods & Framework	Instrument used	Data analysis
Withers & Snowball, 2003	Semi-structured, interview, Survey Questionnaire	A self-completed questionnaire: reasons for migration, experiences of recruitment, pre-arrival expectations, their thoughts of the adaptation program, and their good and bad experiences	Frequency, %
Veer et al., 2004	Survey	Questionnaire: reasons for seeking employment, experiences in looking for a job, experience of working in Netherlands	Frequency, %
O'Brien-Pallas & Wang, 2006	Correlational study	SF-12 -measuring 8 domains: physical functioning, vitality, role functioning, physical problems, social functioning, bodily pain, mental problems	Frequency, %, p-value
Cummins, 2009	Quantitative, Descriptive	34-item questionnaire designed specifically for this study	Descriptive

Appendix E Authors' Comments for Pilette's Adjustment Process

Phases	Pilette, 1989	Spry, 2009, p 594	Palese et al , 2007, p 3	Withers et al , 2003, p 281	Ryan, 2003, p 350-1
Acquaintance (-3mo)	overseas screening & interview process and post-orientation period- possibly be with high activity, euphoria, fascination, high stress	when the nurse arrives and is oriented to the job	this phase can be defined as the gaining of knowledge & commences on arrival and with orientation into the workplace	in this phase, which extends from the first meeting to post orientation, there is a feeling of euphoria and fascination for everything new	Establishing a cultural committee where American Jargon and variations in nursing practice delivery are explained is appropriate in this phase
Indignation (3-6 mo)	characterized by cultural, professional, & psychological dissonance Individuals experience a sharpened awareness of "difference" between here and home	characterized by cultural and psychological dissonance	characterized by cultural confusion, both professional & psychological Support groups can play a special role in relieving anxiety and preventing isolation at this time	in this phase, there is an awareness of differences (such as cultural, professional and psychological) between the host country and home	is the most difficult phase, characterized by cultural, professional and psychological dissonance Having support groups are needed
Conflict resolution (6-9 mo)	This is a period of focused emotion and futuristic decision-making. This phase prove to be the most decisive in the retention outcome	decide either to reject or move	conflict normalizes/resolves	In this phase, individual has a tendency to speak out about the conflicts in the organization: if the conflicts are too great, this the time an individual will decide to transfer to	The hallmark of this phase is decision-making. Individual counseling also can be offered in this phase

<p>Integration (9-12 mo)</p>	<p>characterized by a period of lessened tension, renewed enthusiasm, and emerging concern for coworkers. Indeed, the temporal nature of the commitment contract lends itself to less organizational involvement</p>	<p>when the nurse identified with the institution, has adjusted, and chooses to remain employed in the facility</p>	<p>nurses decide to stay and gradually become completely integrated</p>	<p>another hospital or to return home. The majority of those who decide to stay become less stressed, more enthusiastic and begin integrating</p>	<p>In this phase, the organization needs to evaluate all programs, resources, and efforts designed to facilitate the international nurses' adjustment process</p>
----------------------------------	--	---	---	---	---

Appendix F Summary of Survey Questions

Measures	No. of Ques.	Variable names (num. of cat,)	Scale type
Demographic and Career Characteristics	1	Age	Cont.
	1	Gender (2)	Cat.
	1	Country of Origin (5)	Cat.
	1	Education (home) (4)	Cat.
	1	Past Experience (home)	Cont.
	1	Year of first employment	Cont.
	1	Marital status (3)	Cat.
	1	Primary employment setting (7)	Cat.
	1	Primary clinical area (6)	Cat.
	1	Same unit (2)	Cat.
	1	Social network (2)	Cat.
	1	Role (2)	Cat.
	1	Employment status (3)	Cat.
	1	Length of shift (4)	Cat.
	1	Time of shift (4)	Cat.
	1	Multiple employments (2)	Cat.
	1	Duration of the first employment	Cont.
	1	Presence of agency contract (2)	Cat.
Expectations and Experiences Measures	5	Comfort	5-point Likert scale
	7	Reward	
	8	Responsibility	
Orientation Evaluation	6	General satisfaction	5-point Likert scale
	3	Preceptor type (3) and num, duration	Cat./Cont./Cont.
Organizational Commitment Questionnaire	8	Affective	5-point Likert scale
	8	Continuance	
	8	Normative	
Language Fluency	1	Self-rated language confidence	Cont.
	1	communication challenge	
Health Experiences	1	Self-Rated Health (health status)	5-point Likert scale
	3	Self-Report of Employee Occupational Health Outcomes (injury)	Yes/ No and Cont.
	2	Health Symptoms and Barriers to Symptom Management (symptom)	Yes/No
	8	Social support	Cont.
Job Search Behavior	6	Preparatory	5-point Likert scale with frequency
	6	Active	
Actual Turnover	1	Turnover	Cat.
	1	Open question	Text

Cat. = categorical type, Cont. = continuous type

Appendix G Formal Invitation Letter to the Organizations



University of Michigan School of Nursing TEL 734.764.8152
400 North Ingalls, Suite 4170 FAX 734.647.2416
Ann Arbor, Michigan 48109-5482 nursing.umich.edu

Division of Nursing Business and
Health System Programs

Dear,

My name is Hyo Geun Geun, and I am a PhD candidate at the School of Nursing, University of Michigan.

Allow me to introduce my experience as a foreign-educated nurse and my research interests to you. Initially, I worked in a hospital in Los Angeles for two and half years in the Medical-Surgical unit and the Direct Observation Unit (DOU). With those experiences, I entered the School of Nursing at Michigan to acquire further training to become a researcher.

According to my experience, many US hospitals seemed more interested in recruiting nurses from outside the US than retaining them once they start to work here. Therefore, retaining foreign-educated nurses is emerging as a vital issue; foreign-educated nurses are increasingly returning to their home countries or moving to other organizations. However, research has yet to investigate factors related to this turnover. In addition, it seems that foreign-educated nurses seem to overcome the many practical barriers they face via their own initiative. I believe factors related to their hospitals and work environment likely contribute to foreign-educated nurses' turnover intention and actual turnover, and I want to investigate and define these factors.

Based on my individual experience and review of the relevant literature, my current study focuses on Asian foreign-educated nurses' actual turnover in their first year of employment, based on occupation and organization-related experiences such as language confidence, orientation evaluation, and health experiences. This study is for my dissertation at the University of Michigan.

Leading the way.

Appendix G (Continued).

I am contacting your association for assistance in this important research. I hope to approach members of your association who would be willing to participate in my research project.

I have developed a survey that will take approximately 20 minutes to complete. Participation would be voluntary and all responses would be kept anonymous. The results would be shared with those who express and interest and, of course, I would share the results with your office as well.

I am wondering what approaches might be possible to connect with your membership and how I would go about seeking permission for this access. I am willing to provide a brief synopsis of my proposal and survey for your review. I also am interesting in providing any additional information you may require for consideration of this request.

I look forward to hearing next steps on how I might discuss this request further with you. Thank you very much for your consideration of this request to participate in my research.

Sincerely,

Hyo Geun Geun

PhD candidate, MPH, RN
Data analyst
Peri-operative Outcomes Initiative (POI)
University of Michigan School of Nursing
400 North Ingalls Street, Room 4341
Ann Arbor, Michigan 48109-5482
734-647-0866 (office), 818-636-2982(Cell),
geunhyo@umich.edu

Appendix H Cover letter

Hello,

My name is Hyo Geun Geun, and I am a PhD candidate at the School of Nursing, University of Michigan. I am conducting a survey of unique organization and occupation-related experiences with Asian foreign-educated nurses in the U.S.

