

ABSTRACT

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This thesis explores the demographic make up of nurses who have considered leaving the profession, those who have left, and the reasons cited for leaving. Data from the National Sample Survey of Registered Nurses and the Federation of Nurses and Health Professionals were used to examine the demographic characteristics of two nurse populations, explore demographic differences in the reasons nurses leave, and the degree of nurse job dissatisfaction. It was found that nurses who have considered leaving or have left the field have similar demographic characteristics as those currently in the field. It was also found that differences in the reasons cited for leaving exist by age and by the presence of children in the home among nurses who are no longer in nursing, but not among nurses who have considered leaving. Nurse job dissatisfaction was also determined to decrease with age. This research underscores the importance of developing multi-pronged and multi-level remedies to combat the consequences of the nursing shortage.

RACE, GENDER, AGE AND THE US NURSING SHORTAGE

By

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Dedication

To my loving wife and daughter, Damaris and Gianella

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I, first, would like to thank Dr. Bart Landry for his dedicated mentorship. I have acquired from him knowledge that will last a lifetime. Secondly, I will like to thank my committee members, Dr. Joseph J. Lengermann and Dr. Leonard Pearlin, for their insightful comments and thorough examination. I would also like to thank to my family, friends, and co-workers who were a constant source of support.

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Introduction

One of the most important issues in health care today is that of the impending nursing shortage. Experts predict that by 2020 the demand for nurses will surpass the supply for nurses by 29 percent (HRSA 2002, p.2). This is an increase in demand over supply of approximately 23 percent from 2000 when the demand for nurses surpassed the supply of nurses by about 6 percent. Studies on what has caused the decline in the number of nurses report increasing number of nurses exiting the profession, declining numbers of nursing school graduates, an aging workforce, declining relative earnings, emerging alternative job opportunities, and job dissatisfaction as contributing reasons (HRSA 2002, p.4). Furthermore, these studies reveal that these causes are likely to continue and worsen as the US population continues to experience significant sociodemographic changes (IOM 1996, p.35).

The US population is increasing, getting older, and living longer. In fact, Ahlburg (1993) found that “both males and females will live longer than previously thought, the average length of life rising from 76 to 82 years”, and that “the oldest old (85 and older) will continue to be the fastest-growing age group reaching 18 million (almost 5 percent of the population) by 2050” (Ahlburg 1993). Fertility is also on the rise and expected to increase from 2.052 births per woman to 2.119 in 2050 (Ahlburg 1993). These demographic changes will result in an increased demand for the services offered by nurses at all levels and in different care settings such as hospitals, long-term care facilities, and even schools.

The population is not only increasing and getting older, but also becoming more diverse. Johnson, Farrell, and Guinn (1997) point out that “nonwhite ethnic

minority groups are projected to surpass non-Hispanic whites to become, collectively, the numerical majority of the U.S. population by the fifth decade of the twenty-first century.” In fact, “between [1997] and the year 2050, the black population [was] projected to increase by 94 percent, the American Indian population by 109 percent, the Hispanic population by 238 percent, and the Asian and Pacific Islander population by 412 percent” (Johnson, Farrell, and Guinn 1997). At the same time, “the non-Hispanic white population [was] projected to increase by 29.4 percent” (Johnson, Farrell, and Guinn 1997). In other words, the word minority may need to be abandoned from our language “because of its near obsolescence” (Broida 2000). Some researchers in the health care setting have pointed out that “the implications of these trends are immense for providing culturally sensitive care and interaction between patients and providers at all levels, and for planning the supply and distribution of nursing personnel” (IOM 1996, p.36). The implications of these trends are also immense for national security.

Ever since 9/11 the health care system has, as have other US systems, been asked to ensure the well-being of the nation by purchasing, stockpiling, and maintaining adequate amounts of resources, including staff, to respond to incidents of mass casualty (HRSA 2004). The Health Resources and Services Administration (HRSA) in its mandate to prepare the nation’s hospitals against bioterrorism and other public health emergencies requires its award recipients to “establish a response system that allows the immediate deployment of 250 or more additional patient care personnel per 1,000,000 population in urban areas, and 125 or more additional patient care personnel per 1,000,000 of population in rural areas [to] meaningful increase

hospital patient care surge capacity,” (HRSA 2004, p.10). Given the current number and shortage estimates of nurses, this is a benchmark HRSA award recipients (not to mention the entire US health care system) will have a challenging time meeting.

The findings described briefly in the opening paragraphs on the contributing causes of the nursing shortage (declining numbers of nursing school graduates, declining relative earnings, an aging workforce, emerging alternative job opportunities, and job dissatisfaction) were expanded upon by the a study conducted by the Federation of Nurses and Health Professionals (FNHP) in 2001. The FNHP reported that nurses who were no longer practicing, and nurses who were considering leaving reported stress (emotional and physical), scheduling, and compensation as the primary reasons for leaving (or considering leaving) the profession. The findings of the FNHP supported those found in similar surveys conducted by American Nurses Association (ANA) and HRSA. Although all of these reports provided important information on the reasons why nurses leave the profession, they did not provide descriptions (demographic information) of who it is that is leaving. All of the reports point to the dissatisfied, stressed, and physically exhausted, but none reported on their gender, race, or age.

This thesis will explore these demographic characteristics and their relationships to nursing shortage. Understanding variations in the race, gender, and age of these nurses who are leaving or thinking of leaving the profession is important for a number of reasons. First, information on the race, gender, and age differences of those who leave, or are thinking of leaving, will aid in understanding the potential differential impact the nursing shortage can have on the US population. For example,

if the data reveals that minority nurses leave the profession at higher rates than white nurses, one could make the argument that the nursing shortage will impact minority populations more than the majority population as individuals with similar backgrounds will be less available to offer them care. The potential disparate impact of the nursing shortage on the US population cannot be over emphasized as it can also have a paralyzing impact on the entire healthcare system under certain circumstances. For example, one can make the argument that if the health care system will not have adequate numbers of nurses with the similar backgrounds as those of the minority population the possibility exist that it will be unable to mount an adequate response to a mass casualty disaster as it will be unable to deal with the different needs of large influx of patients.

Second, knowing if there are group specific reasons for leaving the profession can aid policy makers to better determine appropriate remedies. For example, knowing that female nurses leave the profession to rear their children at a higher rate than male nurses might make it worthwhile for healthcare administrators to implement on-site day care programs to ensure that nurses who would normally leave the profession are there taking care of patients, but reassured that their children are well. Similarly, knowing that younger nurses leave the profession at a higher rate than older nurses may aid policymakers in developing loan repayment programs to aid in recruiting and retention.

Third, knowing group-specific reasons for leaving the profession is only half the equation. Understanding group variations in the degree of dissatisfaction (as measured by the number of reasons selected) will provide further insights into the

severity of the problem. Measuring degrees of dissatisfaction, in turn, is important because it allows us to understand the potential role the collective influence of various aspects of the job can have on not only job satisfaction, but also on attrition. It may be that nurses are leaving for multiple reasons (e.g. compensation, patient load, and decision-making), not just one (compensation). This is important because it is not only indicative of how complex the nursing shortage is, but also of how targeted and focused remedies must be. For example, if nurses leave the profession for more than one reason (say two or three) then that may be indicative of a system that is hampered by a number of inadequacies that affect nurses and the reasons for leaving in more than one way. This complexity can be taken a step further by determining whether or not the number of reasons selected by nurses varies by race, gender, age, children, and even employment setting. This perspective is important because it provides insight on whether or not group differences exist among the number of reasons nurses select for leaving the profession. The implications of these findings are important because it allows one to determine whether or not certain aspects of the job collectively influence specific groups differently than others. For example, knowing that minority nurses leave the profession for three reasons as oppose to only one for white nurses may lead policymakers to explore not only the difference in absolute numbers, but also the cumulative effect of the multiple reasons themselves.

Literature Review

The literature on the nursing shortage can be divided into four distinct categories. The first category encompasses studies that speak of the nursing shortage as an eminent sociomedical problem. The second category includes the literature on the reasons that have caused the shortage both at the system and individual level, while the third category includes those studies that offer remedies and strategies to combat the shortage. The last category of the literature looks at the potential implications of the nursing shortage on the US population. Each of these categories offers different perspectives on the same issue and as a result provides a wealth of valuable information to this study.

The literature in the first category describes what the nursing shortage is and the potential impact it can have on the health care industry. The studies in this category have primarily been conducted by the federal government, advocacy groups, and academia, and in the aggregate define the nursing shortage as declining numbers in the supply of nurses relative to demand. One of those studies is a study conducted by HRSA projecting the supply and demand of registered nurses between 2000 and 2020. According to this study, demand for registered nurses was projected to increase 40 percent by 2020, while growth was projected to increase by only 6 percent resulting in a shortage of about 400,000 by 2020 (HRSA 2002, p.3). The HRSA report was important because until then the nursing shortage literature lacked official estimates of nurse supply and demand.

