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by

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Survey Results of the New Health Care Worker Study: Implications of Changing Employment Patterns

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Abstract:
This report examines the effects of contemporary employment arrangements on the quality of nursing work life, and the implications of these employment arrangements for individual nurses, the hospitals, and also for the organization. First we look at nurse work status (full-time, part-time or casual job), contract status (permanent or temporary), and employment preference as factors affecting commitment to the hospital and profession, job satisfaction, retention in the organization, and absenteeism from work. Second, we examine stress, burnout, and physical occupational health problems (in particular, musculoskeletal disorders), as affecting nurse and hospital outcomes. This project investigated how the quality of nursing worklife and career choices differ for nurses in full-time, part-time and casual employment, and whether nurses who have the employment arrangements they prefer enjoy a standard of worklife that encourages retention. We collected data for the study from 1,396 nurses employed at three large teaching hospitals in Southern Ontario (Hamilton Health Sciences, Kingston General Hospital, and St. Michael's Hospital in Toronto) using the *New Health Care Worker Questionnaire*. Results indicate that although a substantial majority of the nurses were employed in the type of job that they preferred, problems of stress, burnout and physical health problems were reported. Further, these problems affected the nurses' job satisfaction, commitment, and propensity to leave the hospitals.

Keywords:
Health care workers, employment status, nurses, job satisfaction, commitment, stress, burnout, physical health problems, MSD, propensity to leave

JEL Classification: I11, I18

Survey Results of the New Health Care Worker Study: Implications of Changing Employment Patterns

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Executive Summary

This report examines the effects of contemporary employment arrangements on the quality of nursing work life, and the implications of these employment arrangements for individual nurses, the hospitals, and also for the organization. First we look at nurse work status (full-time, part-time or casual job), contract status (permanent or temporary), and employment preference as factors affecting commitment to the hospital and profession, job satisfaction, retention in the organization, and absenteeism from work. Second, we examine stress, burnout, and physical occupational health problems (in particular, musculoskeletal disorders), as affecting nurse and hospital outcomes.

Our analysis presents the survey results from a research project titled, "The New Health Care Worker: The Implications of Changing Employment Patterns". This project investigated how the quality of nursing worklife and career choices differ for nurses in full-time, part-time and casual employment, and whether nurses who have the employment arrangements they prefer enjoy a standard of worklife that encourages retention. We collected data for the study from 1,396 nurses employed at three large teaching hospitals in Southern Ontario (Hamilton Health Sciences, Kingston General Hospital, and St. Michael's Hospital in Toronto) using the *New Health Care Worker Questionnaire*.

Survey results indicate that a substantial majority of the nurses are employed in the type of job (full-time, part-time, or casual, and permanent or temporary) that they prefer. Resolution of the slight mismatch between some nurses' preferred employment and current employment

status might result in more satisfied nurses in the health care system. Likewise, most nurses were satisfied with their working conditions, although many reported that there are not enough full-time and part-time nurses in their hospitals.

Results show there are stress, burnout and physical health problems among nurses in the hospitals studied. The nurses showed symptoms of stress, emotional exhaustion and musculoskeletal disorders (commonly known as repetitive strain injuries or soft-tissue damage). These problems were related to employment patterns and preferences, and affected the nurses' job satisfaction, commitment, and propensity to leave the hospitals.

Further analysis of the data showed that those nurses who were not satisfied with their employment status and conditions were also the ones reporting symptoms of stress, burnout, and musculoskeletal disorders. Similarly, the ones who reported symptoms of stress and burnout were those who were intending to leave their hospital or the nursing profession.

We found that nurses who were satisfied with their jobs are committed to their career and workplaces. Furthermore, survey results show that the propensity to leave the hospital and the profession decreased if nurses were committed to their career and hospitals, and were satisfied with their jobs. Thus psychosocial work factors (whether nurses' preferences with their jobs are fulfilled, whether they are satisfied with their jobs, and whether they show stress and burnout symptoms) seem to be the most pressing influences on nurses' commitment and turnover decisions. We recommend that decision-makers pay attention to these psychosocial factors to keep nurses in their profession and in hospitals.

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1. Introduction, Background and the Conceptual Framework

The world of work in Canada and most other industrialized countries has changed tremendously in the last few decades (Zeytinoglu 1999; 2002). A variety of non-standard employment patterns such as part-time work, temporary (casual) work, and job sharing have become common in newly created jobs. Nursing work has also changed with many nurses now employed in part-time, casual and temporary jobs. In addition to the changes in employment patterns, there are nursing shortages and recruitment and retention problems in Canada, as discussed in the qualitative results section of this study (Bauman et al., forthcoming).

The purpose of this report is to examine the effects of contemporary employment arrangements on the quality of nursing work life, and the implications of these employment arrangements for individual nurses, the nursing workplace, and also for the organization. In examining changing employment patterns in nursing, we focus on work statuses (full-time, part-time or casual jobs), contract statuses (permanent or temporary) and employment conditions (hours of work, overtime, shiftwork, scheduling, pay and benefits) of nurses. Stress, burnout, and physical health problems are examined as factors affecting nurses' and their employing hospitals' outcomes. Nurse outcomes that we focus on are nurses' commitment to their careers and hospitals, satisfaction with their jobs, diagnosed health problems and self-reported musculoskeletal disorders (MSDs). Hospital outcomes examined here include absenteeism among nurses and retention concerns.

This report presents the survey results of our research project titled, "The New Health Care Worker: The Implications of Changing Employment Patterns". The study concentrated on nurses' preferences for standard and non-standard employment arrangements. It investigated how the quality of nursing worklife and career choices differ for nurses in full-time, part-time

and casual employment, and whether nurses who have the employment arrangements they prefer enjoy a standard of worklife that encourages retention.

The objectives of our research, "The New Health Care Worker: The Implications of Changing Employment Patterns", were to:

1. Examine the human resource policies on standard and non-standard work arrangements and how these policies are operationalized in three large teaching hospitals.
2. Examine the effects of standard and non-standard employment arrangements on the nursing workplace, including the functioning of nursing and multi-disciplinary teams.
3. Explore nurses' preferences for standard and non-standard work and the reasons for their choices.
4. Investigate whether nurses whose preferences for particular employment arrangements are met experience better quality of worklife than nurses whose preferences are not met.
5. Evaluate the implications of having preferred employment arrangements for retention and suggest policy recommendations for managers and decision-makers.

The key terms used in this study are standard and non-standard employment and the quality of nursing worklife.

Standard employment arrangements are defined as full-time permanent, continuous work with an indefinite-term employment contract (Zeytinoglu & Muteshi 1999, p. 4). **Non-standard employment arrangements** are defined here under broad categories of part-time work and temporary work. Part-time work can be permanent (including job-sharing) or casual part-time. Temporary work can be casual or fixed-term contract work. In either case, the work can be full-time or part-time hours (Zeytinoglu & Muteshi 1999, p. 4). In this study, we refer to part-time, casual and temporary work arrangements including job-sharing and float pool as non-standard.

Quality of nursing worklife is defined as the extent to which "the needs and goals of the individual nurse are met at the same time as patients or clients are assisted to reach their goals and where both outcomes are realized within the cost and quality framework mandated by the

organization where the care is being provided" (O'Brien-Pallas, Baumann & Villeneuve 1994, p. 392).

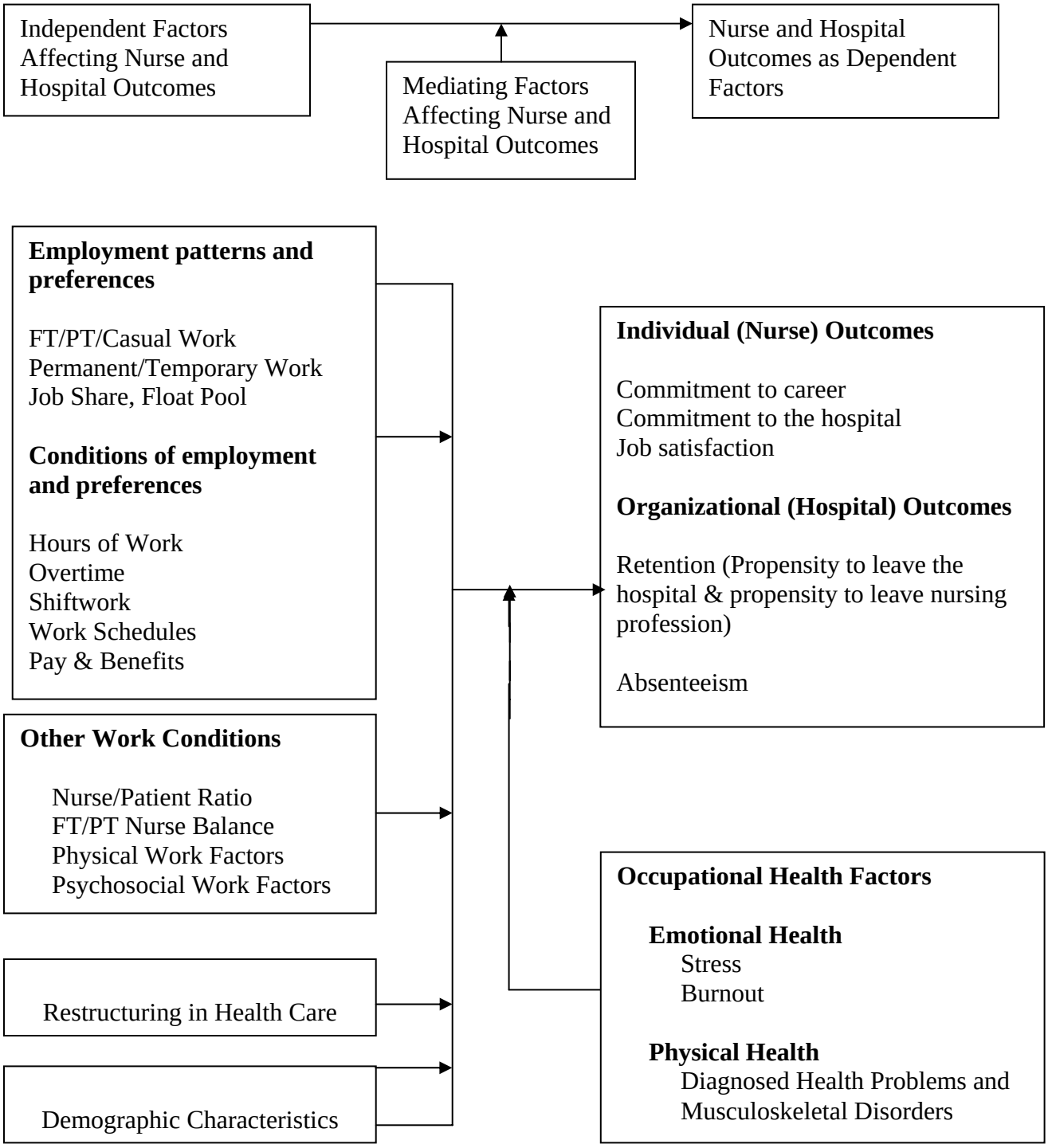
A sequential mixed research methodology was adopted in our study. We started with qualitative data collection and analysis using focus groups and interviews. The study followed with the quantitative data collection using survey methodology. Results to date are presented in this report.

This report follows our qualitative results report (Baumann et al., forthcoming). The background literature, and the Quality of Nursing Worklife Framework (O'Brien-Pallas & Baumann 1992) on which this project is based, are presented in our qualitative results report. Using that knowledge as the background we developed the following conceptual framework (see Figure 1) for the quantitative part of the study. In our conceptual framework, dependent variables are nurse and hospital outcomes. Independent variables affecting dependent variables are: current employment status and preferences; employment conditions and preferences; other work conditions (nurse/patient ratio, and full-time and part-time nurse balance); and demographic characteristics of nurses. Individual well-being variables of stress and burnout are mediating factors affecting dependent variables.