Based on my individual experience and review of the relevant literature, foreign-educated nurses face many practical barriers and issues on a daily basis while trying to adjust to a new environment in the U.S. Although some of the foreign-educated nurses are increasingly returning to their home countries or moving to other organizations in their first year of employment, research has yet to investigate factors related their turnover.

Therefore, this survey will help identify aspects of your experience that many other Asian foreign-educated nurses also find problematic, as well as aspects that will contribute to your future satisfaction and career success and describe risks and benefits of participating in the survey.

All information obtained through this survey will be kept strictly confidential. The survey is being administered and analyzed by me and my dissertation committee members associated with the University of Michigan, and no one associated with the School of Nursing or other departments will have access to the individual responses. All results will be reported in aggregate form and will contain no personally identifying information. The survey is expected to take 15-20 minutes to complete. After survey, you will be offered a **\$5 Starbucks gift card**.

If you have any questions about the issues addressed in this message or other questions or concerns about the survey, please do not hesitate to contact me at 818-636-2982 or geunhyo@umich.edu or geunhg@gmail.com

Sincerely,

Hyo Geun Geun

PhD candidate, MPH, RN
University of Michigan, School of Nursing
400 North Ingalls Street, Room 4341
Ann Arbor, Michigan 48109-5482 734-647-0866 (office), 818-636-2982(cell)

Appendix I Eligibility Testing Questions

- A Since beginning work in US healthcare settings, your current healthcare setting is
- 1 The 1st healthcare setting you have worked in
 - 2 The 2nd healthcare setting you have worked in
 - 3 The 3rd healthcare setting you have worked in
 - 4 The 4th or more
 - 5 No longer in nursing profession

* If your answer is 1 in question A, skip question B, go to question C

And, if you have been working in this organization less than one year, (e.g., three months through 12 months by now), for all of the following questions, PLEASE, base your responses on your CURRENT organizational experiences thus far in this organization.

And, if you have been working in this organization more than one year, for all of the following questions, PLEASE, base your responses on only your FIRST YEAR of organizational experience in this organization.

- B If you are not currently working in your 1st healthcare setting, did you _____?
- 1 leave your first employment involuntarily?
 - 2 retire from your first employment?
 - 3 resign your first employment?
 - 4 change to non-nursing?

- C When you work or worked in your first healthcare setting, did the patients and health care professionals use your first language exclusively as opposed to English?
- 1 Yes
 - 2 No

Appendix J Survey Questionnaire Demographic and Career Characteristics

General Questions

The following three questions are designed to assess your demographic profile.

- 1 What is your year of birth? (year)
- 2 What is your gender?
 - Female
 - Male
- 3 What is your country of origin?
 - China
 - India
 - Korea
 - Philippine
 - Other Asian Country (specify)

Questions related to experiences from your Home country

The following two questions are related to experiences from your home country.

- 4 What is the highest nursing educational degree attained in your home country?
 - Less than Baccalaureate degree
 - Baccalaureate degree
 - Graduate (Master or Doctorate)
 - Others (specify)
- 5 How long did you work as a RN in your home country? (mm/yy)

Questions related to First year of your First employment in the U.S.

The following questions are related to FIRST year of your FIRST employment in the U.S.

- 6 Which year did you first start to work in a U.S. healthcare setting?
- 7 What was your marital status in your first year of employment in the U.S.?
 - Single/divorced/widowed/separated
 - married and with spouse in the U.S.
 - married and without spouse in the U.S.
- 8 What was your primary employment setting in your first year of employment in the U.S.?
 - Hospital
 - Nursing home /Extended care facility
 - Academic education program

Home health setting
Public/community/school/occupational health
Ambulatory care setting
Other (specify)

* If your answer is not 1 in question 8, skip question 9 and 10, go to question 11

- 9 What was your primary clinical practice in your first year of employment in the U.S.?
General (medical/surgical)
Specialty/Critical care
OR/PACU/Recovery
Labor/Delivery
ER
Other (specify) e.g., Pediatric ICU
- 10 Were you placed in the same clinical unit as you had worked last in your country?
Yes
No
- 11 In your first year of employment in the U.S., did you work on the same unit with at least one nurse from your own country of origin?
Yes
No
- 12 What was your role in your first year of employment in a U.S. hospital?
Staff nurse
Non-staff nurse (specify)
- 13 What best describes your employment status in the first year of employment in a U.S. health care setting?
Full time (36 hours/week or more)
Part time
Other (specify)
- 14 What best describes the length of shift you usually worked in your first year of employment?
8 hours
12 hours
Both
Other (specify)
- 15 What shifts did you usually work in your first year of employment?
Day
Evening
Night

Rotating

16 Did you work in more than one healthcare setting in your first year of employment?

Yes (how many:)

No

17 How long did you work for your first US employer? (mm/yy)

18 In your first year of employment, did you have any contract specifying the number of years you were expected to remain with that agency or hospital?

Yes

No

Expectations and Experiences Measures

The following questions are divided into three sections and designed to assess the differences between pre-expectations about your first health-care setting before you start to work and post-experiences in your first health-care setting after you start to work.

Section 1 Comfort (19-23)

Section 2 Reward (24-30)

Section 3 Responsibility (31-38)

		<u>Before you started to work</u> in a U.S. hospital setting, how likely did you believe your employment would result in each of the following?					<u>By the end of your first year of employment</u> , how likely did you believe your employment would result in each of the following?				
		<i>extremely unlikely</i>	<i>unlikely</i>	<i>neutral</i>	<i>likely</i>	<i>extremely likely</i>	<i>not at all</i>	<i>slightly</i>	<i>moderately</i>	<i>very</i>	<i>a great deal</i>
1	Provides job security	1	2	3	4	5	1	2	3	4	5
2	Permits a regular routine in time and place of work	1	2	3	4	5	1	2	3	4	5
3	Has clear cut rules and procedures to follow	1	2	3	4	5	1	2	3	4	5
4	Provides ample leisure time off the job	1	2	3	4	5	1	2	3	4	5
5	Provides comfortable working conditions	1	2	3	4	5	1	2	3	4	5
6	Encourages continued development of knowledge and skills	1	2	3	4	5	1	2	3	4	5
7	Is intellectually stimulating	1	2	3	4	5	1	2	3	4	5

8	Provides a feeling of accomplishment	1	2	3	4	5	1	2	3	4	5
9	Provides the opportunity to earn a high income	1	2	3	4	5	1	2	3	4	5
10	Is respected by other people?	1	2	3	4	5	1	2	3	4	5
11	Permits you to work for superiors you admire and respect	1	2	3	4	5	1	2	3	4	5
12	Rewards good performance with recognition	1	2	3	4	5	1	2	3	4	5
13	Gives you responsibility for taking risks	1	2	3	4	5	1	2	3	4	5
14	Permits you to develop your own methods of doing the work	1	2	3	4	5	1	2	3	4	5
15	Requires working on problems of central importance to the organization	1	2	3	4	5	1	2	3	4	5
16	Makes a social contribution by the work you do	1	2	3	4	5	1	2	3	4	5
17	Provides change and variety in duties and activities	1	2	3	4	5	1	2	3	4	5
18	Requires originality and creativeness	1	2	3	4	5	1	2	3	4	5
19	Satisfies your cultural and aesthetic interests	1	2	3	4	5	1	2	3	4	5
20	Permits working independently	1	2	3	4	5	1	2	3	4	5

Orientation Evaluation

The following questions are designed to measure your general opinions about the satisfaction with orientation content, duration, preceptor, and respect in your first year of employment.