The HRSA report provides a number of different pieces of information. One of these is the declining number of nursing graduates. HRSA reported that “data on the growth in new RNs, as measured by those passing the RN licensing test (NCLEX), show that after growing steadily during the first half of the 1990s the number of new RN graduates fell annually in the last half of the decade, resulting in 26 percent fewer RN graduates in 2000 than in 1995,” (HRSA 2002). More pertinent to this thesis, however, is the fact that the diversity of entrants into the profession has not increased significantly. In fact, a “recent National League of Nursing (NLN) data reflect no significant increase in minority nurses enrollment or graduation over the past 5 years,” (NLN 2000). This information is important because given the fact that “significant disparities in the health status of racial and ethnic groups exist compared to the US population as a whole” (Gonzalez et al. 2000), the racial and ethnic composition of the nursing population (or lack thereof) can have an adverse impact on the US population as a whole. In fact, some researchers (Nugent et al. 2002) have postulated that the underrepresentation of minorities (or lack of diversity) among the nurse population “contributes to the disparity in the delivery of healthcare,” (Nugent et al. 2002).

Besides declining number of nursing graduates, the HRSA report also pointed to the loss of RNs from the license pool as a contributing factor to the nursing shortage. HRSA reported that “the loss of RNs from the license pool increased six- to seven-fold from 23,000 to nearly 175,000” between 1996 and 2000 (HRSA 2002, p.7). This information is very important in that it provides information about a population often not talked about when talking about the nurse shortage. This is the

population of nurses licensed to practice nursing, but who were not employed a nursing job. HRSA reported that between 1996 and 2000 this population increased from 52,000 to 490,000 (HRSA 2002, p.7), and although “69 percent, or 338,000, of the 490,000 licensed RNs not employed in nursing” were 50 years or older in 2000, the remaining 152,000 were less than 50 years of age. This information is also very important because it points to the peculiarity that the U.S. nursing shortage: it may not be an actual shortage. This reasoning lies in the fact that at the same time that HRSA reported that there were 152,000 nurses under the age of 50 who were licensed to practice medicine; it reported that there was a nursing shortage of about 110,000 nurses (HRSA 2002, p.2). If the estimates are correct, it appears that in 2000 the nursing shortage was actually a nursing surplus as approximately 42,000 nurses under the age of 50 were licensed to practice in the United States. From this one can conclude, that the question surrounding the nursing shortage may not necessarily have to focus on the number of nurses produced versus those that are needed. Rather, the real question may be why licensed nurses are not employed in nursing. While the HRSA report did an excellent job at exploring the former, it did not explore the latter. Luckily, the studies in the second category of the nursing shortage literature did.

In 2000, a study by the US Department of Health and Human Services (USDHHS) revealed that only 69.5 percent of the registered nurse (RN) population reported being satisfied with their job—a general level of satisfaction markedly lower than levels seen in the employed general population (USDHHS 2000, p.30). The following year, another study revealed that of those nurses still in the profession, but who were considering leaving, 71 percent were dissatisfied with staffing levels, 70

percent were dissatisfied with having a voice in decisions, and 57 percent were dissatisfied with support and respect from management (FNHP 2001, p.17). These results do not only relate how pervasive job dissatisfaction is among the nursing population, but also how it is linked to other aspects of their job. “Among nurses, inadequate staffing, heavy workloads, and the increased use of overtime are frequently cited as key areas of job dissatisfaction” (GAO 2001c, p.9). Other areas of job dissatisfaction include: “level of autonomy, authority and responsibility, recognition, reward and personal satisfaction with job content and, prospects for career development” (Cronin and Becherer 1999; Traynor 1995). Increasing levels of autonomy may very well increase a nurse’s job satisfaction. In fact, research by Kohn and Schooler point out that control over one’s work process were found to increase personal agency beliefs (Kohn and Schooler 1983).

In 2001, a study by FNHP also revealed that of those nurses still in the profession, but who were considering leaving, 49 percent were dissatisfied with their salary or wages (FNHP 2001, p.15). It should be mentioned that salary and wage dissatisfaction in the FNHP survey was superceded by dissatisfaction with the work environment and scheduling supporting the earlier cited finding of Peltier et al. (2004). The reason for this is that when one analyzes relative earnings among nurses one finds that after a period of low wages in the 1970s and 1980s, RN salaries increased faster than overall earnings in the economy between 1987 and 1992 (IOM 1996, p.85). The result was a 33 percent increase in RN salaries between 1980 and 1992. One study reported that between 1994 and 1997 RN earnings growth lagged behind the rate of inflation, but exceeded the rate between 1998 and 2000 (GAO

2001c, p.10). In spite of this, 27 percent of current RNs cited higher wages or better health benefits as a way of improving their jobs (FNHP 2001, p.22).

The work conditions under which nurses were asked to perform their duties as described in the FNHP study ranged from staffing shortages to lack of management support. In the study, 79 percent of respondents reported an increase in acuity of patients (FNHP 2001, p.18). When adjusted to reflect the increase in acuity, the number of hospital employees on staff (including nurses) per patient discharged decreased 13 percent between 1990 and 1999 (GAO 2001b, p.5). This decline increased the intensity of work for other nurses, and consequently, their dissatisfaction. An Advisory Board Company (ABC) survey conducted in 2000 reported that 36 percent of RNs in their current job for more than one year were very or somewhat dissatisfied with the intensity of their work. The intensity of the work, however, goes beyond patient care responsibilities. Lancaster et al. (1999) found that in addition to their patient care responsibilities nurses many times also served as business managers. Lancaster et al. (1999) contend that these dual-career responsibilities has contributed to “the development of a two-tiered profession, with relatively low-skilled (and lesser-paid) practical nurses and nurses aids performing traditional routine patient care and highly skilled, highly educated (and considerably higher-paid) professional nurses focusing heavily on managerial duties and the care of critically ill patients.” This “two-tiered” system has raised additional concerns among experts as the nurses providing direct patient care may not necessarily have the knowledge and skills demanded for adequate care (IOM 1996, p.75).

The ABC survey also found that 48 percent of RNs that had held their job for more than one year were very or somewhat dissatisfied with the recognition they received, while 35 percent were very or somewhat dissatisfied with their level of decision-making after defining lack of management support as being operationalized as recognition, autonomy, or respect. This finding supported a later finding by the FNHP study, which found that 47 percent of respondents were somewhat or not satisfied with the support and respect that they received from management. Nurses' criticism of management, according to Newman and Maylor (2002), "was a pervasive and corrosive feature of job dissatisfaction" in their study of nurses. If job dissatisfaction is so pervasive in nursing, how does one cure it? What solutions does one bring to bear on job dissatisfaction and the other reasons nurses leave the profession?

The third category of the nursing literature describes some of the remedies and strategies that have been developed to combat the exit of nurses and overall shortage. One of those is the controversial strategy of recruiting foreign-trained nurses. Reilly reports that "with more than 400,000 vacant nursing positions projected in the US during the next 10 years, according to federal projections, recruiters are courting nurses in Asia, most notably the Philippines and India, as well as Africa" (Reilly 2003). Supporters of recruiting foreign-trained nurses contend that it is a viable solution to the nursing problem, arguing that the supply for well-trained nurses in the international market is basically endless (Reilly 2003). In fact, proponents purport that in countries like the Philippines, where foreign labor is a primary export, "nurses

are trained specifically to work in the US” (Reilly 2003). Some would call this the opposite of outsourcing—“insourcing” of labor.

Critics of the practice argue that the practice does not only have the potential of adversely impacting the US healthcare system, but also the health status of the communities from which these nurses are being recruited (Reilly 2003). Critics point out that often because the United States (as well as other countries) are looking for the best and brightest nurses to fill in the void domestic nurses have created, the native countries where these nurses are recruited are left with “poorly educated nurses who often have a history of poor work performance” (Reilly 2003). Moreover, critics contend that rather than attempting to resolve the domestic nursing shortage by recruiting abroad, the nursing community should begin examining the reasons behind the US shortage and develop strategies to address them (Reilly 2003). One reason often cited by critics is compensation.

Spetz and Given (2003) and Peltier et al. (2004) looked at compensation to determine whether or not wage increases will close the gap between the demand for nurses and the supply. In their study, Spetz and Given concluded “that inflation-adjusted wages must increase 3.2 percent-3.8 percent per year between 2002 and 2016, with wages cumulatively rising up to 69 percent, to end the shortage” (Spetz and Given 2003). This cumulative increase of 69 percent (3.2-3.8 percent per year increase) would result in total RN wage expenditures more than doubling by 2016 (Spetz and Given 2003). Cautiously, they point out that their forecasting model, as are many others, is “subject to a number of limitations including those pertaining to the relationship between key variables not changing over time, changes in the underlying

features of nurse labor markets, such as the structure of hospital work performed by nurses” (Spetz and Given 2003). Wage increase, however, is not the only contributing factor to the nursing shortage, and Peltier et al. (2004) in their study explore these other factors in the context of finding new strategies to retaining nurses.