Specific objectives of this report are to:

1) examine nurses' current employment status, employment conditions, and preferences;
2) examine whether preferences are affected by the demographic characteristics of nurses;
3) examine associations between current and preferred employment and stress, burnout, and physical health problems;
4) examine the association between current and preferred employment and commitment, job satisfaction, absenteeism, retention;
5) examine associations between stress and burnout on nurses' commitment, job satisfaction, and retention.

Figure 1. The Conceptual Model of Analyzing the New Health Care Worker Survey Results



2. Methodology

2.1. Research Design

A sequential mixed methodology design was used for this research. The methodology of the qualitative part of this study is discussed in our previous report (Baumann et al., forthcoming). This section gives the research methodology of the quantitative section. Data were selected using systematic sampling (Polit and Hungler 1997).

2.2. Data and Collection Process

Data were collected from three large teaching hospitals in Southern Ontario (Hamilton Health Sciences, Kingston General Hospital, and St. Michael's Hospital in Toronto). Pilot testing of the questionnaire was conducted in April 2002. A modified Dillman approach was used to maximize the response rate to the questionnaire (Dillman 1978). A mail out questionnaire was sent to all 2,684 nurses in participating hospitals. The questionnaires were sent in May-June 2002. After sending a reminder card, in June-July 2002 a second mail out was conducted. A total of 1,396 nurses responded, representing a response rate of 52%. Response rates for each hospital were: Hamilton Health Sciences 56%, Kingston General Hospital 59%, and St. Michael's Hospital 40%.

2.3. Instruments

A *New Health Care Worker Questionnaire* was developed for the study. Most questions were either developed by the research team for this survey (Zeytinoglu et al. 2002a) or adapted from their previous *Health and Work Life Questionnaire* (Denton et al. 2002a). Some questions were adapted from other researchers' studies (as referenced below). The *New Health*

Care Worker Questionnaire is 28-pages long and has sections on current employment status and preferences for standard or non-standard employment, work hours, overtime, shifts, pay, and preferences. There are also questions on career commitment, workplace (hospital) commitment, job satisfaction, stress, burnout, and physical health problems, absenteeism, and the propensity to leave the hospital and the profession. The questionnaire also has sections on organizational/supervisor and peer support, health care restructuring, nursing shortages, and work-family interface issues. The instrument was pilot-tested with a sample of nurses who attended the focus groups.

2.4. Measurements

The research team constructed the questionnaire using valid and reliable instruments published in peer reviewed journals. These include a burnout scale (Maslach & Jackson 1986); career commitment scale (Blau, 1985); propensity to leave scale (Landau & Hammer 1986; Lyons 1971); organizational commitment scale (Meyer, Allen & Smith 1993); job satisfaction scale (Spector 1997); intrinsic job satisfaction, control over work, workload, symptoms of stress, organizational and peer support scales (Denton et al. 2002b&c); MSD scale (Zeytinoglu et al. 2000, adapted from Kuorinka et al. 1987), job insecurity (Denton et al. 2002a adapted from Cameron, Horsburgh & Armstrong-Stassen 1994); and work-family interface scales (Carlson, Kacmar & Williams 2000). Questions on employment status, non-standard and flexible work arrangements are adapted from Zeytinoglu et al. (2002b). The research team developed additional questions on employment status, hours of work, overtime, shift work, scheduling, nurse-patient ratios, full and part-time work issues, nursing shortages, absenteeism, orientation and training, pay and benefits and other employment questions (Zeytinoglu et al. 2002a) based

on their expertise in the field. Propensity to leave the profession question comes from Fimian, Fastenau & Thomas (1988). This report includes information from only the measures relevant to our objectives as stated in Section 1.

2.5. Analysis of the Data

Data was entered into an SPSS file, edited and frequencies (percentage distributions) were produced for each variable. A general descriptive analysis was performed, and outliers were checked. The results based in this report are based on the frequency distributions and correlations. In addition to overall results analysis, analysis of data for each hospital was conducted. Further multivariate analysis is planned in the future to identify the determinants of nurse and hospital outcomes. Comparisons of findings with relevant Statistics Canada data are also planned.

2.6. Limitations of the Data

Our results apply to the three hospitals studied here, and are valid and reliable for the sample covered here. However, we caution for generalizing to the nursing population from our results. We were not able to compare our results with a national data set for generalizability. Comparisons with a national data set was not possible due lack of comparable questions. Our study is among the first comprehensive research emerging in this field. We hope other studies will replicate our questions to show similarities and differences with our findings.

3. Demographic Characteristics of Survey Respondents

In total, 1396 nurses from Hamilton Health Sciences, Kingston General Hospital, and St. Michael's Hospital in Toronto responded to our survey. In terms of professional qualifications, of these individuals, the majority are Registered Nurses (RNs) and a smaller number are Registered Practical Nurses (RPNs). In terms of educational background, the vast majority of survey respondents (755 nurses or 54%) reported a diploma in nursing as their highest level of education. About one in five have a university degree in nursing. Additional information about the educational background of survey participants is contained in Table 1.

When asked about their primary nursing position in the hospital, most of the survey respondents reported that they are employed as staff RNs or RPNs. The most common areas of practice among survey respondents are critical care, medical surgical care, and nursing education. The majority of the nurses in this sample responded that their primary area of practice is the area they would prefer to work in. Additional information about employment status of the sample is contained in Tables 2 and 3.

The survey respondents report an average of 18 years of tenure in the profession of nursing, an average of 13 years of employment at their hospital workplace, and an average of 8 years in their current position. The average age of the sample is 42 years. Our sample reflects the dominance of women workers in the nursing profession. Given this high percentage of female workers, it is not surprising that 17% of our respondents have children living with them who are less than 5 years of age, 26% with children between the ages of 5 and 12 years, and 31% with children13 years of age or older. Only a small number of respondents live with another dependent adult. Almost all reported that they do not live alone, and are married or live with a partner [See Table 4].

Survey respondents are for the most part Canadian born and one in five are immigrants. Of those respondents not born in Canada, most of them were born in the Philippines (53 nurses or 21%), the United Kingdom (41 nurses or 16%), or the Caribbean (22 nurses or 9%), and the rest are from a variety of other countries/regions. Most nurses (1012 or 74%) indicated they were not a member of a particular ethnic group whereas 26% (350 individuals) indicated they were a member. Of those that said they were a member of a certain ethnic group, most (61 nurses or 19% of members) said they were British, English, Irish or Scottish, 16% (52 nurses) were Filipino, 8% (26 nurses) were Italian, 6% (20 nurses) identified as being of Caribbean heritage, and the rest identified themselves with a variety of other ethnic groups. About one in ten nurses indicated that they were a visible minority, a percentage similar to the population in Canada [See Table 4].

The *New Health Care Worker Questionnaire* also contained demographic questions about income and retirement plans. Almost 70% of the survey respondents contribute 50% or more to the family income. Not surprisingly, almost all of the nurses indicated that their personal income was important or very important to their family's economic well-being. On average, nurses plan to retire when they are 58 years of age. However, the retirement plans of the sample were varied with respect to employment status. As they approach retirement, some respondents reported that they anticipate working full-time, and others anticipate working on a casual basis. Almost half of the nurses anticipate working part-time as they approach retirement. [See Tables 5 and 6]. Of those who currently work full-time, 49.9% (397 nurses) anticipate working full-time as they approach retirement, while 36.6% (291 nurses) anticipate working part-time and 13.6% (108 nurses) anticipate working on a casual basis. Of those who work part-time, most (68.1%)

anticipate working part-time as they approach retirement. About one-half of causal nurses (52%) anticipate working casual as they approach retirement.

Table 1: Educational Background

	N (%)
Highest Level of Education Completed	
Some high school/high school/some community college	9 (0.6)
Diploma from Comm. College (nursing)	510 (36.7)
Nursing school	245 (17.7)
Diploma from Comm. College (not nursing)	21 (1.5)
Certificate from Comm. College	91 (6.6)
Some university	179 (12.9)
Completed bachelor's degree	281 (20.2)
Post graduate degree	28 (2.0)
Other	24 (1.7)

Table 2: Primary Position in Nursing

	N (%)
Staff RN	1170 (84.6)
Staff RPN	139 (10.1)
Instructor/Educator/Professor	16 (1.2)
Clinical Nurse Specialist	6 (0.4)
Manager/Assistant Manager	5 (0.4)
Nurse Practitioner	2 (0.1)
Other	45 (3.3)

Table 3: Primary Area of Practice

	N (%)
Critical Care	301 (21.8)
Medical Surgical	267 (19.3)
Nursing Education	272 (19.7)
Maternal/Newborn	105 (7.6)
Emergency Care	73 (5.3)
Operating Room	61 (4.4)
Ambulatory Care	52 (3.8)
Paediatrics	51 (3.7)
Gerontology/Long Term Care	48 (3.5)
Psychiatric/Mental Health	43 (3.1)
Oncology	39 (2.8)
Palliative Care	3 (0.2)
Rehabilitation	29 (2.1)
Other	2 (0.1)
Several Clinical Areas	8 (0.6)

Table 4: Demographic Characteristics of Survey Respondents

Characteristic	**Mean (std. dev.)**
Tenure in the profession in years	18 (10.4)
Tenure at the hospital in years	13 (9.4)
Tenure at current job in years	8 (7.5)
Age	42 (9.5)
Characteristic	**N (%)**
Gender: Female Male	1324 (96.2) 52 (3.8)
Married/Common law	998 (73.0)
Living arrangement: Alone Not Alone	181 (13.2) 1195 (86.8)
Immigrant	284 (20.4)
Member of a visible minority group	130 (9.6)
Member of an ethnic group	350 (25.7)
Those contributing 50% or more of the family income	957 (69.4)

Table 5: Income Information

	N (%)
Personal Contribution to Family Income	
0 -25%	
26-50%	
51-75%	
76-100%	
Importance of Personal Income to Family's Economic Well-Being	
Not at all/not very important	50 (3.6)
Somewhat important	144 (10.4)
Important/very important	1192 (86.0)

Table 6: Retirement Plans

	Mean (SD)
Age Plan to Retire	58.3 (4.6)
	N (%)
Approaching Retirement:	
Anticipate working full-time	35.7 (485)
Anticipate working part-time	46.8 (635)
Anticipate working on a casual basis	17.5 (238)

4. Current Employment & Preferences

4.1. Standard and Non-standard Employment Patterns

We start the analysis of current employment and employment preferences among survey respondents with information about standard and non-standard employment patterns. Many of the nurses who participated in this study have changed employment status since they first started to work at the hospital. The vast majority were initially employed on a full-time or part-time basis, and 17% were in casual jobs. At the time of the study, however, almost 60% of respondents were in full-time positions, with 33% and 8% in part-time and casual jobs respectively. [See Table 7]. Of those who worked full-time when they first started, 69.3% (402 nurses) currently work in full-time jobs. Of those who worked part-time when they first started, 45.3% (255 nurses) currently work part-time. Of those who worked casual when they first started, 25% (60 nurses) currently work in casual jobs. These findings suggest that many nurses do not stay in the same employment status throughout their careers.

We sought information from survey respondents about the reasons for their full-time, part-time, or casual employment at the hospital. For those working full-time, the most commonly given reasons for this employment status were the income that full-time work brings, benefits package, stability of hours, and job security associated with full-time work. Part-time nurses and those in casual nursing jobs reported very similar reasons for their employment status. Control over the work schedule, self-fulfillment/enjoyment, and preferences for pay instead of benefits were the most commonly given reasons. Some part-time nurses and those in casual jobs reported that they were working in a part-time job because they could not find a full-time job or a full-time job that they like, or were working in a casual job because they could not find a full-time or part-time job [See Table 8]. As presented in Table 9a, a large majority of full-time, part-

time, and casual nurses did not prefer a different employment status. As presented in Table 9b, examining those who preferred a different employment status, of those who are working full-time, many want part-time work and some want casual work. Of those working in part-time or casual jobs, a substantial majority want full-time work. This suggests some mismatch between preferences and actual employment for nurses who are not happy about their current employment status.