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I was satisfied in general with the orientation provided by my first employer.	1	2	3	4	5
2	The time spent in the orientation was adequate.	1	2	3	4	5
3	I was satisfied with my preceptor's instructions.	1	2	3	4	5
4	I was provided with adequate opportunities to practice new skills.	1	2	3	4	5
5	Overall, the orientation content included information relevant to my nationality and culture.	1	2	3	4	5
6	In general, new foreign-educated nurses were treated with respect and dignity during orientation.	1	2	3	4	5

Were your preceptors from your own country of origin ?

Always from my own country of origin

Sometimes from my own country of origin

Never from my my own country of origin

How many preceptors worked with you over the course of the orientation? ()

Please indicate the number of weeks spent in orientation () weeks

Organizational Commitment

The following questions are designed to define your desire to maintain your membership in the first U.S. health-care setting (organization) while you are (were) accepting the health-care setting's goals and values and willing to contribute to the benefit of health-care setting in your first year of employment. The measure is divided into three sections.

Section 1 Affective commitment (48-55)

Section 2 Continuance commitment (56-63)

Section 3 Normative commitment (64-71)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1 I would be vary happy to spend the rest of my career with this organization.	1	2	3	4	5
2 I enjoy discussing my organization with people outside of it.	1	2	3	4	5
3 I really feel as if this organization's problems are my own.	1	2	3	4	5
4 I think that I could easily become as attached to another organization as I am to this one.	1	2	3	4	5
5 I do not feel like "part of the family" at my organization.	1	2	3	4	5
6 I do not feel "emotionally attached" to this organization.	1	2	3	4	5
7 This organization has a great deal of personal meaning for me.	1	2	3	4	5
8 I do not feel a strong sense of belonging to my organization.	1	2	3	4	5
9 I am not afraid of what might happen if I quit my job without having another one lined up.	1	2	3	4	5
10 It would be very hard for me to leave my organization right now, even if I wanted to.	1	2	3	4	5
11 Too much in my life would be disrupted if I decided I wanted to leave my organization now.	1	2	3	4	5

12	It wouldn't be too costly for me to leave my organization now.	1	2	3	4	5
13	Right now, staying with my organization is a matter of necessity as much as desire.	1	2	3	4	5
14	I feel that I have too few options to consider leaving this organization.	1	2	3	4	5
15	One of the few serious consequences of leaving this organization would be the scarcity of available alternatives.	1	2	3	4	5
16	One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice-another organization may not match the overall benefits I have here.	1	2	3	4	5
17	I think that people these days move from organization to organization too often.	1	2	3	4	5
18	I do not believe that a person must always be loyal to his or her organization.	1	2	3	4	5
19	Jumping from organization to organization does not seem at all unethical to me.	1	2	3	4	5
20	One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain.	1	2	3	4	5
21	If I got another offer for a better job elsewhere I would not feel it was right to leave my organization.	1	2	3	4	5
22	I was taught to believe in the value of remaining loyal to one organization.	1	2	3	4	5
23	Things were better in the days when people stayed with one organization for most of their careers.	1	2	3	4	5
24	I do not think that wanting to be a "organization man" or "organization woman" is sensible anymore .	1	2	3	4	5

Language Fluency

The following two questions are designed to assess any communication issues that you might face in your first year of employment.

Self-rated Language confidence

72. How well would you say you spoke English in your first year of employment?

Poor

Fair

Well

Very well

Communication skills

73. How comfortable did you feel when you communicated with your co-workers in your first year of employment?

Very uncomfortable

Somewhat uncomfortable

Neutral

Somewhat comfortable

Very comfortable

Health Experiences

The following questions are designed to measure your daily experiences related to your physical and psychological symptoms, and any overall health status change in your first year of employment after you started to work in U.S. health-care setting.

Self-Rated Health

74. Think about your first year of employment in the U.S., would you say that in general your health was...

- Excellent
- Good
- Fair
- Poor
- Very Poor

The Self-Report of Employee Occupational Health Outcomes

75. The following questions are about your experience with job-related injury or illness in your first year of employment in the U.S. Indicate any job related illness or injury you experienced (check all the apply) If you did not experience any job-related illness or injuries in question 75, skip 76 and 77, go to question 78.

- Back injury
- Strain /sprain of arms, shoulder or neck
- Strain /sprain of hip or leg
- Blood or body fluid exposure from needle stick
- Blood or body fluid exposure from splash
- Latex allergy
- Physical or mental injury related to violence or abuse
- Other (specify)

76. How many of the above injuries did you report to the infection control program, employee health services or emergency room? ().

77. If you had injuries that you did not report, indicate why (check all that apply)

- I did not have time
- I was concerned about confidentiality issues
- I thought that the injury was low risk

I didn't think it was important to report because the incident had already occurred and there was nothing that could be done about it

I didn't know the reporting procedure

I was afraid of being reprimanded

In the case of a body fluid exposure, I thought the patient was at low risk for blood borne diseases (HIV, hepatitis B, hepatitis C.,)

Other (please explain)

Health Symptoms and Barriers to Management

78. Have you had any of the following psychological or physical symptoms in your first year of employment? (check all that apply) If you have not experienced any of the following symptoms, skip the question 79, go to 80.

Fear

Anxiety

Anger

Depression

Hypertension

Weight change

Back pain

Stomach upset

Other (specify)

79. If you were not able to manage the symptoms you checked which one of the followings were barriers to management of the symptoms? (check all that apply)

Lack of time

Insufficient energy

Job demand

Concern about something else (e.g., personal, family or other non-job related)

Other (specify)

Social Support

The following questions are designed to assess the atmosphere and conditions of the workplace, which includes the understanding and support received from colleagues in your first year of employment.

		Strongly disagree	Disagree	Undecided	Agree	Strongly agree
1	I feel comfortable with my coworkers, and can talk to them easily about personal matters	1	2	3	4	5
2	I am good friends with some of the people I work with	1	2	3	4	5
3	I enjoy working with the people on this unit	1	2	3	4	5
4	There are well-defined groups of friends on this work unit, and I have not had much success at becoming part of any of these groups.	1	2	3	4	5
5	I don't feel I have much in common with others who work on this unit	1	2	3	4	5
6	I am able to turn to my coworkers when I need help on the job	1	2	3	4	5
7	I would like to do more, socially, with the people on my unit	1	2	3	4	5
8	I avoid the people on my unit as much as possible	1	2	3	4	5

Job Search Behavior

The following questions are divided into two sections and designed to measure your behavior of searching for potential job opportunities while you are (were) working in the first year of U.S. employment.

Section 1 Preparatory job search behavior (88-93)

Section 2 Active job search behavior (94-99)

	1 (never) 0 times	2 (rarely) 1 or 2 times	3 (occasionally) 3 to 5 times	4 (frequently) 6 to 9 times	5 (very frequently) at least 10 times
88 <u>Read</u> the help wanted/classified ads in a newspaper, journal, or professional association.	1	2	3	4	5
89 <u>Listed</u> yourself as a job applicant in a newspaper, journal, or professional association.	1	2	3	4	5
90 <u>Prepared/revised</u> your resume	1	2	3	4	5
91 <u>Sent</u> my resumes to potential employers.	1	2	3	4	5
92 <u>Filled out</u> a job application.	1	2	3	4	5
93 <u>Read</u> a book or article about getting a job or changing jobs.	1	2	3	4	5
94 <u>Had</u> a job interview with a prospective employer.	1	2	3	4	5
95 <u>Talked</u> with friends or relatives about possible job leads.	1	2	3	4	5
96 <u>Contacted</u> an employment agency, executive search firm or state employment service.	1	2	3	4	5
97 <u>Spoke</u> with previous employers or business acquaintances about their knowing of potential job leads.	1	2	3	4	5
98 <u>Telephoned</u> a prospective employer.	1	2	3	4	5

99 <u>Used</u> resources within my current employment setting (e.g., colleagues) to generate potential job leads.	1	2	3	4	5
---	---	---	---	---	---

Actual Turnover

The following two questions are designed to assess whether you stayed in your first organization or moved to another organization (or another unit in the same organization) at the end of your first year of employment.