In their study, Peltier et al. (2004) found that although compensation (or financial bonds to an organization) impacted overall satisfaction and referral likelihood, these did so to a lesser degree than social structural bonds. In other words, the social aspects of the job (flexibility in scheduling, input into patient care decisions, and cohesion with nursing staff) increased overall satisfaction and nurses’ willingness to refer nurses seeking employment to their hospital. This is an important finding because it demonstrates what many (including Nelson 2004) have been saying all along, “nurses leave the field because they are dissatisfied with the environment” (Nelson 2004). In fact, the General Accounting Office (GAO) in a 2001 report to Congress pointed to job dissatisfaction as being “a major factor contributing to the current problems of recruiting and retaining nurses” (GAO 2001a, p.7). The implications of these work conditions and job dissatisfaction and the resulting shortage on the US population are profound, and the focus of the fourth category of the nursing shortage literature. The reason is the impact that the shortage cannot only have on the health care status of the nation, but on the health care industry as a whole.

A great concern that has been coupled with nursing shortages since their appearance in the middle of the 20th century has been that of quality of care specifically degradation of care due to staffing shortages. Concerns have been raised about a decrease in the amount of time nurses have available for direct patient care. In

fact, the ANA study reported in 2001 that 56 percent of nurses believed that the time they had available for direct patient care had decreased (ANA 2001). The same study also reported that 75 percent of the nurses surveyed felt that the quality of nursing care in their work setting in the last two years declined. Moreover, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) in 2002 reported that the nursing shortage had contributed to nearly a quarter of the unanticipated problems that result in death or injury to hospital patients.

This is an alarming figure. However, what is more interesting is the notion that race, gender, and age distributions could have contributed to these deaths and injuries. Given the information discussed thus far it is evident that race, gender, and age play a significant role in health care delivery. And although it is difficult to determine the exact relationship between the different demographic characteristics of nurses, and incidence of medical errors, it is possible that some of these errors could be attributed to lack of culturally competent care. For example, could some of these errors have been caused by the loss of an Asian nurse who spoke both Mandarin and aided physicians in accurately relaying information to certain patients; could some of these errors been caused by the loss of a Hispanic nurse who knew how to incorporate the advice of a local *curandero* (healer) into different treatment procedures. The point here is that the demographic characteristics of nurses are important. And because demographic characteristics are important, determining the distribution of these among nurses leaving the profession (or who are considering leaving the profession) and among the reasons they are leaving is similarly important.

Data and Methods

The data selected for this study were drawn from two surveys: the 2000 National Sample Survey of Registered Nurses (NSSRN) and the 2001 study conducted by American Federation of Teachers—Federation of Nurses and Health Professionals (AFT-FNHP) on the nurse shortage. The 2000 NSSRN had a response rate of 72 percent. The data collection was directed by the Research Triangle Institute, under contract with the Division of Nursing within the Health Resources and Services Administration at the USDHHS. The data file included 35,579 respondents, of which approximately 5.3 percent (n=1,868) were Black, 3.7 percent (n=1,317) were Asian, 2.3 percent (n=817) were Hispanic or Latino, and 88.7 percent (n=31,559) were white. The survey was mailed and follow-up interviews conducted with those who did not respond. The research design resulted in a multistage probability sample of RNs with active licenses to practice nursing in the US. The sampling methodology included oversampling of minority RNs. For an extended description of the data please see Spratley et al. (2000). It is important to point out that this survey contained both active and inactive nurses.

Peter D. Hart Research Associates on behalf of the AFT-FNHP conducted the AFT-FNHP study. The study included two different surveys. The first survey was a national survey of current direct care nurses (n=700) who currently provide direct patient care in a hospital, clinic, or other health care facility. The survey was administered over the telephone between March 5 and March 8, 2001. Interview length was about 20 minutes, and the survey had a margin of error of +/- 3.8 percent.

The second survey was a national survey of former direct care nurses (n=207) between the ages of 18 and 64 who did not currently provide direct patient care in a hospital, clinic, or other health care facility, but who once did. The survey was administered over the telephone between March 5 and March 8, 2001. Interview length was about 20 minutes, and the survey had a margin of error of +/- 7.0 percent. The data file included 907 respondents, of which approximately 4.9 percent (n=44) were Black, 1.1 percent (n=10) were Asian and 90.6 percent (n=822) were white. Both of these surveys were conducted using national representative samples of registered nurses whose contact information was purchased from Best Mailings, Inc. of Tucson, Arizona. The sample list provided by Best Mailings, Inc was compiled from state licensing information that is updated quarterly.

In this study, I will use the NSSRN data that pertains to nurses no longer in nursing, and the AFT-FNHP data pertaining to nurses who have considered leaving the profession. Using these two different subsets of data will allow me to analyze the reasons why nurses leave and why they have left concurrently. It is my assumption that there is some consistency in the types of reasons given for leaving the profession by both nurses who have considered leaving and those who have left. The focus on nurses who are considering leaving and those who have left yields two subsets of registered nurses: a NSSRN subset totaling 1,541 respondents of nurses no longer in a nursing position, and an AFT-FNHP subset of nurses who have considered leaving totaling 214. The questions and responses pertaining to the reasons why nurses have left or are thinking of leaving the field in both subsets are detailed in the Table 1.

For comparison purposes, I will also perform a brief analysis of the biggest problems facing active nurses. The data for this analysis are drawn from the NSSRN survey. The number of respondents used for this analysis was 314.

Dependent Variables

The first dependent variable that will be used in this thesis is the *type of reasons* given by both groups of nurses. The questions that measure the type of reasons given each group of nurses can be found in Table 1. Each of the responses for these questions is coded 1 (if the reason was selected by a respondent) and 0 (if the reason was not).

The second dependent variable that will be used in the study is *nurse job dissatisfaction*. Nurse job dissatisfaction in this study is measured by adding the total number of reasons selected by a respondent. As a result, the more reasons a nurse selects for considering leaving or leaving the field the more dissatisfied that nurse is with the profession. The variable nurse job dissatisfaction is a continuous measure.

Table 1. NSSRN and AFT-FNHP Questions and Reponses Pertaining to Reasons Why Registered Nurses Have Left or Have Considered Leaving the Nursing Field

Subset	Question
NSSRN (RNs No Longer in Nursing)	What is the reason(s) you are not working in a nursing position?
AFT-FNHP (RNs Considering Leaving Nursing)	During the past two years, have you considered leaving the patient-care field

Demographic and Independent Variables

The demographic variables in this analysis include race, gender, age, children, and employment setting.

Race in this study is coded 1 for whites and 0 for minorities. Minorities in this variable are aggregated into one group because of the small number of cases in the individual race groups. It was determined that the small number of cases for each individual group of minorities would not be sufficient to conduct multivariate analysis.

Gender is coded 1 for males and 0 for females.

Age is variable that was present in the NSSRN data file, but not in the AFT-FNHP data file when it was obtained from the entity that collected the data. As a result, age will only be analyzed in the population of nurses no longer in a nursing position. Age, in this study, is a continuous measure.

The variable *children* is coded 1 for respondents who reported having children under the age of 18 in the home, and 0 for those who reported that they did not have children under the age of 18 living in the home.

Employment Setting is measured based on the categories where respondents practiced nursing. In the NSSRN survey, the response categories included: hospital, nursing or extended care facility, community or public health clinic, ambulatory care facility, insurance or claims company, planning or licensing agency, occupational health center, nursing education program, schools, and other. In the AFT-FNHP survey, the response categories included: hospital, community or public health clinic,

ambulatory care facility, and extended care facility. Because of the small number of cases in the non-hospital categories across both subsets items were recoded into one independent variable representing those practicing in hospitals (coded 1) versus those not practicing in hospitals (coded 0).

A complete listing of variables, their frequencies, and recoded response values by subset can be found in Table 2.