For those who responded that they would prefer a different employment status, we inquired about their reasons for preferring full-time, part-time, and contract jobs. Respondents were allowed to choose as many reasons as applied. Most commonly selected responses are provided here. As presented in Table 10, nurses who would prefer full-time work to their current positions reported stability of hours, the benefits package, job security, full-time income, and full-time hours as the rationale for their choice. These numbers indicate that nurses in non-standard employment want stability (in terms of hours of work and financial stability) and security in their lives. For those who would prefer part-time work to their current status, control over work schedule is important. Self-fulfillment/enjoyment, elementary school children at home, preference for pay instead of benefits, and pursuing an education were other common reasons given as reasons for preferring part-time work. Likewise, the majority of nurses who would prefer casual work prefer it because it would provide them with control over their work schedule. Additional information on nurses' preferences for a different employment status is contained in Table 10.

We were also interested in anticipated changes in employment status among our respondents. Approximately 60% of respondents stated that they did not anticipate a change in employment status over the next five years. Of those who did, 11% anticipated a change to full-

time work, 9% to part-time work and 2% to casual work. Some nurses anticipated a change in employment status because of retirement (12%) or other reasons (8%).

In addition to full-time, part-time and casual status of the job (which refer to hours), permanency (or continuity on the job) is an important factor in separating non-standard jobs from standard ones. The vast majority of nurses who responded to our survey (1139 individuals or 97%) stated that their jobs were permanent and 3% (46 nurses) stated that their jobs were temporary. Most respondents (1335 nurses or 97%) stated that they would prefer to work on a permanent basis while 3% (35 nurses) stated they would prefer to work on a temporary basis.

Job sharing is a permanent form of part-time work, often with full-time benefits provided. Only 4% (52 nurses) of respondent's job share, while 96% (1333 nurses) of respondents did not job share. However, 21 % (289 nurses) of respondents stated that they would prefer to job share while 77% (1077) of respondents stated they would not prefer to job share.

Hospitals have float pools (or resource teams) with nurses in different units, depending on the need. Only 5% (64 nurses) of workers stated that they worked on a float pool or resource team, and 95% (1320) did not. In addition, most workers stated that they would not prefer to work on a float pool or resource team, while 6% (80 nurses) stated they would. Most of the respondents (94%) not already working full-time, stated that they would not be prepared to work in a float pool to get into a full-time position, and only 6% said they would.

Table 7: Employment Status When First Started at Hospital and Currently

	N (%)
Employment Status when first started	
Full-time	580 (42.0)
Part-time	562 (40.7)
Casual	240 (17.4)
Employment Status at the time of the study	
Full-time	818 (59.0)
Part-time	462 (33.3)
Casual	107 (7.7)

Table 8: Reasons for Full-Time, Part-Time, and Casual Employment

	N (%)*
Those Working Full-Time (FT), Reasons for FT Work	
Full-time income	639 (78.2)
Benefits package	576 (70.5)
Stability of hours	597 (73.1)
Job security	501 (61.3)
Full-time hours	450 (55.1)
Experience	243 (29.7)
Self-fulfillment /enjoyment	274 (33.5)
Good opportunities for promotion	50 (6.1)
Other	71 (8.7)
Those Working Part-Time (PT), Reasons for PT Work	
Control over work schedule	324 (70.1)
Self-fulfillment /enjoyment	191 (41.3)
Prefer pay instead of benefits	160 (34.6)
Elementary school children at home	145 (31.5)
Pre-school children at home	96 (20.8)
Pursuing education	61 (13.2)
Job security	55 (11.9)
Approaching retirement	45 (9.8)
Cannot find full-time job I like	46 (10)
Travel	36 (7.8)
Cannot find full-time job	29 (6.3)
Care of sick /dependent family member	27 (5.9)
Own illness/disability	19 (4.1)
Other	75 (16.3)
Those in Casual Jobs (CJ), Reasons for CJ Work	
Control over work schedule	77 (72)
Self-fulfillment /enjoyment	29 (27.1)
Prefer pay instead of benefits	27 (25.2)
Elementary school children at home	25 (23.4)
Pre-school children at home	22 (20.6)
Pursuing education	20 (18.7)
Travel	12 (11.2)
Approaching retirement	11 (10.3)
Cannot find full-time job/I like	8 (7.5)
Cannot find part-time job/I like	6 (5.6)
Job security	4 (3.7)
Care of sick /dependent family member	3 (2.8)
Own illness/disability	4 (3.7)
Other	39 (36.4)

*Percentages do not add to 100 because respondents could check all items that applied.

Table 9a: Employment Status Preferred

	Current Status			Total
	Full-time nurses	Part-time nurses	Casual nurses	
	N (%)	N (%)	N (%)	N (%)
Prefer a different status:				
Yes	167 (20.6)	93 (20.4)	24 (22.6)	284 (20.7)
No	644 (79.4)	363 (79.6)	82 (77.4)	1089 (79.3)
Total	811 (100)	456 (100)	106 (100)	1373 (100)

Table 9b: Employment Status Preferred if Different From Current Status

Employment Status Preferred	Current Status			Total
	Full-time nurses	Part-time nurses	Casual nurses	
Would you prefer:	N (%)	N (%)	N (%)	N (%)
Full-time work	---	74 (79.6)	16 (66.7)	93 (32.7)
Part-time work	152 (91.0)	---	7 (29.2)	159 (55.9)
Casual work	10 (6.0)	15 (16.1)	---	25 (8.8)
Missing/ Unspecified	5 (3.0)	4 (4.3)	1 (4.1)	10 (3.5)
Total	167(100)	93 (100)	24 (100)	284 (100)

Table 10: Reasons for Preferring Full-Time, Part-Time and Casual Work

	N (%)*
Prefer Full-time Work (N=91)	
Stability of hours	81 (80.2)
Benefits package	68 (67.3)
Job security	56 (55.4)
Full-time income	56 (55.4)
Full-time hours	53 (52.5)
Experience	22 (21.8)
Self-fulfillment /enjoyment	22 (21.8)
Good opportunities for promotion	14 (13.9)
Other	13 (12.9)
Prefer Part-time Work (N=160)	
Control over work schedule	99 (58.9)
Self-fulfillment /enjoyment	66 (39.3)
Elementary school children at home	43 (25.6)
Prefer pay instead of benefits	40 (23.2)
Pursuing education	39 (23.2)
Approaching retirement	36 (21.4)
Pre-school children at home	27 (16.1)
Travel	25 (14.9)
Own illness /disability	19 (11.3)
Care of sick /dependent family member	15 (8.9)
Job security	12 (7.4)
Cannot find full-time job I like	3 (1.8)
Other	43 (25.6)
Prefer Casual Jobs (N=25)	
Control over work schedule	24 (85.7)
Self-fulfillment /enjoyment	8 (28.6)
Travel	8 (28.6)
Approaching retirement	7 (25.0)
Prefer pay instead of benefits	6 (21.4)
Pre-school children at home	6 (21.4)
Own illness /disability	2 (7.1)
Pursuing education	5 (17.9)
Elementary school children at home	5 (17.9)
Cannot find full-time job I like	1 (3.6)
Cannot find part-time job I like	1 (3.6)
Job security	1 (3.6)
Care of sick /dependent family member	1 (3.6)
Other	9 (32.1)

*Percentages do not add to 100 because respondents could check all items that applied.

4.2. Paid and Unpaid Overtime Hours

Of our respondents, 367 (27%) reported working paid overtime at premium pay and 283 (21%) work unpaid overtime hours. When comparing how many overtime hours the nurses worked to the number of overtime hours they preferred, results show that 20% of nurses worked more overtime than they preferred and 9% of nurses worked less overtime than they preferred. Staff shortages were the most commonly given reason for working paid overtime hours. For unpaid overtime, a large majority responded that they were working overtime to finish tasks unable to complete during their regular work hours. [See Table 11 for further details on this issue].

Table11: Paid and Unpaid Overtime Hours

	N (%)
Paid overtime hours worked	
0	1003 (73.2)
1-5	183 (13.4)
6-10	59 (4.3)
11-15	92 (6.7)
16 and over	33 (2.4)
Total	1370 (100)
Paid overtime hours preferred	
0	1154 (84.6)
1-5	30 (2.2)
6-10	52 (3.8)
11-15	96 (7.0)
16 and over	32 (2.3)
Total	1364 (100)
Work more overtime than preferred	276 (20.4)
Work less overtime than preferred	128 (9.4)
Work the exact amount of overtime preferred	951 (70.2)
Unpaid overtime hours worked	
0	1093 (79.4)
1-5	238 (17.3)
6-10	24 (1.7)
11-15	15 (1.1)
16 and over	6 (0.4)
Total	1376 (100)
Reason for Working Paid Overtime Hours*	
There were not enough nursing staff	230 (62.3)
To make extra money	120 (32.6)
To finish tasks that I was unable to complete in my regular hours	78 (21.2)
I felt pressured by my supervisors	10 (2.7)
I felt pressured by my co-workers	12 (3.3)
I felt pressured by my scheduling clerk	10 (2.7)
I was dealing with an emergency	68 (18.5)
Other	83 (22.6)
Reasons for Working Unpaid Overtime Hours*	
To finish tasks I was unable to complete in my regular hours	219 (77.7)
I felt pressured by my supervisors	7 (2.5)
I felt pressured by my co-workers	11 (3.9)
I felt pressured by my scheduling clerk	4 (1.4)
I was dealing with an emergency	90 (31.8)
Other	66 (23.2)

*Percentages do not add to 100 because respondents had the option of checking all items that applied.

4.3. Shift Work

The majority of nurses worked 12 hour shifts and more than one third worked 8 hour shifts. Only a small number of the survey respondents worked 10 hours shifts or reported another distribution of their work hours. The majority of nurses indicated that they preferred the12 hour shift arrangement. Of our respondents, 42% preferred 8 hour shifts. Table 12b shows that the majority (79.6%) of nurses who work 12 hour shifts prefer 12 hour shifts and the majority (76.8%) of nurses who work 8 hour shifts prefer to work 8 hour shifts. However, responses still suggest that some nurses in 12 hour shifts prefer 8 hour shifts and some nurses who work 8 hour shifts prefer 12 hour shifts [See Table 12b].

Table 12a: Shift Work

	N (%)*
Type of Shifts Worked	
12 hour shifts	1056 (75.9)
10 hour shifts	27 (1.9)
8 hour shifts	534 (38.4)
Other	61 (4.4)
Shift Preference	
12 hour shifts	872 (63.1)
10 hour shifts	193 (14.0)
8 hour shifts	581 (42.0)
Other	45 (3.3)

*Percentages do not add to 100 because respondents could be working more than one type of shift.

Table 12b: Shift Work Preferences

	Prefer 12 Hour Shifts	Prefer 10 Hour Shifts	Prefer 8 Hour Shifts	Prefer Other Shifts
	N (%)*	N (%)*	N (%)*	N (%)*
Work 12 Hour Shifts	836 (79.6)	127 (12.1)	323 (30.8)	27 (2.6)
Work 10 Hour Shifts	4 (14.8)	17 (63.1)	16 (59.3)	1 (3.7)
Work 8 Hour Shifts	187 (35.3)	84 (15.8)	407 (76.8)	16 (3.0)
Work Other Shifts	24 (40.0)	5 (8.3)	39 (65.0)	20 (33.3)

*Percentages do not add to 100 because respondents had the option of checking all items that applied.

With respect to the distribution of day and night shifts worked, most nurses were satisfied with their shift arrangement. However, one in five responded that they were dissatisfied or very dissatisfied with the distribution of their day and night shifts. Similar results were found when we asked nurses if they were satisfied with the distribution of weekday/weekend shifts that they worked [See Table 13].

Tables 14 and 15 present information about the nurses' experience working on an on-call basis. A large majority of nurses did not work on an on-call basis. For the 14% of nurses who did, approximately half worked on-call of 8 or 12 hour length. The length of time per on-call 'shift' varied with a range of 2 hours to 16 weeks. The most often reported length was 12 hours. Close to half of the nurses in an on-call position were satisfied or very satisfied with the on-call rotation in their hospital.