100. What best describes your employment status at the end of the first year after you began to work in an organization in the U.S.?

I work or worked within the same department in the same organization

I switched to another department within the same organization

I left for another organization, and work (or worked) in the same department from I worked initially

I left for another organization, and work(or worked) in a different department from where I worked Initially

I left the first organization by the end of the first year, and I was not employed

* If your answer is 1 in question above, skip the following question.

101. Why did you leave the unit or organization you were originally employed on at the end of the first year? (open-ended)

References

- AbuAlRub, R. F. (2004). Job stress, job performance, and social support among hospital nurses. *Journal of Nursing Scholarship: An Official Publication of Sigma Theta Tau International Honor Society of Nursing*, 36(1), 73-78.
- AbuAlRub, R. F. (2006). Replication and examination of research data on job stress and coworker social support with internet and traditional samples. *Journal of Nursing Scholarship*, 38(2), 200-204.
- Aiken, L. H. (2007). US nurse labor market dynamics are key to global nurse sufficiency. *Health Services Research*, 42(3 Pt 2), 1299-1320.
- Aiken, L. H., Clarke, S. P., Sloane, D. M. Batata,, & Sochalski, J. (2001). Cause for concern: Nurses' reports of hospital care in five countries. *LDI Issue Brief*, 6(8), 1-4.
- Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J., & Silber, J. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *The Journal of the American Medical Association*, 288(16), 1987-1993.
- Aiken, L. H., Buchan, J., Sochalski, J., Nichols, B., & Powell, M. (2004). Trends in international nurse migration. *Health Affairs*, 23(3), 69.
- Alexis, O., & Vydellingum, V. (2005). The experience of overseas black and minority ethnic registered nurses in an English hospital. *Journal of Research in Nursing*, 10(4), 459-472.
- Alexis, O., Vydellingum, V., & Robbins, I. (2006). Overseas nurses' experiences of equal opportunities in the NHS in England. *Journal of Health Organization and Management*, 20(2-3), 130-139.
- Allan, H., & Larsen, J. A. (2003). 'We need respect': Experiences of internationally recruited nurses in the UK. Royal College of Nursing, London.
- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment. *Journal of Occupational Psychology*, 63(1), 1-18.
- Allen, N. J., & Meyer, J. P. (1996). Affective, continuance, and normative commitment to the organization: An examination of construct validity. *Journal of Vocational Behavior*, 49(3), 252-276.
- Amarnah, B.H., AbuAlRub, R. F., AbuAlRub, N. F. (2009). Co-workers' support and job performance among nurses in Jordanian hospitals. *Journal of Research in Nursing*, 15, 391-401.
- American Association of Colleges of Nursing (AACN) (2002). Acute Care Hospital Survey of RN Vacancy and Turnover Rates in 2000.
- American Association of Colleges of Nursing (AACN) (2009). Nursing shortage. <http://www.aacn.nche.edu/media/FactSheets/NursingShortage.htm> Accessed August 20, 2010.

- ANA proposes voluntary code of ethical conduct for the recruitment of foreign-educated nurses to the united states. (2009). *Nurse Educator*, 34(1), 46.
- Batata, A. S. (2005). International nurse recruitment and NHS vacancies: A cross-sectional analysis. *Globalization and Health*, 1(1), 7-17.
- Beechinor, L. A., & Fitzpatrick, J. J. (2008). Demands of immigration among nurses from Canada and the Philippines. *International Journal of Nursing Practice*, 14(2), 178-187.
- Berg, J. A., Rodriguez, D., Kading, V., & De Guzman, C. (2004). Demographic survey of filipino american nurses. *Nursing Administration Quarterly*, 28(3), 199-206.
- Berliner, H. S., & Ginzberg, E. (2002). Why this hospital nursing shortage is different. *The Journal of the American Medical Association*, 288(21), 2742-2744.
- Bieski, T. (2007). Foreign-educated nurses: An overview of migration and credentialing issues. *Nursing Economic\$,* 25(1), 20-3, 34, 3.
- Birnbaum, D., & Somers, M. J. (1993). Fitting job performance into turnover model: An examination of the form of the job performance-turnover relationship and a path model. *Journal of Management*, 19(1), 1.
- Blau, G. (1993). Further exploring the relationship between job search and voluntary individual turnover. *Personnel Psychology*, 46(2), 313.
- Blau, Gary. (1994). Testing a two-dimensional measure of job search behavior. *Organizational Behavior and Human Decision Processes*, 59(2), 288.
- Blau, G., Ward-Cook, K., & Edgar, L. C. (2006). Testing for the impact of correlates on medical technologists' intent to leave their jobs. *Journal of Allied Health*, 35(2), 94.
- Bola, T. V., Driggers, K., Dunlap, C., & Ebersole, M. (2003). Foreign-educated nurses: Strangers in a strange land? *Nursing Management*, 34(7), 39-42.
- Boyle, D. K., & Miller, P. A. (2008). Focus on nursing turnover: A system-centered performance measure. *Nursing Management*, 39(6), 16-20.
- Boylston, M. T., & Burnett, I. (2010). Education, adaptation, and orientation of Korean nurses in a U.S. healthcare system. *Journal for Nurses in Staff Development*, 26(1), 23-27.
- Brewer, C. S., Kovner, C. T., Greene, W., & Cheng, Y. (2009). Predictors of RNs' intent to work and work decisions 1 year later in a U.S. national sample. *International Journal of Nursing Studies*, 46(7), 940-956.
- Brown, D. E., & James, G. D. (2000). Physiological stress responses in Filipino-American immigrant nurses: The effects of residence time, life-style, and job strain. *Psychosomatic Medicine; Psychosomatic Medicine*, 62(3), 394-400.
- Brush, B. L. (2008). Global nurse migration today. *Journal of Nursing Scholarship*, 40(1), 20-25.
- Brush, B. L., Sochalski, J., & Berger, A. M. (2004). Imported care: Recruiting foreign nurses to U.S. health care facilities. *Health Affairs (Project Hope)*, 23(3), 78-87.
- Buchan, J. (2004). International rescue? the dynamics and policy implications of the international recruitment of nurses to the UK. *Journal of Health Services Research & Policy*, 9 Suppl 1, 10-16.