Table 2. Variables, Frequency Distributions, and Response Values by Subset

Subset	Type	Variable	Frequencies		Response Values
NSSRN (RNs No Longer in Nursing)	Demographic	Race	White	91.2%	1=White, 0=Minority
			Black	4.0%	
			Hispanic	1.9%	
			Asian	3.0	
		Gender	Male	0.0%	1=Male, 0=Female
			Female	100.0%	
		Age	--		Continuous (0-100)
		Children under 18 in Home	Yes	45.5%	1=Yes, 0=No
			No	52.6 %	
		Employment Setting	Hospital	42.3%	1=Hospital, 0=Other
			Extended Care	7.7%	
			Clinic	17.9%	
			Ambulatory	12.0%	
			Insurance	4.3%	
			Planning	8.5%	
			Occupation al Health	2.6%	
			RN Program	.4%	
			Schools	3.4%	
			Other	.9%	
AFT-FNHP (RNs Considering Leaving)	Demographic	Race	White	90.7%	1=White, 0=Minority
			Black	6.1%	
			Asian	.5%	
			Other	1.9%	
		Gender	Male	7.0%	1=Male, 0=Female
			Female	93.0%	
		Children under 18 in Home	Yes	53.3%	1=Yes, 0=No
			No	46.7%	
		Employment Setting	Hospital	71.5%	1=Hospital, 0=Other
			Clinic	17.8%	
			Ambulatory	4.2%	
			Extended Care	7.9%	

Analytical Strategy

The present thesis aims to (1) understand the demographic differences in the populations of nurses no longer in nursing and those who have considered leaving, (2) determine if there are group-specific reasons why nurses leave or have considered leaving the profession, and (3) measure the degree of dissatisfaction among the two different groups of nurses. Because a study of the demographic characteristics of nurses no longer in nursing and those who have considered leaving has never been done, this thesis is an exploratory study, and therefore will not address specific hypotheses. The analysis will be performed in three distinct steps.

The first step is the basic descriptive analysis of both populations to understand their demographic differences. This step includes generating and analyzing frequency counts and percentages for all study variables. The results from this step are critical in identifying not only the basic descriptive statistics associated with the data, but also bringing to the forefront the data (such as the most popular reasons for leaving the field) that will be used in subsequent steps of the analysis.

The second step includes the analysis of the multivariate binary logistic regression:

$$\log [p/1-p] = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5$$

In this regression, $\log [p/1-p]$ equals the log odds that a respondent will select one of three principal reasons for no longer being in nursing or for considering leaving the field. The principal reasons used are the reasons selected by each of group of nurses most frequently. The other variables in this equation include: X_1 =race, X_2 =gender, X_3 =employment setting, X_4 =children and X_5 =age. The analysis of race,

gender, employment setting, children, and age on the principal reasons for considering leaving or no longer being in the field will afford me the opportunity to determine whether there are group-specific differences among the reasons why nurses are no longer or have considered leaving nursing.

The third step in my study of the data includes the analysis of the multivariate linear regression:

$$Y=B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5$$

In this regression, Y equals job dissatisfaction, while X_1 =race, X_2 =gender, X_3 =employment setting, X_4 =children, and X_5 =age. This regression will be analyzed to determine group variations in the degree of job dissatisfaction between the two groups of nurses.

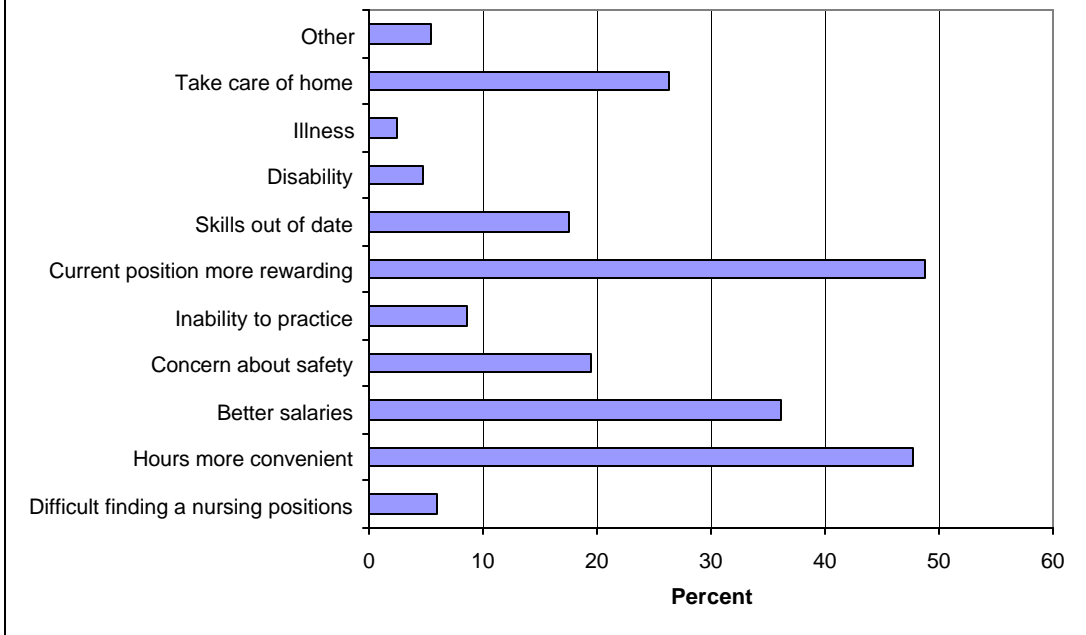
Results

Descriptive Statistics

The distributions of variables in both samples are presented in Table 2. Table 2 shows that 93.1 percent of nurses no longer in nursing, and 90.7 percent of nurses that have considered leaving the profession, are white. The data also show that female nurses make up 100 percent of the sample of nurses no longer in a nursing position and 93.0 percent of the sample of nurses that have considered leaving the profession. Additionally, one finds that the average age of nurses no longer in nursing is approximately 49 years. The age of nurses considering leaving the profession could not be determined because there was not an age variable that could be analyzed in the data file provided. Table 2 also shows that children under the age of 18 were reported to be present in the homes of approximately 46 percent of nurses no longer in nursing, and in the homes of approximately 53 percent of nurses that have considered leaving the profession. In addition, Table 2 also shows that approximately 43 percent of nurses no longer in nursing and approximately 72 percent of nurses that have considered leaving the profession have worked in hospitals.

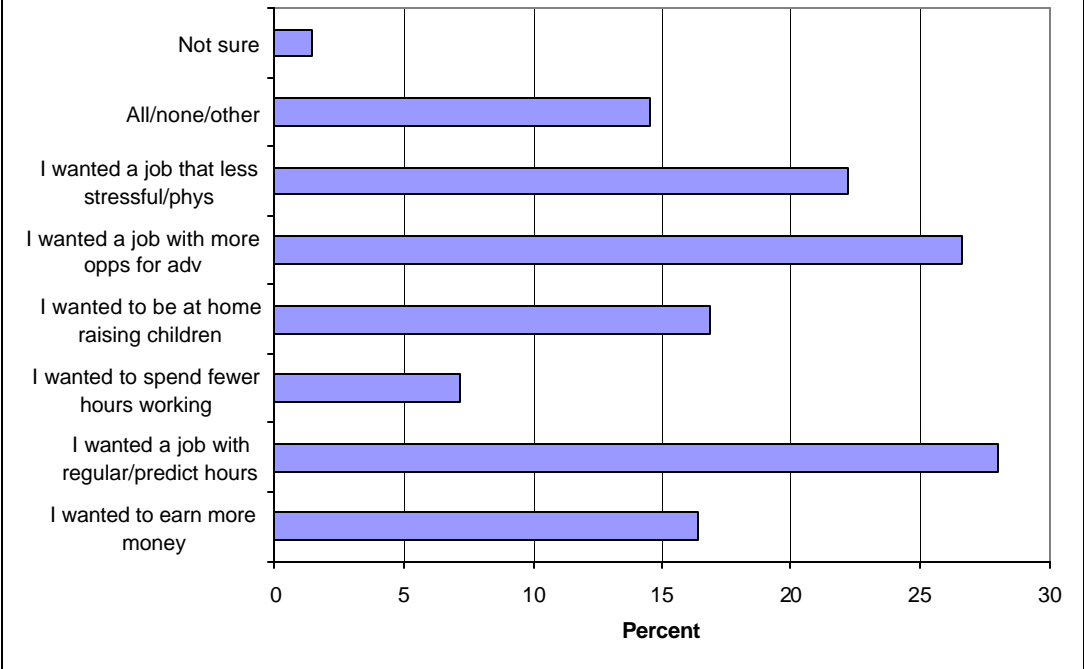
The distributions of the reasons why nurses that are no longer in nursing have left the profession are presented in Figure 1. Figure 1 shows that the three principle reasons why nurses are no longer in a nursing position are intrinsic rewards, hours, and compensation.

Figure 1. Reasons Why Nurses Are No Longer in a Nursing Position



The distributions of the reasons why nurses have considered leaving the profession are presented in Figure 2. Figure 2 shows that the three principal reasons nurses have considered leaving the profession are: hours, opportunities for advancement, and stress.

Figure 2. Reasons Why Nurses Have Considered Leaving the Profession



The distributions of the biggest problems with being nurse are presented in Figure 3. Figure 3 shows that among nurses currently in the field, but who have not considered leaving, the three biggest problems with being a nurse are: understaffing, stress and physical demands, and not receiving support from the administration. Unpredictable work schedules and long hours was the fourth biggest problem with being a nurse.