Table 13: Satisfaction with Shift Distribution

	Very Dissatisfied/ Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied/ Very Satisfied
	N (%)	N (%)	N (%)
How satisfied are you with the distribution of day and night shifts that you work?	271 (19.9)	196 (14.4)	895 (65.7)
How satisfied are you with the distribution of weekday/weekend shifts that you work?	251 (18.7)	239 (17.8)	853 (63.5)

Table 14: Length of Being On-Call

	N (%)
12 hours or less	87 (53.4)
24 hours	19 (11.6)
1 week	14 (8.6)
16 weeks	14 (8.6)
Varies	29 (17.8)
Total	163 (100)

Table 15: Satisfaction with On-Call Rotation

	Very Dissatisfied/ Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied/ Very Satisfied
	N (%)	N (%)	N (%)
How satisfied are you with your on-call rotation?	54 (29.5)	47 (25.7)	82 (44.8)

4.4. Scheduling

We asked the nurses to describe how their work is scheduled at the hospital. The vast majority of respondents (68%) indicated that their work is scheduled according to a master schedule. The work was self-scheduled for 14% of nurses, and 18% responded that their work is scheduled in another manner. Approximately half of the respondents (49%) prefer to have their work determined by a master schedule, 44% prefer self-scheduling, and 7% prefer another system. Of those who work by a master schedule, 63.3% (589 nurses) prefer to have their work

determined by a master schedule and 35.5% (312 nurses) prefer to self-schedule. Of those who work by self-scheduling, almost all (95.2% or 179 nurses) prefer to work by self-scheduling. These findings suggest that many nurses would prefer to self-schedule although the large majority were satisfied or very satisfied with their work schedule [See Table 17].

When asked about their reasons for these scheduling preferences, as presented in Table 16, the most commonly given response was that "it is easier to plan life outside of work". Table 16 presents the additional reasons cited for scheduling preferences among the nurses in this sample. In addition, we wanted to learn whether or not nurses experienced difficulties in adjusting their work schedule. As presented in Table 18, respondents found adjusting their schedule when needed and switching shifts with co-workers to be particularly difficult. Furthermore, getting a leave of absence for educational activities or conferences was also difficult or very difficult for the survey respondents. The nurses were, however, easily able to get time off from work for personal reasons. In terms of the perceived effects of the collective agreement on scheduling, the responses from nurses were generally unfavourable, with only 20 percent agreeing that contract language makes scheduling easier [See Table 19].

Table 16: Reasons for Schedule Preference

	N (%)*
Easier to plan life outside of work	1186 (87.9)
More control over work hours	753 (55.8)
Continuity in patient care	271 (20.1)
Equitable distribution of shifts	542 (40.1)
Other	108 (8.0)

*Percentages do not add to 100 because respondents had the option of checking all items that applied.

Table 17: Satisfaction with Work Schedule

	Very Dissatisfied/ Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied/ Very Satisfied
	N (%)	N (%)	N (%)
Overall, how satisfied are you with your work schedule?	223 (16.2)	255 (18.5)	900 (65.3)

Table 18: Ease of Adjusting Work Schedule

In general, how easy is it to…	Very Difficult/ Difficult	Neither Difficult Nor Easy	Easy/Very Easy
	N (%)	N (%)	(N %)
Adjust schedule when needed	672 (48.8)	322 (23.4)	384 (27.9)
Switch shifts with co-workers	643 (47.6)	331 (24.5)	377 (27.9)
Get preferred vacation time	506 (37.2)	359 (26.4)	493 (36.3)
Get time off for personal crisis	417 (30.8)	359 (26.6)	575 (42.5)
Get a leave of absence for (ed /conferences)	545 (41.0)	442 (33.3)	341 (25.6)
Participate in committee work	423 (32.4)	522 (40.0)	361 (27.7)

Table 19: Effect of the Collective Agreement on Scheduling

	Strongly Disagree/ Disagree	Neither Agree Nor Disagree	Agree/ Strongly Agree
	N (%)	N (%)	N (%)
Contract language makes scheduling easier at this hospital	411 (30.9)	656 (49.4)	260 (19.6)
Seniority is given too much priority when scheduling	636 (47.4)	348 (26.0)	347 (26.6)
Contract language causes inflexibility in scheduling	282 (21.3)	623 (47.1)	417 (31.5)
Contract language makes it easier to adjust schedule to accommodate personal life	518 (39.0)	653 (49.3)	156 (11.7)

4.5. Pay and Benefits

When we inquired about respondents' perceptions of the financial remuneration at their workplace, we learned that the nurses are about one-half satisfied or very satisfied with the pay that they receive for their job (56% or 757 nurses). Almost 30% (364 nurses) are dissatisfied or very dissatisfied with their pay and the rest (17%) were neutral on this issue. An overwhelming

majority of the nurses (1113 individuals or 82%) indicated that they prefer a structure of seniority and merit in the clinical pay ladder, rather than a structure of only seniority or merit.

With respect to benefits, approximately half of the nurses receive benefits at their job in the hospital, and an additional 30% receive pay in lieu of benefits. Only 16% receive neither benefits nor pay in lieu of benefits. The results indicate that 141 nurses (approximately 10%) in our sample are not receiving any benefits or pay in lieu of that.

We asked respondents if they *preferred* to receive benefits, pay in lieu of benefits, or receive no benefits. 827 individuals or 61% prefer to receive benefits, 34% or 457 would prefer to receive pay in lieu of benefits, and 80 respondents (6%) do not want to receive benefits. Of those receive benefits, 89% (653 nurses) preferred to receive benefits, 9% (64 nurses) preferred pay in lieu of benefits and 2% (14 nurses) preferred not to receive benefits. Of those who receive pay in lieu of benefits, 66% (271 nurses) preferred to receive pay in lieu of benefits, 30% preferred to receive benefits and 5% (19 nurses) preferred not to receive benefits. Of those who did not receive benefits, 56% (122 nurses) preferred to receive pay in lieu of benefits, 23% (50 nurses) preferred benefits and 22% (47 nurses) preferred not to receive benefits. These results show that there are a substantial number of nurses who are not receiving benefits who would prefer to receive them as well as many nurses who are receiving benefits but would prefer other options.

Of the 827 nurses who said that they prefer to receive benefits, the overwhelming majority want to receive extended health care benefits (89%), prescription (92%), vision (88%), dental coverage (93%), and disability benefits (90%). They also wanted to continue to be included in the hospital's pension plan (91%) and life insurance plan (75%).

We wanted to learn if the explanation to why some nurses preferred *not* to receive benefits, or prefer to receive pay in lieu of benefits, was due to them receiving benefits from a family member. Close to half of the nurses receive benefits from a family member (a partner or spouse, or a former partner or spouse, as presented in the second column of Table 20b). Then we continued to ask those not receiving benefits from a family member if they were receiving benefits from another employer. Only 55 individuals (or 4%) receive benefits from another employer. The third column of Table 20b contains detailed information about the benefits received from another employer.

Lastly, taking into consideration that the average age of nurses is in mid-40s, and that they might be interested in their retirement income, we asked whether nurses belonged to the pension plan at their hospital. Out of 1371 responses to this question, 20% (273 nurses) indicated they did not belong to the hospital pension plan whereas the majority of respondents (1098 nurses or 80%) indicated they did belong to the hospital pension plan. When we asked about their preference, out of 1352 respondents, 17% (223 nurses) said they do not prefer to belong to the hospital pension plan whereas 84% (1129 nurses) reported that they do prefer to belong to the plan. Of those who do not belong to the hospital pension plan, 37% (98 nurses) would prefer to belong.

Table 20a: Benefits Preferred

Preference	Received Benefits (N=736)	Did Not Receive Benefits (N=221)	Received Pay in Lieu of Benefits (N=418)
Prefer to Receive Benefits	653 (89%)	50 (23%)	123 (30%)
Prefer NOT to Receive Benefits	14 (2%)	47 (21%)	19 (5%)
Prefer Pay in Lieu of Benefits	64 (9%)	122 (56%)	271 (65%)

Table 20b: Benefits Received

Type of Benefits	Receive from a Family Member (N=613)	Receive from Another Employer (N=55)
	N (%)*	N (%)*
Extended health care benefits	422 (76.2)	36 (72.0)
Prescriptions	520 (93.9)	35 (70.0)
Life insurance plan	177 (31.9)	33 (66.0)
Hospital's pension plan	123 (22.2)	40 (80.0)
Vision benefits	471 (76.8)	36 (72.0)
Disability benefits	126 (22.7)	36 (72.0)
Dental plan	519 (93.7)	34 (68.0)
Other	39 (7.0)	5 (10.0)

*Percentages do not add to 100 because respondents had the option of checking all items that applied.

5. Other Work Conditions

5.1. Nurse/Patient Ratios

The majority of respondents (953 nurses or approximately 70%) stated that they work in a setting where nurse to patient ratios were part of their jobs. The ratios varied according to day and night time and area in which the nurses worked. Nurses were asked to identify the ratio they worked during the day and night and the ratio they thought was their ideal or preferred ratio for that time. When comparing the ratio they worked with the ratio they preferred to work, we found that 58% worked with a higher ratio their ideal or preferred ratio during the day and 61% worked with a higher ratio than preferred during the night [See Table 21a]. The respondents were also asked how often they have a higher patient assignment than their ideal ratio. Approximately 42% of respondents said that they have a higher nurse/patient ratio than their ideal or preferred ratio most or all of the time. Only 18% of respondents said that this happened either none of the time or a little of the time and 40% said some of the time [See Table 21b].

Table 21a: Preferred Ratios: Difference between Current and Preferred Ratios

	Days (N %)	**Nights (N%)**
Currently work lower ratio than preferred	11 (1.2%)	15 (2%)
Currently work higher ratio than preferred	483 (57.8%)	461 (60.8%)
Currently work the ratio preferred	343 (41%)	282 (37.2)
Total	837 (100%)	758 (100%)

Table 21b: Perceptions of Patient Assignment Ratios

	None/A little of the Time	Some of the Time	Most/All of the Time
	N (%)	N (%)	N (%)
How often do you have a higher patient assignment than your ideal ratio?	172 (17.7)	391 (40.2)	409 (42.1)

5.2. FT/PT Nurse Balance

We also inquired about the balance of full-time and part-time nurses on the hospital units in which our respondents work. As presented in Table 22, about one in five agreed with the statement that there were too many part-time and not enough full-time nurses. Over one-half of the respondents felt that there were not enough full-time or part-time nurses on their units. The majority of the nurses disagreed with the statement that there were "too many full-time and not enough part-time nurses" [See Table 22].

Table 22: Balance of Part-Time and Full-Time Nurses

On my unit, there are:	Strongly disagree/ Disagree	Neither agree nor disagree	Agree/ Strongly agree
	N (%)	N (%)	N (%)
Too many part-time and not enough full-time nurses	739 (55.8)	346 (26.1)	239 (18.1)
Too many full-time and not enough part-time nurses	751 (64.8)	383 (29.1)	80 (6.1)
Not enough full-time or part-time nurses	311 (23.4)	266 (20.0)	752 (56.5)

6. Occupational Health as Affecting Nurses and Hospitals

As presented in Figure 1, nurses' emotional and physical occupational health affects their commitment, satisfaction, absenteeism, and retention. We now turn to these factors.

Stress and burnout affect nurses' decisions to stay with the employing hospital, absenteeism, commitment to their career and to their employing hospital, and job satisfaction. In this section we first examine stress and burnout constructs in detail.

The changing work environment affects both mental and physical health outcomes of nurses. We examine the diagnosed health problems of nurses, with a particular focus on whether they have musculoskeletal disorders.

6.1. Stress

In the first measure of stress, respondents were asked to describe overall how stressful their lives are on a 5-point scale from 1 = not at all stressful to 5 = very stressful. The same question was repeated about their jobs. For the question about life stress, 24% of respondents rated their lives as stressful or very stressful. The nurses rated their jobs slightly more stressful than their lives. Almost one-half of the nurses (48%) rated their jobs as stressful or very stressful.