- Buchan, J. (2007). International recruitment of nurses: Policy and practice in the United Kingdom. *Health Services Research, 42*(3 Pt 2), 1321-1335.
- Buchan, J., & Calman, L. (2004). The global shortage of registered nurses: an overview of issues and actions. Geneva, Switzerland: International Council of Nurses
- Buerhaus, P. I., Staiger, D. O., & Auerbach, D. I. (2003). Is the current shortage of hospital nurses ending? *Health Affairs (Project Hope), 22*(6), 191-198.
- Bumgarner, S. D., & Biggerstaff, G. H. (2000). A patient-centered approach to nurse orientation. *Journal for Nurses in Staff Development, 16*(6), 249-54; quiz 255-6.
- Campion, M. A. (1991). Meaning and measurement of turnover: Comparison of alternative measures and recommendations for research. *Journal of Applied Psychology, 76*(2), 199.
- Casey, K., Fink, R., Krugman, M., & Propst, J. (2004). The graduate nurse experience. *The Journal of Nursing Administration, 34*(6), 303-311.
- Castro, A., PhD, MSN, MPH, RN, Gee, G., & Takeuchi, D. (2008). Relationship between job dissatisfaction and physical and psychological health among Filipino immigrants. *AAOHN Journal, 56*(1), 33.
- Chaguturu, S., & Vallabhaneni, S. (2005). Aiding and abetting--nursing crises at home and abroad. *The New England Journal of Medicine, 353*(17), 1761-1763.
- Campbell, E. T. (2009). Teaching korean RN-BSN students. *Nurse Educator, 34*(3), 122-125.
- Chang, C. S., Du, P. L., & Huang, I. C. (2006). Nurses' perceptions of severe acute respiratory syndrome: Relationship between commitment and intention to leave nursing. *Journal of Advanced Nursing, 54*(2), 171-179.
- Cheng, C. Y., & Liou, S. R. (2011). Intention to leave of Asian nurses in US hospitals: Does cultural orientation matter? *Journal of Clinical Nursing, 20*(13-14), 2033-2042.
- Connelly, L. M., & Hoffart, N. (1998). A research-based model of nursing orientation. *Journal of Nursing Staff Development, 14*(1), 31-39.
- Corcega T, Lorenzo M, Yabes J, sde la Merced B, Vales K. (2002). Nurse supply and demand in the Philippines. *The UP Manila Journal. 5*(1), 1-7.
- Cummins, T. (2009). Migrant nurses' perceptions and attitudes of integration into the perioperative setting. *Journal of Advanced Nursing, 65*(8), 1611-1616.
- Daniel, P., Chamberlain, A., & Gordon, F. (2001). Expectations and experiences of newly recruited Filipino nurses. *British Journal of Nursing (Mark Allen Publishing), 10*(4), 254-6, 258-65.
- DeCicco, J., Laschinger, H., & Kerr, M. (2006). Perceptions of empowerment and respect: Effect on nurses' organizational commitment in nursing homes. *Journal of Gerontological Nursing, 32*(5), 49-56.
- DeSalvo, K. B., Fisher, W. P., Tran, K., Bloser, N., Merrill, W., & Peabody, J. (2006). Assessing measurement properties of two single-item general health measures. *Quality of Life Research : An International Journal of Quality of Life Aspects of Treatment, Care and Rehabilitation, 15*(2), 191-201.
- de Veer, A., den Ouden, D. J., & Francke, A. (2004). Experiences of foreign European nurses in the Netherlands. *Health Policy (Amsterdam, Netherlands), 68*(1), 55-61.

- Dicicco-Bloom, B. (2004). The racial and gendered experiences of immigrant nurses from Kerala, India. *Journal of Transcultural Nursing, 15*(1), 26-33.
- Dijkhuizen, S. R. (1995). Meeting the basic and educational needs of foreign nurses. *Journal of Continuing Education in Nursing, 26*(1), 15-19.
- Dillman, D.A. (2000). *Mail and internet surveys: The tailored design method* (2nd ed.). New York: John Wiley & Sons Incorporated.
- Dubois, H. F., Padovano, G., & Stew, G. (2006). Improving international nurse training: An American-Italian case study. *International Nursing Review, 53*(2), 110-116.
- Ea, E. E., Griffin, M. Q., L'Eplattenier, N., & Fitzpatrick, J. J. (2008). Job satisfaction and acculturation among Filipino registered nurses. *Journal of Nursing Scholarship, 40*(1), 46-51.
- Edward, J. (2000). Teaching strategies for foreign nurses. *Journal for Nurses in Staff Development, 16*(4), 171-173.
- Edwards, J. R. (1991). Person-job fit: A conceptual integration, literature review, and methodological critique. *International review of industrial and organizational psychology, 6*, 283-357.
- Edwards, P. A., & Davis, C. R. (2006). Internationally educated nurses' perceptions of their clinical competence. *Journal of Continuing Education in Nursing, 37*(6), 265-269.
- Fang, Z. Z. (2007). Potential of China in global nurse migration. *Health Services Research, 42*(3 Pt 2), 1419-1428.
- Fields, D., Dingman, M. E., Roman, P. M., & Blum, T. C. (2005). Exploring predictors of alternative job changes. *Journal of Occupational and Organizational Psychology, 78*, 63.
- Flynn, L., & Aiken, L. H. (2002). Does international nurse recruitment influence practice values in U.S. hospitals? *Journal of Nursing Scholarship, 34*(1), 67-73.
- Friedman, R. A., & Holtom, B. (2002). The effects of network groups on minority employee turnover intentions. *Human Resource Management, 41*(4), 405.
- Gavlak, S. (2007). Centralized orientation: Retaining graduate nurses. *Journal for Nurses in Staff Development, 23*(1), 26-30.
- Gee, G. C., & Ponce, N. (2010). Associations between racial discrimination, limited English proficiency, and health-related quality of life among 6 Asian ethnic groups in California. *American Journal of Public Health, 100*(5), 888-895.
- Gerrish, K., & Griffith, V. (2004). Integration of overseas registered nurses: Evaluation of an adaptation program. *Journal of Advanced Nursing; Journal of Advanced Nursing, 45*(6), 579-587.
- Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management, 26*(3), 463.
- Guttman, M. S. (2004). Increasing the linguistic competence of the nurse with limited English proficiency. *Journal of Continuing Education in Nursing, 35*(6), 264-269.
- Hagey, R., Choudhry, U., Guruge, S., Turriffin, J., Collins, E., & Lee, R. (2001). Immigrant nurses' experience of racism. *Journal of Nursing Scholarship, 33*(4), 389-394.