Figure 3. Biggest Problems with Being a Nurse

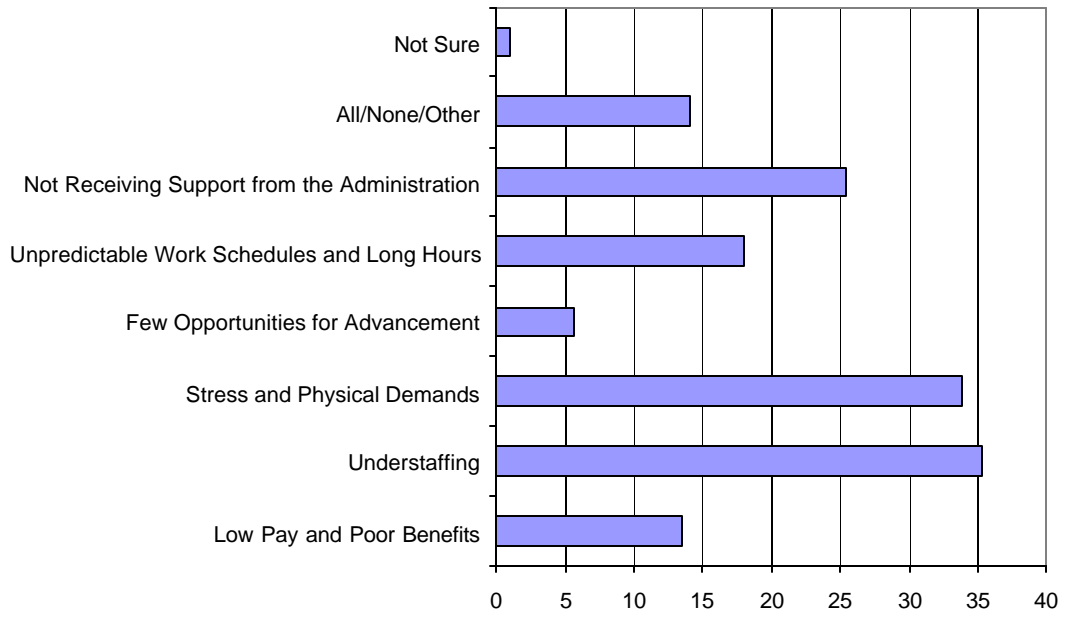


Figure 4 shows the distribution of the three principle reasons nurses are considering leaving the profession by employment setting, race, gender, and children. The data in Figure 4 show that while nurses who work in hospitals have considered leaving the profession because of stress (53.6 percent), hours (24.8 percent), and opportunities for advancement (13.7 percent), nurses who do not work in hospitals cited considering leaving the profession because of stress (55.7 percent), opportunities for advancement (19.7 percent), and hours (18.0 percent). The data in Figure 4 also show that white nurses have considered leaving nursing because of stress (54.1 percent), hours (23.7 percent), and opportunities for advancement (15.5 percent), and that minority nurses have considered leaving because of stress (61.1 percent), opportunities for advancement (16.7 percent), and hours (11.1 percent). Figure 4 also shows that both male and female nurses have considered leaving the profession because of stress (males-40.0 percent, females-55.3 percent), hours (males-33.3 percent, females-22.1 percent), and opportunities for advancement (males-6.7 percent, females-16.1 percent). Lastly, Figure 4 shows that nurses with children under the age of 18 in the home and nurses without children under the age of 18 in the home have considered leaving nursing because of stress (children-50.4 percent, no children-58.6 percent), hours (children-26.5 percent, no children-19.2 percent), and opportunities for advancement (children-16.8 percent, no children-14.1 percent).

Figure 4. Principal Reasons for Considering Leaving Nursing by Employment Setting, Race, Gender, and Children

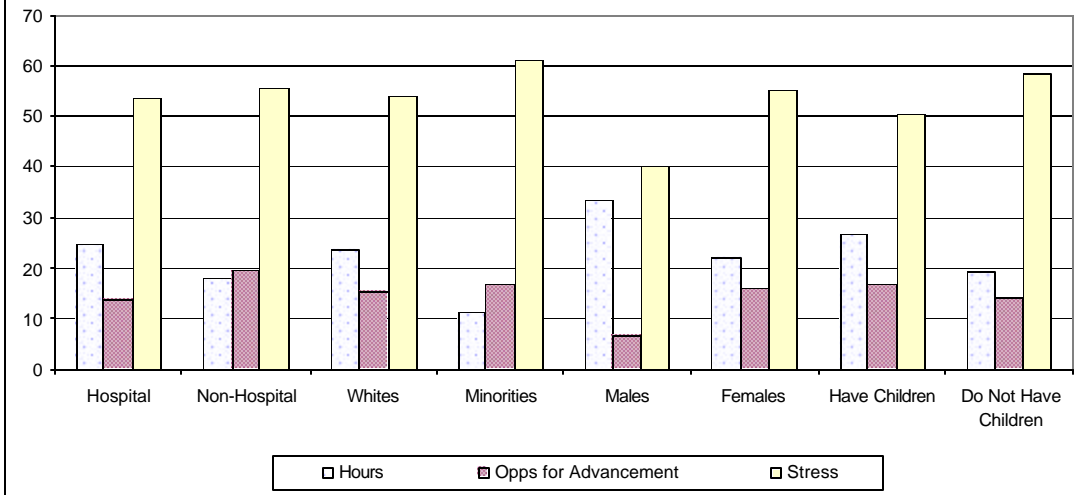


Figure 5 shows the distribution of the three principle reasons nurses are no longer in nursing by employment setting, race, gender, and children. Figure 5 shows that while nurses who worked in hospitals are no longer in the profession because of intrinsic rewards (51.5 percent), hours (51.5 percent), and compensation (40.4 percent), nurses who did not work in hospitals cited no longer being in the profession because of the intrinsic rewards (53.5 percent), hours (43.2 percent), and compensation (29.5 percent). Additionally, Figure 5 shows that white nurses are no longer in nursing because of intrinsic rewards (49.0 percent), hours (47.8 percent), and compensation (36.7 percent), and that minority nurses are no longer in nursing because of hours (48.6 percent), intrinsic rewards (43.8 percent), and compensation (34.3 percent). Nurses with children under the age of 18 in the home are no longer in nursing because of hours (53.5 percent), intrinsic rewards (44.1 percent), and compensation (35.1 percent), while those who do not have children under the age of 18 in the home are no longer in nursing because of intrinsic rewards (53.0 percent), hours (43.2 percent), and compensation (37.6 percent).

Figure 5. Principal Reasons for No Longer Being in Nursing by Employment Setting, Race, and Children

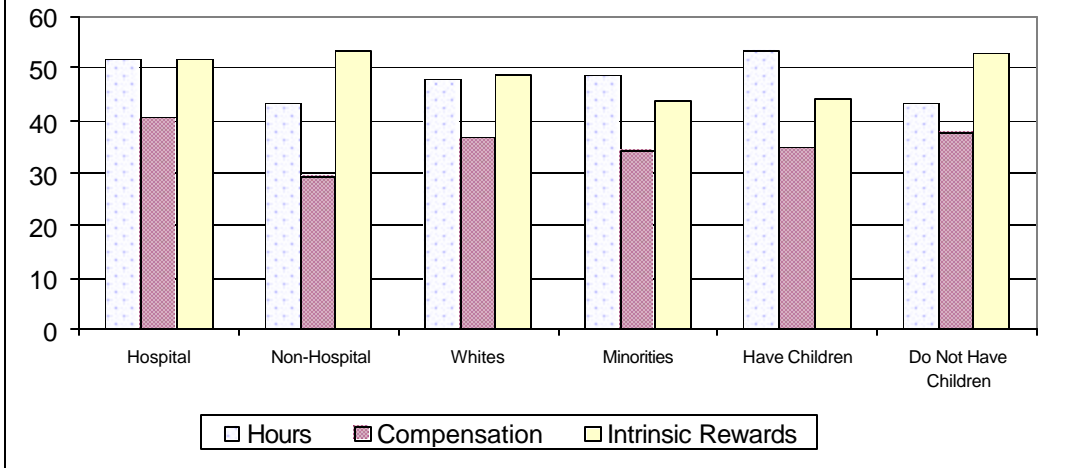
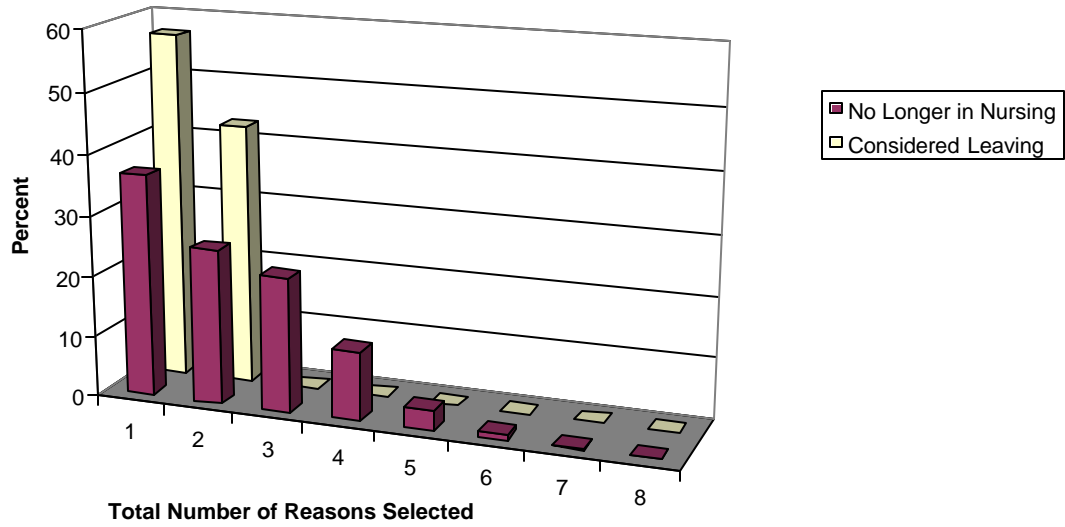