In the second measure of stress, respondents were presented with 14 symptoms of stress. These items were based on a scale created by Denton et al. (2002). Nurses were asked (on a 5-point scale ranging from 1= none of the time to 5 = all of the time) how often they felt this way during the past month. The symptoms of stress scale was obtained by summing the 14 stress symptoms to form a stress scale. Stress scores ranged from 14 to 70 with higher scores indicating higher levels of stress. The average of stress scale was 32.4 (std. dev. = 7.9), with Cronbach's alpha = .87, indicating good internal reliability of the stress scale. The mean for the symptoms of stress indicates that nurses are feeling stressed. The most frequently reported

symptoms were: not being able to sleep through the night (20%), being exhausted at the end of the day (50%), and not feeling energized on the job (29%), although the same percentage (29%) felt energized on the job. About 16% felt burnt out most or all of the time [See Table 23].

Table 23: Stress Scale

How often did you feel this way during the past month:	None/a little of the time N (%)	Some of the time N (%)	Most/all of the time N (%)	Scale Properties
Exhausted at the end of the day	169 (12.4)	508 (37.3)	685 (50.3)	Mean: 32.4 Std. dev.: 7.9 Range: 14-70 Alpha: .87 N=1396
Headaches or migraines	810 (59.6)	449 (33.0)	100 (7.4)	
Able to sleep through the night *	266 (19.6)	312 (23.0)	780 (57.4)	
Felt like crying	933 (68.8)	369 (27.2)	55 (4.1)	
Energized on the job *	394 (29.1)	560 (41.4)	399 (29.4)	
Burnt out	671 (49.3)	477 (35.0)	213 (15.7)	
Like yelling at people	914 (67.3)	372 (27.4)	73 (5.3)	
Like there is 'nothing more to give'	836 (61.6)	367 (27.0)	154 (11.4)	
Difficulty concentrating	925 (68.0)	392 (28.8)	43 (3.1)	
Angry	888 (65.2)	413 (30.3)	61 (4.4)	
Helpless	969 (71.3)	309 (22.7)	82 (6.1)	
In control of your life *	122 (9.0)	279 (20.5)	957 (70.4)	
Irritable and tense	745 (54.9)	492 (36.3)	120 (8.9)	
Dizzy	1207 (88.8)	136 (10.0)	16 (1.2)	

*Scores were reversed for these items in constructing the scale.

6.2. Burnout

The burnout measurement used in this study is the Maslach Burnout Inventory (Maslach and Jackson, 1986). This scale is subdivided into three separate scales: emotional exhaustion, depersonalization, and personal accomplishment. Respondents were asked how often they felt a certain way over the last month, with 1=none of the time to 5=all of the time. The scores were then summed to construct the three scales.

The nine items of the Emotional Exhaustion scale measure feelings of being overextended and exhausted by one's work. The five items on the Depersonalization scale describe impersonal or unfeeling responses towards patients receiving care. The eight items on the Personal Accomplishment scale describe feelings of accomplishment and professional achievement on the job. The average score for Emotional Exhaustion was 21.7 (std. dev. = 6.4) with Cronbach's alpha = .90, indicating a very high reliability. The mean indicates that nurses are experiencing some emotional exhaustion on the job. The average for Depersonalization scale is 8.5 (std. dev. = 3.0) and Cronbach's alpha = .76, indicating a high internal reliability. The low average for Depersonalization shows that nurses responding to our survey care for their patients, and are dedicated individuals. Scores on Personal Accomplishment show an average of 28.6 (std. dev. = 3.8) and Cronbach's alpha = .76, indicating a high reliability. This above average response suggests that nurses feel a high degree of personal accomplishment from their jobs at the hospital.

Table 24: Maslach Burnout Inventory

How often have you felt each of the following over the past month?	None or a little of the time	Some of the time	Most or all of the time	Scale Properties
Emotional Exhaustion	**N (%)**	**N (%)**	**N (%)**	
I feel emotionally drained from my work	427 (38.9)	403 (40.1)	769 (21.0)	Mean: 21.7 Std. dev.: 6.4 Range: 9-45 Alpha: .90 N= 1396
I feel used up at the end of the workday	418 (30.8)	442 (32.6)	497 (36.7)	
I feel fatigued when I get up in the morning and have to face another day on the job	636 (46.9)	444 (32.7)	277 (20.4)	
Working with people all day is really a strain on me	1059 (78.4)	237 (17.6)	54 (4.0)	
I feel burned out from my work	745 (55.0)	412 (30.4)	197 (14.5)	
I feel frustrated by my job	617 (45.6)	515 (38.1)	220 (16.2)	
I feel I'm working too hard on my job	463 (34.3)	538 (39.9)	347 (25.7)	
Working with people directly puts too much stress on me	1140 (84.7)	183 (13.6)	23 (1.7)	
I feel like I'm at the end of my rope	1076 (79.6)	210 (15.5)	65 (4.8)	
Depersonalization	**N (%)**	**N (%)**	**N (%)**	
I feel I treat some patients as if they were impersonal "objects"	1157 (86.0)	170 (12.6)	19 (1.4)	Mean: 8.5 Std. dev.: 3.0 Range: 5-25 Alpha: .76 N=1396
I've become more callous toward people since I took this job	1051 (78.5)	218 (16.3%)	70 (5.2)	
I worry that this job is hardening me emotionally	974 (71.9)	271 (20.0)	109 (8.0)	
I don't really care what happens to some patients	1258 (93.6)	71 (5.3)	15 (1.1)	
I feel patients blame me for some of their problems	1005 (74.4)	286 (21.2)	59 (4.3)	

Table 24: Maslach Burnout Inventory (continued)

How often have you felt each of the following over the past month?	None or a little of the time	Some of the time	Most or all of the time	Scale Properties
Personal Accomplishment	**N (%)**	**N (%)**	**N (%)**	Mean: 28.6 Std. dev.: 3.8 Range: 8-40 Alpha: .76 N=1396
I can easily understand how my patients feel about things	83 (6.2)	325 (24.1)	939 (69.7)	
I deal effectively with the problems of patients	51 (3.8)	115 (8.5)	1185 (87.7)	
I feel I'm positively influencing other people's lives through my work	129 (9.5)	389 (28.7)	836 (62.0)	
I feel very energetic	429 (31.8)	482 (35.7)	439 (32.5)	
I can easily create a relaxed atmosphere with patients	93 (6.9)	297 (22.0)	961 (71.1)	
I feel exhilarated after working closely with my patients	260 (19.5)	539 (40.4)	535 (40.1)	
I have accomplished many worthwhile things in this job	102 (7.6)	387 (28.7)	858 (63.7)	
In my work, I deal with emotional problems calmly	61 (4.5)	233 (17.2)	1028 (78.3)	

6.3. Diagnosed Health Problems

Our survey also asked respondents about their long-term health conditions, as diagnosed by a health professional. As presented in Table 25, the three most frequently reported health conditions for nurses in our study were allergies, back problems excluding arthritis, and migraine headaches. When combined, close to one-fifth of our respondents had either carpal tunnel syndrome or other work-related musculoskeletal disorders. Many of the diagnosed health questions asked in the survey replicated the questions in the National Population Health Survey (1998). We compared results to draw some conclusions about the extent of health problems

experienced by some of our respondents compared to the sample of working women aged 20-65. Overall, nurses responding to our survey are sicker than the comparable population on almost all long-term health conditions. In particular, nurses have almost twice the rate of back problems excluding arthritis (n=388 or 29%) than the comparable population of working women (n=577 or 15%).

Table 25: Diagnosed Health Problems: Suffer From a Long-Term Condition

Condition diagnosed by a health professional	**Respondents (N=1396)**	**Working women aged 20-65 (NPHS) (N=3852)**
	N (%)	N (%)
Allergies	474 (35.0)	1534 (39.4)
Asthma	168 (12.4)	341 (8.8)
Arthritis or rheumatism	227 (16.8)	493 (12.7)
Back problems excluding arthritis	388 (28.6)	577 (14.8)
High blood pressure	145 (10.7)	281 (7.2)
Migraine headaches	255 (18.9)	510 (13.1)
Chronic bronchitis or emphysema	23 (1.7)	86 (2.2)
Heart disease	22 (1.6)	51 (1.3)
Cancer	26 (1.9)	34 (0.9)
Stomach or intestinal ulcers	51 (3.8)	108 (2.8)
Effects of a stroke	5 (0.4)	N/A
Carpal tunnel syndrome	99 (7.3)	N/A
Other work-related musculoskeletal disorders	161 (12.0)	N/A
Other	168 (12.8)	275 (7.1)

6.4 Musculoskeletal Disorders

Musculoskeletal disorders (MSD) are disorders of the soft tissue and surrounding structure, not resulting from an acute or instantaneous event (Hales & Bernard 1996). These disorders occur as pain or discomfort in the neck, shoulder, arm, elbow, hand, hips, knees, ankles and feet. It also shows as back pain, or as sore or sprained muscles. A scale developed in Zeytinoglu et al. (2000) was used in this survey. Respondents rated how often they experienced each symptom on a 5-point scale ranging from 1=none of the time to 5=all of the time. The responses to seven questions were summed to create an MSD scale. Possible MSD scores range from 7 to 35, with higher scores indicating more extensive MSD. The mean score was 14.8. The Cronbach's alpha was .82, indicating high internal reliability. With respect to physical health problems, experiencing symptoms of the problems even some of the time is important, since it indicates some damage incurred to the body. Thus, we have included responses of 'some of the time' in our presentation of the results. As presented in Table 26, data show the following symptoms of MSD experienced by nurses some, most or all of the time: back pain (55%), pain or discomfort in the neck or shoulder (51%), pain in the arm, elbow or hand (31%), sore or sprained muscles (32%), pain in hips (28%), pain in knees (33%) and pain in ankles or feet (37%). These results suggest a high percentage of nurses with MSD symptoms.

Table 26: MSD Scale

Please indicate how often you had each of these in the past few months:	None/a little of the time	Some of the time	Most/all of the time	Scale Properties
	N (%)	N (%)	N (%)	
Back pain	613 (44.9)	492 (36.1)	259 (19.0)	Mean: 14.8 Std. dev.: 5.4 Range: 7-35 Alpha: .82 N=1396
Pain or discomfort in neck or shoulder	672 (49.4)	418 (30.7)	271 (20.0)	
Pain or discomfort in arm, elbow or hand	925 (68.7)	286 (21.2)	136 (10.1)	
Sore or sprained muscles	927 (68.0)	306 (22.4)	131 (9.6)	
Pain or discomfort in hips	981 (72.2)	249 (18.3)	128 (9.4)	
Pain or discomfort in knees	914 (67.2)	298 (21.9)	148 (10.9)	
Pain or discomfort in ankles or feet	850 (62.6)	311 (22.9)	197 (14.5)	

7. Nurse Outcomes

Nurse outcomes examined here are commitment and job satisfaction. One objective of this research was to study commitment and job satisfaction issues among nurses. As individual outcomes, these are important factors in determining the "health" of the labour supply of nurses. In this section, we examine career commitment and commitment to the hospital. While nurses' commitment to the hospital is important especially to employing hospitals, to understand whether there might be problems in the nursing labour market, it is career commitment which indicates whether nurses will stay in their careers. Organizational commitment and career commitment then, in turn, affect job satisfaction and ultimately affect the retention of nurses.

7.1. Commitment to Career

Commitment to career was measured by using Blau's (1985) career commitment scale. The scale consists of 8 items, each measured on a 5-point scale with 1 = strongly disagree, to 5 = strongly agree. Items were summed to create a scale score. The scale scores range from 8 to 40 with higher scores indicating higher commitment to career. In creating the scale, scoring was reversed for some scale items (as shown below). The average for commitment to career scale is 25.3 (std. dev. = 6.3), suggesting a low to moderate level of commitment to the nursing profession among our respondents [See Table 27]. The scale range and response range are the same for this construct. A Cronbach's alpha of .87 indicated a good internal reliability of the commitment to career scale.