- Haug, S. (2008). Migration networks and migration decision-making. *Journal of Ethnic and Migration Studies*, 34(2), 585-605.
- Health Resources and Services Administration [HRSA]. (2005). *Preliminary findings: 2004 National Sample Survey of Registered Nurses*. Retrieved June 13, 2007, from <http://bhpr.hrsa.gov/healthworkforce/reports/rnpopulation/preliminaryfindings.htm>
- Health Resources and Services Administration (HRSA). (2007). The registered nurse population: Findings from the 2004 National Sample Survey of Registered Nurses. Retrieved from <http://bhpr.hrsa.gov/nursing/NACNEP/reports/sixth/rnsneeded.htm>.
- Health Resources and Services Administration (HRSA), 2010. NSSRN, The Registered Nurse Population: Findings from the 2008 National Sample Survey of Registered Nurses. Released at 09/22/2010. Assessed at 11/06/2010 <http://bhpr.hrsa.gov/healthworkforce/rnsurvey/2008/nssrn2008.pdf>
- Hong, W., & Chao, R. (2007). A comparative test of two employee turnover prediction models. *International Journal of Management*, 24(2), 216.
- Houkes, I., Janssen, P. P. M., de Jonge, J., & Bakker, A. B. (2003). Specific determinants of intrinsic work motivation, emotional exhaustion and turnover intention: A multisample longitudinal study. *Journal of Occupational and Organizational Psychology*, 76, 427.
- HSM Group, L. (2002). Acute care hospital survey of RN vacancy and turnover rates in 2000. *The Journal of Nursing Administration*, 32(9), 437-439.
- Humphries, N., Brugha, R., & McGee, H. (2009). "I won't be staying here for long": A qualitative study on the retention of migrant nurses in Ireland. *Human Resources for Health*, 7, 68.
- Hussey, P. S. (2005). International migration of physicians and nurses to the United States. (Ph.D., The Johns Hopkins University), 101.
- Ingersoll, G. L., Olsan, T., Drew-Cates, J., DeVinney, B. C., & Davies, J. (2002). Nurses' job satisfaction, organizational commitment, and career intent. *The Journal of Nursing Administration*, 32(5), 250-263.
- International Council of Nurses. (2007). Position statements: Nurse retention, transfer and migration. Retrieved August 29, 2010, from <http://209.61.232.65/psretention.htm>
- Irving, P. G., & Meyer, J. P. (1994). Reexamination of the met-expectations hypothesis: A longitudinal. *Journal of Applied Psychology*, 79(6), 937.
- Irving, P. G., & Meyer, J. P. (1995). On using direct measures of met expectations: A methodological note. *Journal of Management*, 21(6), 1159.
- Janiszewski Goodin, H. (2003). The nursing shortage in the United States of America: An integrative review of the literature. *Journal of Advanced Nursing*, 43(4), 335-343.
- Janssen, P. P. M., de Jonge, J., & Bakker, A. B. (1999). Specific determinants of intrinsic work motivation, burnout and turnover intentions: A study among nurses. *Journal of Advanced Nursing*, 29(6), 1360.
- Jones, C., RN, PhD, FAAN, & Gates, M., RN, PhD. (2007). The costs and benefits of nurse turnover: A business case for nurse retention. *Online Journal of Issues in Nursing*, 12(3)

- Joyce, R. E., & Hunt, C. L. (1982). Philippine nurses and the brain drain. *Social Science & Medicine (1982)*, 16(12), 1223-1233.
- Kalisch, B. J., Curley, M., & Stefanov, S. (2007). An intervention to enhance nursing staff teamwork and engagement. *The Journal of Nursing Administration*, 37(2), 77-84.
- Kawi, J., & Xu, Y. (2009). Facilitators and barriers to adjustment of international nurses: An integrative review. *International Nursing Review*, 56(2), 174-183.
- Khatri, N., Fern, C. T., & Budhwar, P. (2001). Explaining employee turnover in an Asian context. *Human Resource Management Journal*, 11(1), 54.
- Kim, G., Aguado Loi, C. X., Chiriboga, D. A., Jang, Y., Parmelee, P., & Allen, R. S. (2011). Limited English proficiency as a barrier to mental health service use: A study of Latino and Asian immigrants with psychiatric disorders. *Journal of Psychiatric Research*, 45(1), 104-110.
- Kinderman, K. T. (2006). Retention strategies for newly hired Filipino nurses. *The Journal of Nursing Administration*, 36(4), 170-172.
- Kingma, M. (2001). Nursing migration: Global treasure hunt or disaster-in-the-making? *Nursing Inquiry*, 8(4), 205-212.
- Kingma, M. (2006). New challenges, emerging trends, and issues in regulation of migrating nurses. *Policy, Politics & Nursing Practice*, 7(3 Suppl), 26S-33S.
- Kingma, M. (2007). Nurses on the move: A global overview. *Health Services Research*, 42(3 Pt 2), 1281-1298.
- Kirsch, J. C. (1990). Staff development opportunity and nurse job satisfaction, organizational commitment, and intent to remain in the organization. implications for staff development. *Journal of Nursing Staff Development*, 6(6), 279-282.
- Kirschenbaum, A., & Weisberg, J. (2002). Employee's turnover intentions and job destination choices. *Journal of Organizational Behavior*, 23(1), 109.
- Kneipp, S. M., & McIntosh, M. (2001). Handling missing data in nursing research with multiple imputation. *Nursing Research*, 50, 384-389.
- Kline, D. S. (2003). Push and pull factors in international nurse migration. *Journal of Nursing Scholarship*, 35(2), 107-111.
- Kong, S. X., Wertheimer, A. I., Serradell, J., & McGhan, W. F. (1994). Psychometric evaluation of measures of organizational commitment and intention to quit among pharmaceutical scientists. *Pharmaceutical Research*, 11(1), 171-180.
- Kovner, C. T., Brewer, C. S., Greene, W., & Fairchild, S. (2009). Understanding new registered nurses' intent to stay at their jobs. *Nursing Economic\$,* 27(2), 81-98.
- Lee, J. (2007). Nurse migration to the united states: Foreign-educated nurses job participation. (Ph.D., University of Illinois at Chicago, Health Sciences Center). , 118.
- Lee, S., Lee, T. W., & Lum, C. (2008). The effects of employee services on organizational commitment and intentions to quit. *Personnel Review*, 37(2), 222.
- Lee, S., Nguyen, H. A., & Tsui, J. (2009). Interview language: A proxy measure for acculturation among Asian Americans in a population-based survey. *Journal of Immigrant and Minority Health / Center for Minority Public Health*,

- Likupe, G. (2006). Experiences of African nurses in the UK national health service: A literature review. *Journal of Clinical Nursing*, 15(10), 1213-1220.
- Liou, S. R., & Cheng, C. Y. (2008). Building organizational commitment of Asian nurses in the United States. *The Journal of Nursing Administration*, 38(1), 8-10.
- Liou, S. R., & Cheng, C. Y. (2011). Experiences of a Taiwanese nurse in the United States. *Nursing Forum*, 46(2), 102-109.
- Liou, S. R., & Grobe, S. J. (2008). Perception of practice environment, organizational commitment, and intention to leave among Asian nurses working in U.S. hospitals. *Journal for Nurses in Staff Development*, 24(6), 276-282.
- Little, L. (2007). Nurse migration: A Canadian case study. *Health Services Research*, 42(3 Pt 2), 1336-1353.
- Leininger, M. M. (1995). Theory of culture care diversity and universality in: George, J. B. (ed) nursing theories; the base for professional nursing practice. *Nursing Theories*, 373-389.
- Lopez, N. (1990). The acculturation of selected filippino nurses to nursing practice in the United States. (Ph.D. University of Pennsylvania).
- Lundberg, O., & Manderbacka, K. (1996). Assessing reliability of a measure of self-rated health. *Scandinavian Journal of Social Medicine*, 24(3), 218-224.
- Ma, A. X., Griffin, M. T., Capitolo, K. L., & Fitzpatrick, J. J. (2010). Demands of immigration among Chinese immigrant nurses. *International Journal of Nursing Practice*, 16(5), 443-453.
- MacDavitt, K., Chou, S. S., & Stone, P. W. (2007). Organizational climate and health care outcomes. *Joint Commission Journal on Quality and Patient Safety*, 33(11 Suppl), 45-56.
- Magnusdottir, H. (2005). Overcoming strangeness and communication barriers: A phenomenological study of becoming a foreign nurse. *International Nursing Review; International Nursing Review*, 52(4), 263-269.
- Martiniano, R., & Moore, J. (2006). Trends in foreign-trained registered nurses in the United States. *Cahiers De Sociologie Et De Demographie Medicales*, 46(2), 149-168.
- Mathews, J. J., & Nunley, C. (1992). Rejuvenating orientation to increase nurse satisfaction and retention. *Journal of Nursing Staff Development : JNSD*, 8(4), 159-164.
- Matiti, M. R., & Taylor, D. (2005). The cultural lived experiences of internationally recruited nurses: a phenomenological study. *Diversity in Health and Social Care*, 2(1), 7-15.
- Maze, C. D. (2006). Registered nurses' willingness to serve populations on the periphery of society. *Journal of Nursing Scholarship : An Official Publication of Sigma Theta Tau International Honor Society of Nursing*, 38(3), 301-306.
- McCloskey, J. C. (1990). Two requirements for job contentment: Autonomy and social integration. *Image--the Journal of Nursing Scholarship*, 22(3), 140-143.
- Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61-89.