Figure 6 shows the distribution of nurse job dissatisfaction among both groups of nurses. The data in Figure 6 shows that nurses who have considered leaving the field are less dissatisfied with their job than those no longer in nursing. The data in Figure 6 also shows that approximately 57 percent and 42 percent of nurses who have considered leaving the field have done so for one or two reasons. It also shows that approximately 37 percent, 26 percent, and 22 percent of nurses no longer in nursing left for 1, 2, and 3 reasons respectively.

Figure 6. Degree of Nurse Job Dissatisfaction



Differences in Reasons for Considering Leaving by Demographic Characteristics

In Table 3, I present the multivariate binary logistic regression of coefficients for the effect of demographic characteristics on the top three principal reasons why nurses consider leaving the profession. The coefficients in Table 3 show that being white lowers the chance that stress and opportunities for advancement will be selected as reasons for considering leaving the field. These coefficients, however, fail to reach significant levels. Similarly, having children under the age of 18 living in the home and working in a hospital decreases the chance that stress and opportunities for advancement will be selected as reasons for considering leaving the field. However, these coefficients also fail to reach significant levels. In fact, all of the coefficients in this binary logistic regression fail to reach significant levels. As a result, the regression coefficients do not reflect significant differences in the reasons for considering leaving the profession by demographic characteristics.

Table 3. Multivariate Binary Logistic Regression Results for the Effects of Demographic Characteristics on the Top-Three Principle Reasons Nurses Have Considered Leaving the Profession

Variables	Stress	Hours	Opportunities for Advancement
<i>Demographic Variables</i>			
Race (Whites=1)	-.340 (.510)	.962 (.773)	-.122 (.668)
Gender (Males=1)	-.677 (.552)	.632 (.588)	-.968 (1.056)
Children (Yes=1)	-.376 (.281)	.517 (.341)	.163 (.385)
Employment Setting (Hospital=1)	-.072 (.309)	.406 (.388)	-.382 (.401)
Intercept	.795 (.566)	-2.763** (.842)	-1.354 (.736)
-2 log-likelihood	287.17	220.08	180.67
Chi-Square	3.623	6.202	2.329
N	163	178	178

Note: Standard errors are in parenthesis.

**p<.001

Differences in Reasons for No Longer Being in a Nursing Position by Demographic Characteristics

Table 4 presents the coefficients from the binary logistic regression of demographic characteristics on the top three principal reasons nurses are no longer in nursing. The coefficients show that having children under the age of 18 in the home increases the chance that hours will be selected as a reason for not being in a nursing position. The data also show that children are negatively associated with compensation and intrinsic rewards. According to the data, having children under the age of 18 in the home decreases the chance of selecting compensation and intrinsic rewards as reasons for not being in a nursing position. Table 4 also shows that age decreases the chance of selecting hours and compensation as reasons for not being in a nursing position. Age also slightly decreases the chance of selecting intrinsic rewards as a reason for not being in a nursing position, but this coefficient fails to reach a significant level. Employment setting and race both fail to have a significant effect on the three principal reasons nurses are no longer in a nursing position. As a result, the only regression coefficients that reflect differences in the reasons why nurses are no longer in a nursing position are age and the presence of children under the age of 18 in the home.

Table 4. Multivariate Binary Logistic Regression Results for the Effects of Demographic Characteristics on the Top-Three Principle Reasons Nurses Are No Longer in a Nursing Position

Variables	Hours	Compensation	Intrinsic Rewards
<i>Demographic Variables</i>			
Race (Whites=1)	-.049 (.208)	.152 (.222)	.166 (.209)
Gender (Males=1)	--	--	--
Children (Yes=1)	.263** (.114)	-.438*** (.120)	-.395** (.114)
Age (in years)	-.020* (.006)	-.046*** (.007)	-.002 (.006)
Employment Setting (Hospital=1)	.092 (.219)	-.119 (.226)	.165 (.218)
Intercept	.809* (.383)	1.749*** (.403)	.091 (.380)
-2 log-likelihood	2017.35	1890.55	2030.73
Chi-Square	26.69***	52.42***	14.55*
N	1476	1476	1476

Note: Standard errors are in parenthesis.

*p<.05, **p<.001, ***p<.000

Impacts of Demographic Characteristics on Nurse Job Dissatisfaction

I remind the reader that nurse job dissatisfaction is measured by adding the number of reasons selected by a respondent for leaving or considering leaving the field, and while Figure 3 presented the distribution of nurse job dissatisfaction between both populations, Table 5 presents the impacts of demographic characteristics on the same. Table 5 shows that demographic characteristics do not impact nurse job satisfaction significantly. In other words, although race, gender, children, and employment setting negatively impact nurse job dissatisfaction in nurses that have considered leaving the profession, their coefficients fail to reach levels of significance. Among nurses that are no longer in a nursing position, Table 5 shows that age has a significant negative impact on nurse job dissatisfaction. In other words, the older a nurse gets the less dissatisfied with nursing they are. The impacts of race, gender, children, and employment setting had on job satisfaction failed to reach significant levels in the analysis. It can also be noted that demographic characteristics explain some of the variance in job dissatisfaction in both nurse populations.

Table 5. Multivariate Linear Regression Results for the Effects of Demographic Characteristics on Job Dissatisfaction Total Number of Reasons Nurses are No Longer or Have Considered Leaving the Nursing Profession

Variables	Nurse Job Dissatisfaction	
	Have Considered Leaving	Are No Longer in a Nursing Position
<i>Demographic Variables</i>		
Race (Whites=1)	-.0017 (.136)	-.0077 (.125)
Gender (Males=1)	-.167 (.133)	--
Children (Yes=1)	-.0063 (.069)	.0017 (.069)
Age (in years)	--	-.0012** (.004)
Employment Setting (Hospital=1)	-.116 (.075)	.128
Intercept	1.52*** (.136)	2.731*** (.229)
R ²	.025	.011
N	212	1541

Note: Standard errors are in parenthesis.

*p<.001, ** p<.001, ***p <.000

Discussion and Conclusion

In this study, I sought to explore three main objectives: (1) understand the demographic composition of nurses that are thinking of leaving the field, or have already left; (2) determine if there are differences in the reasons given by nurses for leaving (in other words, group-specific reasons why nurses leave or have considered leaving the profession); and (3) determine if there are demographic differences in the degree to which nurses are dissatisfied with the profession. Information that addresses these objectives is particularly relevant to our understanding of the conditions underlying the US nursing shortage.

In this study, the results show that nurses considering leaving and those who have left are similar in their make up compared to nurses currently practicing. Both populations are predominantly white and female. This information is particularly relevant when we revisit the findings presented by Alburgh (1993) on the diversification of the US population. According to Alburgh (1993), the US population is not only increasing in size, but also becoming more diverse. This thesis has confirmed (see Nugent et al. 2002) that the active nurse population is not only decreasing, but that currently does not reflect the country's current demographic composition. Fortunately, this study has determined that minority nurses are not leaving at higher numbers than white nurses, and as a result their exit will not have a differential impact on the health of the minority segments of the population. Consequently, I contend that the differential impact the nursing shortage will have on certain segments of the US population will not be the result of minority nurses

leaving the field at higher numbers than white nurses, but the result of the lack of adequate minority representation in the profession presently.

The results on the composition of gender were in line with my expectations. Nursing has traditionally been a female dominated profession, and as a result, the low number of males encountered during my analysis was not surprising. I must note, however, that the low number of males can itself be a contributing factor to the nursing shortage since males are a viable pool of available labor. I propose that steps be taken to de-feminize the profession with the purpose of increasing the overall numbers of nurses in the workforce. In the past, policymakers, health administrators, and professional associations have cited institutional and social beliefs as the reason for the low number of male entrants into the profession. However, if the profession seeks to increase the overall number of entrants it must do its best to limit the impact institutional and social beliefs have on the recruitment of a viable albeit male labor pool.