Table 27: Career Commitment

Do you agree or disagree with each statement:	Strongly disagree/ Disagree	Neither agree nor disagree	Agree/ Strongly agree	Scale Properties
	N (%)	N (%)	N (%)	
If I could get another job different from being a nurse and paying the same amount, I would probably take it *	485 (35.0)	259 (18.7)	638 (46.1)	Mean: 25.3 Std. dev.: 6.3 Range: 8-40 Alpha: .87 N=1396
I definitely want a career for myself in the nursing profession	120 (8.7)	486 (35.2)	774 (56.1)	
If I could do it all over again, I would not choose to work in the nursing profession *	709 (51.6)	212 (15.4)	455 (33.1)	
If I had all the money I needed without working, I would probably still continue to work in the nursing profession	598 (43.5)	206 (15.0)	570 (41.5)	
I like this vocation too much to give it up	413 (30.2)	375 (27.4)	580 (42.4)	
This is the ideal profession for a life work	476 (34.8)	422 (30.9)	467 (34.2)	
I am disappointed that I ever entered the nursing profession *	961 (70.0)	287 (20.9)	124 (9.0)	
I spend a significant amount of personal time reading nursing-related journals or books	566 (41.2)	357 (26.0)	451 (32.9)	

* Scores were reversed in these items in constructing the scale.

7.2. Commitment to Hospital

Learning whether the nurses employed in their hospitals are committed to that organization is an important issue for managers. In this study we used Meyer, Allen & Smith's (1993) organizational commitment scale to measure commitment to the hospital. Their

commitment scale is a measure of attitudinal commitment focusing on the process by which people come to think about their relationships with the organization (Meyer & Allen 1997). Strong commitment, i.e. strong positive attitude towards the employing organization, is highly associated with the desirable organizational outcomes of lower absenteeism and turnover. Commitment is often referred in workplaces as allegiance, loyalty or attachment. The organizational commitment scale of Meyer, Allen & Smith consists of three components: affective commitment, continuance commitment and normative commitment. Affective commitment refers to the nurse's emotional attachment to, identification with, and involvement in the hospital. A strong affective commitment shows an emotional commitment to the hospital. Continuance commitment refers to the nurse's awareness of the costs that might be associated with leaving the hospital. They are committed to the hospital because they believe that they have no other employment options. Lastly, normative commitment shows the feeling of obligation to the hospital to continue employment. High normative commitment scores show the nurses' attitudes that they feel obligated to stay with the hospital and continue to provide care to patients.

Each component of the scale consist of 6 items, scored on a 5-point scale with 1= strongly disagree to 5= strongly agree. The scale range is between 6 and 30 for each component with higher scores indicating higher organizational commitment. As presented in Table 28, the average for affective commitment was 17.7 (SD = 4.5), and Cronbach's alpha = .82; for continuance commitment the mean was 17.9 (SD = 4.1) with Cronbach's alpha= .72, and for normative commitment the mean was 15.7 (SD = 4.4) and Cronbach's alpha = .83. All three alphas were sufficiently high indicating a good internal reliability of the three components of the organizational commitment scale.

Results show a moderate level of affective commitment to the hospital. Many nurses do not seem to have strong emotional attachment and identification with their employing hospital. At the same, time the continuance commitment scale shows the respondents were keenly aware of the costs of leaving their hospital and many considered staying with the hospital a matter of necessity and to avoid disruption in their lives. The strong labour market favouring nurses showed its affect here in terms of responses [See Table 28]. Nurses' scores were also rather low in terms of normative commitment, i.e. the feeling of obligation to continue employment in the hospital. Close to half of the sample did not feel any obligation to remain with the hospital and would not feel guilty if they left the hospital; they felt like they did not owe much to the hospital, nor to the people working there [See Table 28].

Table 28: Organizational Commitment: Affective Commitment

Do you agree or disagree with each statement:	**Strongly disagree/ Disagree**	**Neither agree nor disagree**	**Agree/ Strongly/ agree**	**Scale Properties**
Affective Commitment	**N (%)**	**N (%)**	**N (%)**	
I would be very happy to spend the rest of my career with this hospital	232 (16.9)	334 (24.3)	806 (58.7)	Mean: 17.7 Std. dev.: 4.5 Range: 6-30 Alpha: .82 N=1396
I really feel as if this hospital's problems are mine	822 (60.0)	367 (26.8)	182 (13.3)	
I do not feel a strong sense of "belonging" to my hospital *	543 (39.5)	354 (25.7)	478 (34.8)	
I do not feel "emotionally attached" to this hospital*	524 (38.0)	316 (22.9)	540 (39.1)	
I do not feel like "part of the family" at my hospital*	449 (32.6)	449 (32.6)	480 (34.9)	
This hospital has a great deal of personal meaning for me	539 (39.1)	408 (29.6)	432 (31.3)	

* Scores were reversed in these items in constructing the scale.

Table 28: Organizational Commitment: Continuance Commitment (continued)

Do you agree or disagree with each statement:	**Strongly disagree/ Disagree**	**Neither agree nor disagree**	**Agree/ Strongly/ agree**	**Scale Properties**
Continuance Commitment	**N (%)**	**N (%)**	**N (%)**	
Right now, staying with my hospital is a matter of necessity as much as desire	281 (20.5)	206 (15.0)	885 (64.5)	Mean: 17.9 Std. dev.: 4.1 Range: 6-30 Alpha: .72 N=1396
It would be very hard for me to leave my hospital right now, even if I wanted to	555 (40.4)	279 (20.3)	540 (39.3)	
My life would be disrupted if I wanted to leave my hospital	430 (31.3)	233 (48.2)	712 (51.8)	
I have too few options to consider leaving this hospital	587 (42.7)	328 (23.9)	459 (33.4)	
Had I not already put so much of myself into this hospital, I might consider leaving	644 (46.8)	429 (31.2)	304 (22.1)	
A negative consequences of leaving this hospital is the scarcity of available alternatives (i.e. no other positions)	739 (53.9)	263 (19.2)	369 (26.9)	

Table 28: Organizational Commitment: Normative Commitment (continued)

Do you agree or disagree with each statement:	Strongly disagree/ Disagree	Neither agree nor disagree	Agree/ Strongly/ agree	Scale Properties
Normative Commitment Scale	N (%)	N (%)	N (%)	
I do not feel any obligation to remain with my current employer *	461 (33.6)	328 (23.9)	583 (42.5)	Mean: 15.7 Std. dev.: 4.4 Range: 6-30 Alpha: .83 N=1396
Even if it were to my advantage, I do not feel it would be right to leave my hospital now	748 (54.5)	313 (22.8)	311 (22.6)	
I would feel guilty if I left my hospital now	818 (59.3)	310 (22.5)	251 (18.2)	
This hospital deserves my loyalty	570 (41.4)	466 (33.8)	342 (24.8)	
I would not leave my hospital because I have a sense of obligation to the people	661 (48.1)	406 (29.6)	306 (22.3)	
I owe a great deal to my hospital	774 (56.2)	462 (33.6)	141 (10.3)	

*Scores were reversed in these items in constructing the scale.

7.3. Job Satisfaction

Job satisfaction is another indicator of whether nurses would stay with their employing hospitals. The higher the job satisfaction, the more possibility of the nurse to stay with her/his employing hospital. For the job satisfaction construct, we first asked an overall job satisfaction question (on a 5-item scale with 1= very dissatisfied to 5= very satisfied). The majority of nurses (70%) were satisfied or very satisfied with their jobs while 15% stated they were dissatisfied or very dissatisfied. Approximately 18% of nurses said they were neither satisfied nor dissatisfied with their jobs.

In addition, we used Spector's 1985 Job Satisfaction Survey (JSS) (Spector 1997), adapting the scale responses from 1 to 5, with 1=strongly disagree to 5= strongly agree. The JSS

assesses nine facets of job satisfaction, consisting of: satisfaction with pay and pay raises, promotion opportunities, immediate supervisor, fringe benefits, contingent rewards, with rules and procedures, co-workers, type of work done, and communication within the organization. An overall satisfaction scale consists of all 36 items included in these nine facets. To create scores for each subscale, responses to each item are summed together. Thus, scores for each sub-scale range from 4 to 20. In creating the scales some of the items are reverse-scored as indicated below [See Table 29]. Spector's job satisfaction sub-scales have high reliabilities (alpha above .70) for most sub-scales except for satisfaction with rules and procedures and satisfaction with co-workers sub-scales (with alpha's .62 and .60). Our sub-scales also show similar reliabilities [See Tables 29 and 30].

Overall, respondents did not show a high level of satisfaction with their jobs, although there were some variations between satisfaction with different components of the job. Generally, they were more satisfied with their immediate supervisors and co-workers, and the type of work done. They were less satisfied with their pay, benefits, recognition for a job well-done, and opportunities for promotion. They were also less satisfied with the communication within the organization and rules and procedures.

In addition to following Spector's nine facets of job satisfaction, we created three summary scales. These showed nurses to be less satisfied with the financial rewards, but moderately satisfied with work and work environment. A Total Job Satisfaction scale showed similarly a moderate level of satisfaction. They all showed high reliability [See Table 30].

Table 29: Job Satisfaction

Do you agree or disagree with each of the following:	Strongly disagree/ Disagree	Neither agree nor disagree	Agree/ Strongly agree	Scale Properties
Satisfaction with pay and pay raises	**N (%)**	**N (%)**	**N (%)**	
I feel I am being paid a fair amount for the work I do	456 (33.0)	154 (11.2)	771 (55.9)	Mean: 11.8 Std. dev.: 3.4 Range: 4-20 Alpha: .81 N=1396
Raises are too few and far between *	260 (18.9)	406 (29.5)	708 (50.6)	
I feel unappreciated by the organization when I think about what they pay me *	624 (45.2)	428 (31.0)	527 (23.7)	
I feel satisfied with my chances for salary increases	463 (33.7)	471 (34.2)	442 (32.1)	
Satisfaction with promotion opportunities	**N (%)**	**N (%)**	**N (%)**	**Scale Properties**
There is really too little chance for promotion on my job *	139 (10.1)	376 (27.3)	862 (63.6)	Mean: 10.3 Std. dev.: 2.5 Range: 4-20 Alpha: .69 N=1396
Those who do well on the job stand a fair chance of being promoted	806 (58.4)	440 (31.9)	133 (9.7)	
People get ahead as fast here as they do in other places	210 (15.3)	906 (66.2)	253 (18.5)	
I am satisfied with my chances for promotion	495 (36.0)	658 (47.9)	221 (16.1)	

***** Scores were reversed in these items in constructing the scale.

Table 29: Job Satisfaction (continued)

Do you agree or disagree with each of the following:	**Strongly disagree/ Disagree**	**Neither agree nor disagree**	**Agree/ Strongly agree**	**Scale Properties**
Satisfaction with immediate supervisor	**N (%)**	**N (%)**	**N (%)**	
My supervisor is quite competent in doing his/her job	259 (18.9)	353 (25.7)	760 (55.4)	Mean: 14.2 Std. dev.: 3.4 Range: 4-20 Alpha: .86 N=1396
My supervisor is unfair to me *	973 (70.6)	326 (23.7)	78 (5.7)	
My supervisor shows too little interest in the feelings of subordinates *	599 (43.7)	396 (28.9)	376 (27.4)	
I like my supervisor	136 (9.9)	354 (25.7)	887 (64.4)	
Satisfaction with fringe benefits	**N (%)**	**N (%)**	**N (%)**	**Scale Properties**
I am not satisfied with the benefits I receive *	449 (32.7)	426 (31.1)	496 (36.2)	Mean: 11.5 Std. dev.: 2.7 Range: 4-20 Alpha: .70 N=1396
The benefits we receive are as good as most other organizations offer	207 (15.2)	551 (40.3)	608 (44.5)	
The benefit package we have is equitable	313 (22.9)	610 (44.6)	444 (32.5)	
There are benefits we do not have which we should have *	103 (7.5)	407 (29.6)	866 (62.9)	