- Meyer, J.P., Allen N.J., & Smith, CA. (1993). Commitment to organizations and occupations: extension and test of a three-component conceptualization. *Journal of Applied Psychology*, 78(4), 538–551
- Meyer, R. M., & Meyer, M. C. (2000). Utilization-focused evaluation: Evaluating the effectiveness of a hospital nursing orientation program. *Journal for Nurses in Staff Development : JNSD : Official Journal of the National Nursing Staff Development Organization*, 16(5), 202-6; quiz 207-8.
- Mobley, W.H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology*, 63, 237-240.
- Moore, J. E., & Burke, L. A. (2002). How to turn around 'turnover culture' in IT. *Association for Computing Machinery. Communications of the ACM*, 45(2), 73.
- Moser, K. (2005). Recruitment sources and post-hire outcomes: The mediating role of unmet expectations. *International Journal of Selection and Assessment*, 13(3), 188.
- Mueller, C. W., Boyer, E. M., Price, J. L., & Iverson, R. D. (1994). Employee attachment and noncoercive conditions of work. *Work and Occupations*, 21(2), 179.
- Mueller, C. W., & McCloskey, J.C. (1990). Nurses' job satisfaction: A proposed measure. *Nursing Research*, 39(2), 113-117.
- Mueller, C. W., Wallace, J. E., & Price, J. L. (1992). Employee commitment: Resolving some issues. *Work and Occupations*, 19(3), 211.
- Muncada, F. L. (1995). The labor migration of Philippine nurses to the United States. (PH.D., The Catholic University of America), 214. (UMI Order #PUZ9613690.)
- Murphy, S., & McGuire, M. (2005). The internationally educated nurse: Well-researched and sustainable programs are needed to introduce internationally educated nurses to the culture of nursing practice in Canada. *The Canadian Nurse*, 101(1), 25.
- National Council of State Boards of Nursing (NCSBN). (2010). *NCLEX examination pass rates*. Accessed October, 2010. <https://www.ncsbn.org/1237.htm>.
- Newman, K., Maylor, U., & Chansarkar, B. (2001). The nurse retention, quality of care and patient satisfaction chain. *International Journal of Health Care Quality Assurance Incorporating Leadership in Health Services*, 14(2-3), 57-68.
- Nguyen, L., Ropers, S., Nderitu, E., Zuyderduin, A., Luboga, S., & Hagopian, A. (2008). Intent to migrate among nursing students in Uganda: Measures of the brain drain in the next generation of health professionals. *Human Resources for Health*, 6, 5.
- O'brien-Pallas, L., & Wang, S. (2006). Innovations in health care delivery: Responses to global nurse migration--a research example. *Policy, Politics & Nursing Practice*, 7(3 Suppl), 49S-57S.
- Omeri, A., & Atkins, K. (2002). Lived experiences of immigrant nurses in New South Wales, Australia: Searching for meaning. *International Journal of Nursing Studies*, 39(5), 495-505.
- Padgett, M., Gjerde, K. P., Hughes, S. B., & Born, C.J. (2005). The relationship between pre-employment expectations, experiences, and length of stay in public counting. *Journal of Leadership and Organizational Studies*, 12(1), 82-102

- Palese, A., Barba, M., Borghi, G., Mesaglio, M., & Brusaferrro, S. (2007). Competence of Romanian nurses after their first six months in Italy: A descriptive study. *Journal of Clinical Nursing*,
- Palumbo, M. V., Rambur, B., McIntosh, B., & Naud, S. (2010). Registered nurses' perceptions of health and safety related to their intention to leave. *Official Journal of the American Association of Occupational Health Nurses*, 95-103.
- Pappas, N. A., Alamanos, Y., & Dimoliatis, I. D. (2005). Self-rated health, work characteristics and health related behaviours among nurses in Greece: A cross sectional study. *BMC Nursing*, 4, 8. # page missing
- Park, K. O., Schaffer, B. S., Griffin-Blake, C. S., Dejoy, D. M., Wilson, M. G., & Vandenberg, R. J. (2004). Effectiveness of a healthy work organization intervention: Ethnic group differences. *Journal of Occupational and Environmental Medicine / American College of Occupational and Environmental Medicine*, 46(7), 623-634.
- Parry, J. (2008). Intention to leave the profession: Antecedents and role in nurse turnover. *Journal of Advanced Nursing*, 64(2), 157-167.
- Perrin, M. E., Hagopian, A., Sales, A., & Huang, B. (2007). Nurse migration and its implications for Philippine hospitals. *International Nursing Review*, 54(3), 219-226.
- Pilette, P. C. (1989). Recruitment and retention of international nurses aided by recognition of phases of the adjustment process. *Journal of Continuing Education in Nursing*, 20(6), 277-281.
- Pizer, C. M., Collard, A. F., Bishop, C. E., James, S. M., & Bonaparte, B. (1994). Recruiting and employing foreign nurse graduates in a large public hospital system. *Hospital & Health Services Administration*, 39(1), 31-46.
- Pizer, C. M., Collard, A. F., James, S. M., & Bonaparte, B. H. (1992). Nurses' job satisfaction: Are there differences between foreign and U.S.-educated nurses? *Image--the Journal of Nursing Scholarship*, 24(4), 301-306.
- Polsky, D., Ross, S. J., Brush, B. L., & Sochalski, J. (2007). Trends in characteristics and country of origin among foreign-trained nurses in the United States, 1990 and 2000. *American Journal of Public Health*, 97(5), 895-899.
- Porter, L. W., & Steers, R. M. (1973). Organizational, work, and personal factors in employee turnover and absenteeism. *Psychological Bulletin*, 80(2), 151-176.
- Raghuram, P. (2007). Interrogating the language of integration: The case of internationally recruited nurses. *Journal of Clinical Nursing*, 16(12), 2246-2251.
- Ravestein, E. G. (1989). 'The Laws of Migration' *Journal of the Royal Statistical Society*, 52(2), 241-305.
- Robinson, J. E. (2009). 10 suggestions for orienting foreign-educated nurses: An integrative review. *Journal for Nurses in Staff*, 25(2), 77-83; quiz 84-5.
- Rothausen, T. J., Gonzalez, J. A., Clarke, N. E., & O'Dell, L. L. (1998). Family-friendly backlash--fact or fiction? the case of organizations' on-site child care centers. *Personnel Psychology*, 51(3), 685.