My data analysis also showed that the average age of nurses no longer working in a nursing position was 49 years. This figure differs only slightly from the average age of the current nursing workforce (45 years)¹. This can be interpreted as being a significant finding in two ways. First, the data show that nurses exit the profession at a relatively early age when examined against a comparable profession. For example, when the mean age of the nursing workforce (45 years) is compared to the current mean age of social workers one finds that the mean age is virtually the

¹ The average age of nurses in nursing was not the result of my data analysis, but rather a statistic published by the Health Resources and Services Administration in 2001.

same (45 years of age) (NASW 2005). However, when one examines the mean age of nurses no longer in nursing to the mean age of social workers no longer in social work one finds that 45 percent of social workers not active in social work are 55 years of age or older (NASW 2005). The early exit of nurses can be indicative of certain institutional and organizational factors (such as those cited by nurses in this study) that drive nurses out of the profession. In fact, my multivariate logistic analysis showed that as age decreases the chances that hours and compensation are selected as reasons for no longer being in a nursing position increase. In other words, the younger the nurses are the higher the chances that institutional and organizational factors such as hours and compensation are cited as reasons for leaving the profession.

Secondly, the finding is significant because one can argue that as nurses get older their age may limit the activities they can perform. For example, a nurse who is 55 may have a tougher time moving and bathing a patient, than a nurse who is 10 years younger. The high average age of the nursing workforce is particularly important when one takes into consideration the distribution of age among the US population.

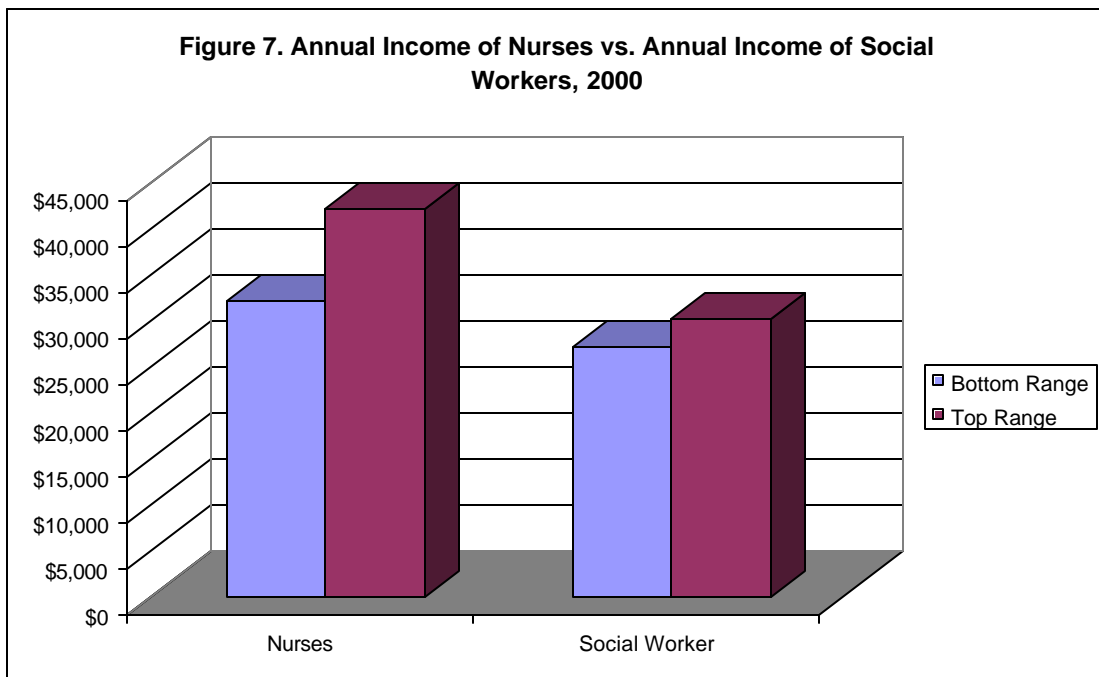
With an increasing upper age stratum in the US population comes the need for more healthcare services since on average older citizens require more medical attention and resources than their younger counterparts. This increase in demand for services will in turn require a relative increase in service providers and in alternative ways of delivering health care such as an expanded use of information technology-based medical technology such as Telehealth programs (HRSA 2005). Existing research predicts that there will not be enough service providers to meet this demand

(HRSA 2001, ANA 2000, AFT 2001). Based largely on the results of this thesis, I predict that the US will not only not have enough nurses to take care of the needs of its population in the future, but that it the nurses that it will have may be unable to meet the much more labor intensive needs of an aging population.

The data in this thesis also shows that approximately 50 percent of nurses in each group have children under the age of 18 living in the home. Children may impact a nurse in number of ways. First, children may impact a nurse's ability fulfill scheduling expectations at their workplace. This appears to be the case in this study as children increased the probability that hours would be selected as a reason for not being in nursing. The reasons why children affect hours range; however, this study has determined that whatever the reason, we can be confident that hours is significant group-specific reason for nurses with children, and one that should be addressed with further research and action.

In this thesis, children also decreased the probability of selecting compensation as a reason for no longer being in the nursing. In other words, nurses with children are less likely to select compensation as a reason for leaving the profession than women without children. This finding supports earlier research (Spetz and Given 2003; Peltier et al. 2004) that point out that although compensation is a problem in nursing, it is not the sole, nor most important, factor influencing a nurse's decision to leave. One reason why this may be the case is that nurses fair a bit better with compensation than women in other female dominated occupations. For example, in 2000, the US Census reported the average income of registered nurses to be between \$37,000 and \$42,000 annually. When these figures are compared to those of

another female dominated occupation such as social work (whose members earn between \$27,000 and \$30,000 annually (Census 2004)), one finds that registered nurses do in fact fair better economically. Figure 7 graphically illustrates the differences in income ranges between registered nurses and social workers.



The point here is that nurses with children have significant group-specific reasons for leaving the field. This is important because it provides policymakers, healthcare administrators, and advocacy groups some evidenced-based information that can be used to develop targeted strategies to combat the nursing shortage and, at the very least, slow down the rate at which nurses are leaving the field.

My analysis also showed that that approximately 72 percent of nurses who work in hospitals have considered leaving. My analysis also showed that 43 percent of nurses who used to work in hospitals are no longer in nursing. These findings deviated slightly from what has been reported in earlier research (HRSA 2001). In spite of their deviation, these findings are important because they provide information on the main setting in which these different factors interact. In some instances, the employment setting may be the source of some of the institutional and organizational factors governing such things as hours and compensation.

It is worth noting that the principal reasons cited for leaving by nurses no longer in nursing (intrinsic rewards, hours, and compensation) and by nurses considering leaving the field (hours, opportunities for advancement, and stress) are similar to the biggest problems with being a nurse. Nurses in the field who have not considered leaving cited that the biggest problems with being a nurse are understaffing, stress, and lack of administrative support. These problems were followed by unpredictable schedules and long hours. This comparison is important because not only does it highlight the consistency of some of the institutional and organizational problems with nursing as they relate to the different aspects of the profession, but also how consistent these are among three different populations

(nurses in the field who have not considered leaving, those in the field who have considered leaving, and those no longer in the field).

The current environment of managed care requires healthcare facilities to not only operate at capacity, but also to cut costs in order to stay in business. Often times, health care facilities are forced to cut “non-essential” staff and give their responsibilities to nurses. This results in more work and responsibilities and longer shifts. This, in turn, impacts the time nurses spend with their families, and in certain situations, impacts nurses financially. For example, some day care centers charge extra when a parent is late picking up their children. Moreover, the increase in responsibilities increases the burden on nurses to be responsive to a variety of needs concurrently—including patient care (Lancaster 1999). The result is a decrease in patient-provider interactions and, consequently, a decrease in the quality of care provided to a patient. Some research has found that the added non-clinical responsibilities increase stress (IOM 1996), and incidents where a nurse’s safety becomes a concern (IOM 1996).

Competition is an enormous driver in the healthcare environment. This competition forces the healthcare system and its players (including hospitals) are pushed to be competitive at all costs. Often times, this includes cutting costs in areas (like personnel) that in the end impact the quality of the service provided to their patients. To remedy this, policymakers must revisit the concept of quality of care. More specifically, policymakers must revisit the minimum number of resources and interactions a patient must have to ensure their well-being. Subsequently, policymakers must regulate and alter the norms and mores under which the healthcare

system operates. Only then will the US be able to ensure the end users of the products and services produced that these are adequate and appropriate.

This thesis also showed that nurse job dissatisfaction is greater among nurses no longer in nursing when compared to those who have considered leaving. Additionally, this thesis showed that, to a certain extent, dissatisfaction among nurses is decreasing (the majority of nurses no longer in nursing cited leaving for more than two reasons, while the majority of nurses who have considered leaving only cited doing so for one). This is important because it may be indicative of progress in addressing some of the needs of nurses.