***** Scores were reversed in these items in constructing the scale.

Table 29: Job Satisfaction (continued)

Do you agree or disagree with each of the following:	**Strongly disagree/ Disagree**	**Neither agree nor disagree**	**Agree/ Strongly agree**	**Scale Properties**
Satisfaction with contingent rewards (not necessarily monetary) given for good performance	**N (%)**	**N (%)**	**N (%)**	
When I do a good job, I receive the recognition for it that I should receive	776 (56.3)	321 (23.3)	281 (20.3)	Mean: 10.4 Std. dev.: 3.1 Range: 4-20 Alpha: .78 N=1396
I do not feel that the work I do is appreciated*	486 (35.2)	371 (26.9)	522 (37.8)	
There are few rewards for those who work here*	203 (14.7)	358 (26.0)	816 (59.3)	
I don't feel my efforts are rewarded for the way they should be *	227 (16.5)	471 (34.2)	680 (49.3)	
Satisfaction with rules and procedures	**N (%)**	**N (%)**	**N (%)**	**Scale Properties**
Many of our rules and procedures make doing a good job difficult *	476 (34.6)	517 (37.6)	382 (27.8)	Mean: 11.0 Std. dev.: 2.5 Range: 4-20 Alpha: .53 N=1396
My efforts to do a good job are seldom blocked by red tape	374 (27.2)	522 (38.0)	477 (34.8)	
I have too much to do at work *	251 (18.2)	439 (31.9)	688 (49.9)	
I have too much paperwork *	230 (16.7)	305 (22.1)	842 (61.1)	

***** Scores were reversed in these items in constructing the scale.

Table 29: Job Satisfaction (continued)

Do you agree or disagree with each of the following:	**Strongly disagree/ Disagree**	**Neither agree nor disagree**	**Agree/ Strongly agree**	**Scale Properties**
Satisfaction with coworkers	**N (%)**	**N (%)**	**N (%)**	
I like the people I work with	38 (2.7)	157 (11.3)	1192 (85.9)	Mean: 13.9 Std. dev.: 2.5 Range: 4-20 Alpha: .62 N=1396
I feel I have to work harder at my job because of the incompetence of people I work with *	578 (41.9)	388 (28.1)	413 (29.9)	
I enjoy my coworkers	42 (3.0)	150 (10.8)	1194 (86.1)	
There is too much bickering and fighting at work *	303 (22.0)	364 (26.4%)	711 (51.6)	
Satisfaction with the type of work done	**N (%)**	**N (%)**	**N (%)**	**Scale Properties**
I sometimes feel my job is meaningless *	922 (66.7)	206 (14.9)	255 (18.4)	Mean: 15.4 Std. dev.: 2.4 Range: 4-20 Alpha: .70 N=1396
I like doing the things I do at work	47 (3.4)	169 (12.3)	1163 (84.3)	
I feel a sense of pride in doing my job	45 (3.3)	122 (8.8)	1215 (87.9)	
My job is enjoyable	134 (9.7)	298 (21.5)	952 (68.7)	
Satisfaction with communication within the organization	**N (%)**	**N (%)**	**N (%)**	**Scale Properties**
Communication seems good within this hospital	747 (53.9)	408 (29.5)	230 (16.6)	Mean: 11.6 Std. dev.: 2.6 Range: 4-20 Alpha: .63 N=1396
The goals of this hospital are not clear to me *	537 (38.9)	446 (32.3)	397 (28.7)	
I often feel that I do not know what is going on with the hospital *	257 (18.6)	382 (46.3)	742 (53.7)	
Work assignments are not fully explained *	817 (59.5)	393 (28.6)	164 (11.9)	

***** Scores were reversed for these items in constructing the scale.

Table 30: Total Job Satisfaction Scores

Total Job Satisfaction	**Scale Properties**
Satisfaction with Financial Rewards • Consists of satisfaction with pay, promotional opportunities and fringe benefits	Mean: 33.7 Std. dev.:6.4 Range: 12-60 Alpha: .81 N=1396
Satisfaction with Work and Work Environment • Consists of satisfaction with supervisor, contingent rewards, rules and procedures, co-workers, type of work done and communications)	Mean: 76.6 Std. dev.: 11.1 Range: 24-120 Alpha: .86 N=1396
Total Job Satisfaction	Mean:110.3 Std. dev.: 15.3 Range: 36-180 Alpha: .89 N=1396

We also examined intrinsic job satisfaction developed by Denton et al. (2002). Intrinsic job satisfaction refers to satisfaction people receive from their work due to internal factors such as experiencing a sense of accomplishment and a purpose in life. As a group, nurses have a moderate level of intrinsic job satisfaction. [See Table 31]. In particular, the nurses responded that they get a sense of accomplishment from their job and that they find their job interesting.

Table 31: Intrinsic Job Satisfaction Scale

Do you agree or disagree with each statement:	**Strongly disagree/ Disagree**	**Neither agree nor disagree**	**Agree/ Strongly agree**	**Scale Properties**
	N (%)	**N (%)**	**N (%)**	
I get a sense of accomplishment from my job	74 (5.4)	197 (14.3)	1110 (80.4)	Mean: 11.2 Std. Dev.: 2.0 Range: 3-15 Alpha: .69 N=1396
My job gives me a sense of purpose in life – a reason to get up in the morning	278 (20.2)	424 (30.8)	675 (49.0)	
My job is interesting to me	54 (3.9)	183 (13.2)	1147 (82.8)	

8. Hospital Outcomes

Retention of nurses in their hospitals and in the profession is one of the major challenges of managers. Lowering absenteeism rates also contributes to a more healthy work environment for nurses. One of the goals of this research was to examine retention and absenteeism issues. In this section we examine retention issues and absenteeism among nurses.

8.1. Retention

Hospitals would like to retain their nurses, and the health care sector is interested in keeping nurses in the profession. Retention refers to the interest to keep workers in the organization. Retention and turnover are opposite sides of the same coin. One is the interest to stay, and the other is the interest to leave. In research on the topic, individuals are surveyed of their intentions to leave or to stay. One of the objectives of this research was to learn of nurses' intentions to stay or leave. To measure these intentions we used the propensity to leave scale of Landau and Hammers (1986) and the intention to stay scale of Lyons (1971) to create a propensity to leave the hospital scale. We also asked the nurses a question to measure their propensity to leave the profession.

The propensity to leave the hospital scale consists of three questions from Landau and Hammer's (1986) propensity to leave scale, and Lyons' (1971) intention to stay scale. In creating the scale Lyons' items are reversed. Our propensity to leave scale consists of six items, with responses scored as 1 = strongly disagree to 5 = strongly agree. As shown in Table 32, the mean was 14.7 (std. dev. 4.7), and scores range from 6 to 30, with higher scores indicating a higher propensity to leave. As presented in Table 32, nurses did not show a high interest to stay in the hospital, suggesting that hospitals can lose nurses easily. In terms of the intention to leave the

profession, however, a high majority of the nurses were not seriously considering leaving the nursing profession in the future. [See Table 32].

Table 32: Propensity to Leave the Hospital

Do you agree or disagree with each of the following:	**Strongly disagree/ Disagree**	**Neither agree nor disagree**	**Agree/ Strongly agree**	**Scale Properties**
	N (%)	**N (%)**	**N (%)**	
As soon as I can find a better job, I'll leave this hospital	757 (54.9)	404 (29.3)	217 (15.8)	Mean: 14.7 Std. dev.: 4.7 Range: 6-30 Alpha: .88 N=1396
I am seriously thinking about quitting my job at this hospital	925 (67.1)	273 (19.8)	181 (13.2)	
I am actively looking for a job outside this hospital	1001 (72.6)	201 (14.6)	176 (12.7)	
If I were completely free to choose, I would prefer to keep working in this hospital *	265 (19.2)	373 (27.0)	742 (53.7)	
I would like to stay at this hospital for a long time *	307 (22.5)	449 (33.0)	606 (44.5)	
If I had to quit work for a while (for example because of personal/family reasons), I would return to this hospital *	124 (9.0)	364 (26.4)	889 (64.6)	

* Scores were reversed in these items in constructing the scale.

Table 33: Propensity to leave the Profession

Do you agree or disagree with the following:	Strongly disagree/ Disagree	Neither agree nor disagree	Agree/ strongly agree
	N (%)	N (%)	N (%)
I am seriously considering leaving the nursing profession in the near future	949 (68.9)	214 (15.5)	215 (15.6)

8.2. Absenteeism

Absenteeism is also an indication of discontent in the organization. Managers would like to take precautions to lower the absenteeism rate in their organization. This study showed an average of 9 days per year of absences for the nurses. We learned that 19% (261 nurses) were not absent any days over the past year. Of those who reported absences, the average number of days absent from work is 14 days. These absences were taken in the form of sick days, disability days, drop days, personal days, education leave and days off for other reasons. Table 34 presents more information about absenteeism in the study respondents.

Table 34: Absenteeism Data

Reasons for absenteeism	N (%)	Mean (Std. Dev)	Range
Sick days		4.9 (9.8)	0-334
0	387 (28.4)		
1-5	683 (50.0)		
6-10	179 (13.1)		
11-15	44 (3.2)		
16 or more	72 (5.3)		
Disability days		.41 (2.7)	0-365
0	1314 (96.3)		
1-5	23 (1.7)		
6-10	**		
11-15	5 (.4)		
16 or more	20 (1.5)		
Drop days		.35 (1.3)	0-18
0	1241(90.9)		
1-5	105 (7.7)		
6-10	18 (1.3)		
11-15	**		
16 or more	**		
Personal days		.57 (3.9)	0-82
0	1188 (87.0)		
1-5	156 (11.4)		
6-10	13 (1.0)		
11-15	**		
16 or more	7 (0.5)		
Educational Leave		.51 (4.9)	0-141
0	1184 (86.8)		
1-5	168 (12.3)		
6-10	8 (.6)		
11-15	**		
16 or more	**		
Other leave		.96 (6.2)	0-365
0	1252 (91.7)		
1-5	76 (5.6)		
6-10	10 (0.7)		
11-15	6 (0.4)		
16 or more	21 (1.5)		

** less than 5 cases

Respondents were also asked a series of questions pertaining to sick time at their hospitals. The majority of the nurses said that there is no reward for those with perfect attendance. In addition, many admitted that nurses call in sick when they are not and said absenteeism is a problem on their units. However, the vast majority said that they, themselves, did not call in sick when they are not [See Table 35]. In addition, we asked respondents about the pressure they feel when taking time off from work due to illness. More than half of the nurses did not feel pressured to work when they were sick, although about one in five reported that they felt pressure from employers, coworkers, and scheduling clerks to work when they were ill or when they had days off [See Table 36]. Lastly, we inquired about the nurses feelings of obligation to work when they are sick or on days off. Nurses felt the greatest obligation to work when they are sick or on days off to their coworkers [See Table 37].