- Rothberg, M. B., Abraham, I., Lindenauer, P. K., & Rose, D. N. (2005). Improving nurse-to-patient staffing ratios as a cost-effective safety intervention. *Medical Care*, 43(8), 785-791.
- Ryan, M. (2003). A buddy program for international nurses. *The Journal of Nursing Administration*, 33(6), 350-352.
- Salmon, M. E., Yan, J., Hewitt, H., & Guisinger, V. (2007). Managed migration: The Caribbean approach to addressing nursing services capacity. *Health Services Research*, 42(3 Pt 2), 1354-1372.
- Schwab, D. P. (1991). Contextual variables in employee performance-turnover relationships. *Academy of Management Journal*, 34(4), 966.
- Seago, J. A., & Spetz, J. (2008). Minority nurses' experiences on the job. *Journal of Cultural Diversity*, 15(1), 16-23.
- Sherman, R. O. (2007). Leadership development needs of managers who supervise foreign nurses. *Leadership in Health Services (Bradford, England)*, 20(1), 7-15.
- Smith, J., & Crawford, L. (2002). *Report of findings from 2001 Employer's Survey* (NCSBN Research Brief, Vol. 3). Chicago, IL: National Council of State Boards of Nursing.
- Sourdif, J. (2004). Predictors of nurses' intent to stay at work in a university health center. *Nursing & Health Sciences*, 6(1), 59-68.
- Spry, C. (2009). Between two cultures: Foreign nurses in the United States. *Association of Operating Room Nurses. AORN Journal*, 89(3), 593.
- Stevens, G. (2006). The age-length-onset problem in research on second language acquisition among immigrants. *Language Learning*, 56(4), 671.
- Stone, P. W., Du, Y., & Gershon, R. R. (2007). Organizational climate and occupational health outcomes in hospital nurses. *Journal of Occupational and Environmental Medicine / American College of Occupational and Environmental Medicine*, 49(1), 50-58.
- Stone, P. W., & Gershon, R. R. (2009). Nurse work environments and occupational safety in intensive care units. *The Journal of Nursing Administration*, 39(7-8 Suppl), S27-34.
- Sutton, G., & Griffin, M. A. (2004). Integrating expectations, experiences, and psychological contract violations: A longitudinal study of new professionals. *Journal of Occupational and Organizational Psychology*, 77, 493.
- Steyerberg, E. W., Eijkemans, M. J. C., & Habbema, J. D. F. (1999). Stepwise Selection in Small Data Sets: A Simulation Study of Bias in Logistic Regression Analysis. *Journal of Clinical Epidemiology*, 52(10), 935-942.
- Thomas, P. (2006). The international migration of Indian nurses. *International Nursing Review*, 53(4), 277-283.
- Thompson, C. A., Jahn, E. W., Kopelman, R. E., & Prottas, D. J. (2004). Perceived organizational family support: A longitudinal and multilevel analysis*. *Journal of Managerial Issues*, 16(4), 545.
- Trossman, S. (2002). The global reach of the nursing shortage. *The American Journal of Nursing*, 102(3), 85, 87, 89.

- Tucker, S. J., Harris, M. R., Pipe, T. B., & Stevens, S. R. (2010). Nurses' ratings of their health and professional work environments. *Official Journal of the American Association of Occupational Health Nurses*, 58(6), 253-267.
- Turritin, J., Hagey, R., Guruge, S., Collins, E., & Mitchell, M. (2002). The experiences of professional nurses who have migrated to Canada: Cosmopolitan citizenship or democratic racism? *International Journal of Nursing Studies*, 39(6), 655-667.
- van der Heijden, B. I., Kummerling, A., van Dam, K., van der Schoot, E., Estryng-Behar, M., & Hasselhorn, H. M. (2010). The impact of social support upon intention to leave among female nurses in Europe: Secondary analysis of data from the NEXT survey. *International Journal of Nursing Studies*, 47(4), 434-445.
- Vestal, V., & Kautz, D. D. (2009). Responding to similarities and differences between Filipino and American nurses. *The Journal of Nursing Administration*, 39(1), 8-10.
- Vujicic, M., Zurn, P., Diallo, K., Adams, O., & Dal Poz, M. R. (2004). The role of wages in the migration of health care professionals from developing countries. *Human Resources for Health*, 2(1), 3.
- Wagner, C. M. (2006). Predicting nursing turnover with catastrophe theory. (Ph.D., The University of Iowa). , 279.
- Waltz, C. F., Strickland, O., & Lenz, E. R. (2005). *Measurement in nursing and health research*. New York: Springer Pub.
- Wanous, J. P., Poland, T. D., Premack, S. L., & Davis, K. S. (1992). The effects of met expectations on newcomer attitudes and behaviors: A review and meta-analysis. *Journal of Applied Psychology*, 77(3), 288.
- Wilkins, K., & Shields, M. (2009). Employer-provided support services and job dissatisfaction in Canadian registered nurses. *Nursing Research*, 58(4), 255-263.
- Withers, J., & Snowball, J. (2003). Focus. adapting to a new culture: A study of the expectations and experiences of Filipino nurses in the oxford radcliffe hospitals NHS trust. *NT Research*, 8(4), 278-290.
- World Health Organization (WHO). (2000). Nursing and midwifery services facing crisis, experts say. Geneva:WHO.
- Wu, L., & Norman, I. J. (2006). An investigation of job satisfaction, organizational commitment and role conflict and ambiguity in a sample of Chinese undergraduate nursing students. *Nurse Education Today*, 26(4), 304-314.
- Wyss, K. (2004). An approach to classifying human resources constraints to attaining health-related millennium development goals. *Human Resources for Health*, 2(1), 11.
- Xu, Y. (2003). Are Chinese nurses a viable source to relieve the U.S. nurse shortage? *Nursing Economic\$; Nursing Economic\$*, 21(6), 269-74, 279, 259.
- Xu, Y. (2005). Diversity discussion. clinical challenges of Asian nurses in a foreign health care environment. *Home Health Care Management & Practice*, 17(6), 492-494.
- Xu, Y. (2007a). International Migration of Nurses and Human Development. *Home Health Care Management & Practice*, 20(1), 87-90

- Xu, Y. (2007b). Strangers in strange lands: A metasynthesis of lived experiences of immigrant Asian nurses working in western countries. *ANS. Advances in Nursing Science*, 30(3), 246-265.
- Xu, Y., & Davidhizar, R. (2004). Conflict management styles of asian and asian american nurses: Implications for the nurse manager. *The Health Care Manager*, 23(1), 46-53.
- Xu, Y., Gutierrez, A., & Kim, S. H. (2008). Adaptation and transformation through (un) learning: Lived experiences of immigrant Chinese nurses in US healthcare environment. *ANS. Advances in Nursing Science*, 31(2), E33-47.
- Xu, Y., & Kwak, C. (2005). Characteristics of internationally educated nurses in the United States. *Nursing Economic\$, Nursing Economic\$, 23(5)*, 233-8, 211.
- Xu, Y., & Kwak, C. (2006). Trended profile of internationally educated nurses in the United States: Implications for the nurse shortage and beyond. *Journal of Nursing Administration*, 36(11), 522.
- Xu, Y., & Kwak, C. (2007). Comparative trend analysis of characteristics of internationally educated nurses and U.S. educated nurses in the United States. *International Nursing Review*, 54(1), 78-84.
- Xu, Y., Xu, Z., & Zhang, J. (2002). A comparison of nursing education curriculum in China and the United States. *The Journal of Nursing Education*, 41(7), 310-316.
- Xu, Y., Zaikina-Montgomery, H., & Shen, J. J. (2010). Characteristics of internationally educated nurses in the United States: An update from the 2004 national sample survey of registered nurses. *Nursing Economic\$, 28(1)*, 19-25, 43.
- Yao, Q., Ma, H., & Yue, G. (2010). Pre-entry expectations and turnover. *Nankai Business Review International*, 1(3), 284.
- Yi, M., & Jezewski, M. A. (2000). Korean nurses' adjustment to hospitals in the United States of America. *Journal of Advanced Nursing*, 32(3), 721-729.
- Zinsmeister, L. B., & Schafer, D. (2009). The exploration of the lived experience of the graduate nurse making the transition to registered nurse during the first year of practice. *Journal for Nurses in Staff Development*, 25(1), 28-34.