Also of important in the fact that age in nurses no longer in a nursing position had a negative relationship with job dissatisfaction². The data in this these showed that as nurses get older, dissatisfaction with their job decreases. This finding is important particularly when one considers the low entry numbers into profession (HRSA 2002), and the average age of the active nurse population. Dissatisfaction at the lower age stratum of the profession can result in higher turnover among the group of workers that is slated to replace those who are getting older and retiring, and in the overall age of your workforce. The overall age of the workforce is important since, as noted above, age may limit the number and type of activities an individual worker can perform. This information, along with the other revealed by this thesis, is valuable for a number of reasons.

² A relationship between age and job dissatisfaction among nurses who have considered leaving the field could not be performed because the age of the respondents was not included with the data file provided to me by the AFT-FNHP.

First, and foremost, the information is valuable as policymakers, health administrators, and advocacy groups continue to discuss remedies to battle the nursing shortage. For example, since the data in this thesis suggests that job dissatisfaction is higher among younger nurses, one may use this information to develop loan repayment programs to ensure their financial well being, and by extension, their participation in the workforce in the future. Similarly, the data in this thesis also suggests that nurse with children are more likely to leave the profession because of the hours. Policymakers, hospital administrators, and advocacy should use this information to devise and implement scheduling practices that are flexible and take into consideration the family needs of a nurse.

Secondly, the information contained in this thesis is valuable because of the insight it provides on who is leaving the profession and the potential differential impact the nursing shortage can have on certain segments of the US population. As a result of my analysis, I contend that the nursing shortage will not have a differential impact on certain segments of the population—particularly the minority segments of the population. At the same time, however, I conclude that while the nursing shortage may not differentially impact minority segments of the population, the lack of minority nurses in the profession currently may. The current demographic distribution of the profession does not reflect that of the current US population, or current estimates of its future distribution.

I should mention that the data analyzed in this thesis contained a number of limitations. The first limitation was the fact that age comparisons across nurses who have considered leaving and those no longer in nursing could not be performed

because information on age for those who have considered leaving was not included with the data file obtained. The age comparisons across both populations could have potentially provided valuable information as age was a significant variable in our analysis—particularly on nurse job dissatisfaction. The second limitation was that the reasons cited for considering leaving the profession, or for no longer being in the profession, were similar, but not necessarily comparable. The analysis would have benefited greatly from having the same question asked across both groups of nurses. The third limitation was that the data collected from nurses no longer in nursing was retrospective since the data was collected after nurses had left the profession.

I propose that future research on the nursing shortage focus on ways to diversify the profession. This includes implementing recruiting and management strategies that attract younger, minority, and male workers. In addition, I propose that future research strive to validate the link between health disparities (by race, gender, and age) and provider shortages. Current research has linked health disparities to access and insurance coverage, but not to provider shortage. Lastly, future research should use the information gathered from this study to develop multi-pronged and multi-level strategies to combat the nursing shortage. Not doing so would be a disservice not only to the nurses in the profession, but also those who depend on them.

Bibliography

- Ahlburg, D.A., "The Census Bureau's New Projections of the US Population", *Population and Development Review*, March 1993, Vol.19, No. 1
- American Federation of State, County, and Municipal Employees, "Solving the Nursing Shortage," 2002
- American Federation of Teachers, "The Nurse Shortage: Perspectives from Current Direct Care Nurses and Former Direct Care Nurses," 2001
- American Nurses Association, "The ANA Staffing Survey," February 2001
- Broida, Bethany, A., Demographics: Changing Population, "*School Planning and Management*," December 2000
- Brush, Barbara L., Sochalski, J., and Berger, Anne M., "Imported Care: Recruiting Foreign Nurses to U.S. Health Care Facilities," *Health Affairs*, Chevy Chase: May/Jun 2004. Vol.23, Iss.3
- Colie, Russell C., "Magnet Hospitals Use Culture, Not Wages, to Solve Nursing Shortage," *Journal of Healthcare Management*, Jul/Aug 2001; 46, 4
- Dellagloria, Rebecca, "The Nurse Shortage: The National Crisis Becomes Even More Severe When it comes to Treating Spanish-speaking Patients," *Hispanic*, October 2003
- General Accounting Office (a), *Nursing Workforce: Recruitment and Retention of Nurses and Nurse Aides Is a Growing Concern*, May 2001
- General Accounting Office (b), *Nursing Workforce: Multiple Factors Create Nurse Recruitment and Retention Problems*, June 2001
- General Accounting Office (c), *Nursing Workforce: Emerging Nurse Shortages Due to Multiple Factors*, GAO-01-944, July 2001
- General Accounting Office (d), *AHealth Workforce: Ensuring Adequate Supply and Distribution Remains Challenging*, August 2001
- Institute of Medicine, Division of Health Care Services, Committee on the Adequacy of Nurse Staffing in Hospitals and Nursing Homes, "Nursing Staff in Hospitals and Nursing Homes: Is It Adequate," National Academy Press, Washington, DC:1996
- Joint Commission on Accreditation of Healthcare Organizations, *Health Care at the Crossroads: Strategies for Addressing the Evolving Nursing Crisis*, 2001

Johnson, J.H., Farrell, W.C., and Guinn, C., "Immigration Reform and the Browning of America: Tensions, Conflicts and Community Instability in Metropolitan Los Angeles," *International Migration Review*, Winter 1997, Vol.31, No.4

Kohn, M.L. and Schooler, C., Work and Personality: An Inquiry Into the Impact of Social Stratification, Ablex Publishing Corporation, New Jersey, 1983

Lancaster, Jeanette, "Nursing Issues in Leading and Managing Change", Mosby: Missouri 1999

Moore, David S. and McCabe, George P., Introduction to the Practice of Statistics, Fourth Edition, W.H.Freeman Company, New York, 2002

National Association of Social Workers, Center for Workforce Studies, "Assuring the Sufficiency of a Frontline Workforce: A National Study of Licensed Social Workers," Preliminary Report, March 2005

National League for Nursing, *Nursing Data Review 2000*, New York, NLN Press 2000

Nelson, S.S., "Big Issues, Big Ideas" *Carolina Nursing*, Spring 2004

Newman, K. and Maylor, U., The NHS Plan: nurse satisfaction, commitment and retention strategies, *Health Services Management Research* 15, 93-105

Nugent, Katherine E.; Childs, Gwen; Jones, Rosalyn; Cook, Pamela; Ravenell, Kathy, "Said Another Way—Call to Action: The Need to Increase Diversity in the Nursing Workforce", *Nursing Forum*, Volume 37, No. 2, April-June 2002

Peltier, J., Schibrowsky, J.A., and Nill, A., "Crossing Cultures," *MHS*, Spring 2004

Reilly, Patrick, "Importing Controversy", *Modern Healthcare*, Chicago: March 31, 2003, Vol.33, Iss.13

Sawada, A., *The Nurse Shortage in Japan*, 2003

Sibbald, B., "A New Study says Action is Needed Now to Avert a Shortage", *The Canadian Nurse*, 94, no. 1, 1998:22

Sochalski, J., "Nursing Shortage Redux: Turning the Corner on an Enduring Problem," *Health Affairs*, Chevy Chase: Sep/Oct 2002, Vol.21, Iss.5

Spetz, J., and Given, R., "The Future of the Nurse Shortage: Will Wage Increase Close the Gap?" *Health Affairs*, Chevy Chase: Nov/Dec 2003. Vol. 22, Iss. 6

Steinbrook, Robert, *New England Journal of Medicine*, May 2002

The Advisory Board Company, "The Nurse Perspective: Drivers of Job Satisfaction and Turnover", 2000

Tieman, Jeff, "Nursing the Nurse Shortage", *Modern Healthcare*, Chicago: May 20, 2002. Vol.32, Iss.20

Ulrich, B. "The Nursing Shortage and Potential Solutions: An Overview," *Nephrology Nursing Journal*, August 2003, Vol.30, No.4

US Census Bureau, 2004, "US Interim Projections by Age, Sex, Race, and Hispanic Origin," <http://www.census.gov/ipc/www/usinterimproj/>, Internet Release Date: March 18, 2004

US Department of Commerce, Economics and Statistics Administration, Bureau of the Census, "Who's Minding the Kids?", Statistical Brief, April 1994

US Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, "The Registered Nurse Population: Findings from the National Sample of Registered Nurses," March 2000

US Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, "Projected Supply, Demand, and Shortages of Registered Nurses: 2000-2020," July 2002

US Department of Health and Human Services, Health Resources and Services Administration, Special Programs Bureau, National Bioterrorism Hospital Preparedness Program FY2004 Continuation Guidance, May 2004

US Department of Labor, Bureau of Labor Statistics, *Occupational Outlook Handbook*, 2004-2005 Edition, Registered Nurses, <http://www.bls.gov/oco/ocos083.htm>, April 24, 2005

Wakefield, Mary K., "Hard Numbers, Hard Choices: Seeking Solutions to the Nursing Shortage," *Nursing Economics*, March-April 2001. Vol.19, No.2