Table 35: Sick Time Absences

Do you agree or disagree with the following:	**Strongly disagree/ Disagree**	**Neither agree nor disagree**	**Agree/ Strongly agree**
	N (%)	**N (%)**	**N (%)**
There is no reward for those who have perfect attendance	148 (10.8)	134 (9.8)	1084 (79.3)
Nurses call in sick when they are not	141 (10.3)	251 (18.3)	977 (71.4)
Nursing staff absenteeism is a problem on my unit	254 (18.6)	238 (17.4)	877 (64.1)
I call in sick when I am not because I know I won't be able to get time off if I ask for it	966 (70.6)	187 (13.7)	224 (15.6)

Table 36: Pressure to Work When Sick

When I am sick or on my days off, I feel pressured to work…	Strongly disagree/ Disagree	Neither agree nor disagree	Agree/ Strongly agree
	N (%)	N (%)	N (%)
By my employer	730 (54.4%)	320 (23.8%)	293 (21.8%)
By my coworkers	766 (56.9%)	303 (22.5%)	277 (20.6%)
By my scheduling clerk	701 (52.2%)	326 (24.3%)	316 (23.5%)

Table 37: Obligation to Work When Sick

When I am sick or on my days off, I feel an obligation to work…	Strongly disagree/ Disagree	Neither agree nor disagree	Agree/ Strongly agree
	N (%)	N (%)	N (%)
To my employer	665 (49.7)	328 (24.5)	345 (25.8)
To my coworkers	470 (34.4)	230 (16.9)	663 (48.6)
To my patients	499 (36.9)	299 (22.1)	555 (41.0)

9. Associations Between Variables

9.1. Associations Between Employment Patterns, Preferences and Demographic Characteristics

In this section we use bi-variate correlations to examine whether nurses employment patterns and preferences are related to their demographic characteristics. As presented in Table 38a, educational background was not associated with full-time or part-time work or preferences for a different work status, except for casual nurses, which showed that those with college or nursing education did not work in casual jobs. RPNs are more likely to work on a casual basis, but prefer full-time and not part-time work. No other relationships were found between work status, work preferences and professional qualifications. Gender was not a factor in employment patterns and preferences, only that older nurses worked in full-time jobs. No other relations between employment status, preferences and age were found.

There were more divorced/separated and never married nurses working full-time and more married nurses working part-time. Nurses with children under age 12 were less likely to work full-time and more likely to work part-time. No other associations were found between children and employment patterns or preferences.

Tenure in the profession, hospital, and job were measured by the number of months in those positions. Nurses with more tenure at the hospital worked full-time, and those with less tenure on their job and in the hospital worked in casual jobs. Interestingly, nurses with higher tenure in the profession and on the job were less likely to prefer full-time work, and were more likely to prefer part-time jobs.

As previously discussed, of those nurses working full-time, 83% said they contributed 50% or more of their incomes to support their families, while 81% of part-time workers and 67% of casual workers said they contributed at least 50% of their incomes to support their families.

The associations showed similar trends between nurses and types of job and income (as presented in Table 38a). Full-time nurses rated the importance of their personal income to support their families significantly higher than either part-time or casual workers. Those workers who said they would prefer to work on a casual basis rated the importance of their incomes to support their families significantly lower than full-time workers. Those who preferred to work part-time considered the importance of their contribution to family income as important. Those nurses who stated they would prefer to get a full-time job tended to be RPNs.

In examining permanent/temporary, job share, float/resource nurse issues with the demographic characteristics, as shown in Table 38b, there were no associations between educational background, marital status, or gender with employment patterns or their preferences for each, except in a few cases (of widowed nurses). Those nurses who work float/resource are most likely to be RPNs. In terms of age, older nurses preferred permanent positions. Having children under the age of 12 was not associated with employment patterns and preferences.

Nurses who had spent longer time periods in their hospitals and current job worked in permanent jobs and those with longer tenure in their hospital worked in job sharing positions. Contribution of nurses' earnings to family income was mostly not associated with employment patterns and preferences. Those who noted the importance of their income to their families preferred to work in permanent jobs. No other associations with contribution to income or importance of income to support families were found. [See Table 38b].

Table 38a: Associations Between Nurses' FT/PT Work, Preferences and Demographic Characteristics

Factors	Full-time work[6]	Part-time work[6]	Casual work[6]	Work PT or Casual but Prefer FT work[7]	Work FT or Casual but Prefer PT work[7]	Work FT or PT but Prefer casual work[7]
Education:						
High School or Less	.007	.000	-.013	-.013	-.017	-.007
College or Nursing School	.011	.030	-.074 **	-.062	.077	-.029
University or Higher	-.031	.008	.043	.026	-.041	.028
Marital status:						
Married/Common	-.167 **	.161 **	.025	-.030	-.001	.007
Widowed	.015	-.009	-.012	-.011	-.008	.025
Divorce/Separated	.058 *	-.051	-.018	.014	-.029	-.012
Never Married	.138 **	-.141 **	-.005	.037	.030	-.004
Other	.063 *	-.050	-.027	-.042	.051	-.019
Position[1]	.001	-.050	.086 **	.196 **	-.175 **	-.020
Gender[2]	-.057 *	.052	.014	-.019	.077	-.100
Age	.061 *	-.047	-.030	-.102	.047	.086
Children under 12[6]	-.158 **	.150 **	.025	-.120	.119	-.006
Tenure in profession[3]	.037	-.025	-.025	-.145*	.089	.085
Tenure at hospital[3]	.082**	.005	-.161 **	-.084	.080	.001
Tenure in current job[3]	.046	.022	-.124 **	-.158 **	.135*	.030
Contribution to family income [4]	.339 **	-.287 **	-.118 **	-.013	.128 *	-.199 **
Importance of personal income to family [5]	.247 **	-.153 **	-.184 **	-.043	.151*	-.185 **

****** p<.001, *p<.01

[1] (1 = RPN, 0 = RN)

[2] (1 = Female, 0 = Male)

[3] Measured in months

[4] (1 = 0-25 %, 2 = 26-50%, 3 = 51-75%, 4 = 76-100%)

[5] (1 = not at all important – 5 very important)

[6] (1 = Yes, 0 = No)

[7] (1 = Yes, 0 = Otherwise)

Table 38b: Associations Between Nurses' Employment Patterns with Status Issues, Preferences and Demographic Characteristics

Factors	Perm./ Temp. [6]	Prefer Perm. Position[6]	Work is Job Share[7]	Prefer Job Share[7]	Work is float/ Resource[7]	Prefer float/ Resource[7]
Education[8]:						
High School or Less	-.009	-.008	-.004	-.007	-.004	-.005
College or Nursing School	-.036	-.061 *	-.027	-.004	-.003	-.034
University or Higher	-.020	-.009	.021	.000	-.009	.003
Marital status[8]:						
Married/Common	.002	-.008	-.040	.000	.021	-.015
Widowed	-.022	.061 *	.071 **	.028	.077 **	.046
Divorce/Separated	.024	-.037	.041	.010	-.023	-.010
Never Married	-.033	-.002	-.006	-.014	-.030	-.005
Other	.070 **	.085 **	-.007	-.013	-.007	.065 *
Position[1]	.046	-.010	.006	.052	.122 **	.065 *
Gender[2]	.037	-.041	-.031	.001	.016	.021
Age	-.021	.068 *	-.007	.012	.032	.036
Children under 12[6]	.010	-.031	-.008	-.017	.013	.024
Tenure in profession[3]	-.018	.051	.055 *	-.013	.007	-.009
Tenure at hospital[3]	-.065 *	.010	-.065 *	.025	.014	.009
Tenure in current job[3]	-.091 **	.030	-.038	-.022	.024	.031
Contribution to family income [4]	-.023	-.026	.028	-.011	-.062 *	-.014
Importance of income to family [5]	-.015	-.087 **	.030	-.004	-.023	-.027

****** p<.001, *p<.01

[1] (1 = RPN, 0 = RN)

[2] (1=Female, 0 = Male)

[3] Measured in months

[4] (1 = 0-25 %, 2 = 26-50%, 3 = 51-75%, 4 = 76-100%)

[5] (1 = not at all important – 5 very important)

[6] (1 = Yes, 0 = No)

[7] (1 = Temporary, 0 = Permanent)

[8] (1 = Yes, 0 = Otherwise)

9.2. Associations Between Stress, Burnout, and Employment Patterns and Preferences

As presented in Table 39, results showed that work status of full-time, part-time, and casual, as well as preferences, were significantly associated with symptoms of stress and emotional exhaustion and depersonalization subscales of burnout. Those working full-time showed symptoms of stress, emotional exhaustion, and depersonalization; and those working on a part-time and casual basis did not show these symptoms. Those who preferred a different employment status showed symptoms of stress and burnout; in particular, those who were stressed and burned out preferred to work part-time, and those who did not have these symptoms preferred full-time jobs. Overall feelings of personal accomplishment were not associated with work status.

Contract status and working overtime were generally not related to stress or burnout. However, those who worked in temporary positions had lower symptoms of burnout. It seems that those who really wanted a full-time job and will work float to get a full-time job were stressed and showed emotional exhaustion. Those working unpaid overtime also showed symptoms of stress and emotional exhaustion.

Those who were satisfied with their shifts, work schedule, rotation, and pay showed lower symptoms of stress and burnout.

In terms of demographic characteristics, as presented in Table 40, nurses who never married showed symptoms of stress and burnout. Similarly, nurses whose income is important to the family showed higher or more symptoms of stress and burnout. Nurses who contributed more to the family income also showed higher or more symptoms of burnout. Those who were older and those who had longer tenure in the profession and the hospital showed lesser symptoms of stress and burnout. Female nurses showed lesser symptoms of emotional

exhaustion and depersonalization. Interestingly, having children under the age of 12 or the nurses' position had no effect on the symptoms of stress or burnout.

Table 39: Associations Between Stress, Burnout and Employment Patterns

Factors Affecting Nurse Outcomes	Symptoms of Stress	Burnout Scale		
		Emotional Exhaustion	Depersonalization	Personal Accomplishments
Work status				
Full-time [1]	.093 **	.111 **	.060 *	-.019
Part-time[1]	-.048	-.077 **	-.040	.034
Casual[1]	-.086 **	-.068 *	-.040	-.026
Prefer different status[1]	.132 **	.165 **	.100 **	-.048
Work PT or Casual but prefer FT[1]	-.173 **	-.192 **	-.013 *	.104
Work FT or Casual but prefer PT[1]	.172 **	.155 **	.105	-.135 *
Work FT or PT but prefer casual[1]	-.012	.050	.032	.059
Contract Status				
Temporary position[2]	-.032	-.064 *	-.039	.003
Prefer permanent position[3]	.004	.007	.028	-.026
Job share[1]	-.033	-.011	.012	.021
Prefer to job share[1]	-.023	.004	-.002	.003
Work on float[1]	-.027	-.005	.015	-.010
Prefer to work on float[1]	-.026	-.008	.007	-.047
Will float to get FT job[1]	.077 **	.104 **	.031	-.027
Overtime				
Worked paid overtime[4]	-.018	-.016	.002	.003
Paid overtime preferred[4]	-.015	-.010	-.020	.033
Worked unpaid overtime[4]	.062 *	.063 *	.018	.029
Satisfaction with shift work				
Satisfaction with day/evening/ night shift[5]	-.188 **	-.207 **	-.147 **	.100 **
Satisfaction with distribution of weekday /weekend shift[5]	-.178 **	-.206 **	-.147 **	.109 **
Satisfaction with on call rotation[5]	-.243 **	-.206 **	-.113	.087
Satisfaction with work schedule[5]	-.226 **	-.257 **	-.175 **	.151 **
Satisfaction with pay[5]	-.188 **	-.228 **	-.147 **	.109 **

****** p<.001, *p<.01

[1] (1 = Yes, 0 = No)

[2] (1 = Temporary, 0 = Permanent)

[3] (1 = Prefer temporary, 0 = Prefer permanent)

[4] Number of hours

[5] (1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree)

Table 40: Associations Between Stress, Burnout and Demographic Characteristics

Factors	Symptoms of Stress	Burnout Scale		
		Emotional Exhaustion	Depersonalization	Personal Accomplishments
Education[6]:				
High School or less	-.028	-.005	.002	-.028
College or Nursing School	.048	.014	.081 **	-.013
University or higher	-.022	.001	.005	-.005
Marital status[6]:				
Married/Common	-.047	-.051	-.095 **	.034
Widowed	-.006	-.006	-.021	.009
Divorced/Separated	-.011	-.004	-.003	.007
Never Married	.068 *	.070 *	.132 **	-.037
Position[1]	-.011	-.014	-.032	-.034
Gender[2]	-.021	-.061 *	-.139 **	.010
Age	-.115 **	-.100 **	-.177 **	.069 *
Children under 12[6]	.041	.008	.049	-.006
Tenure in profession[3]	-.113 **	-.108 **	-.187 **	.063 *
Tenure at hospital[3]	-.020	-.034	-.117 **	.052
Tenure in current job[3]	-.001	.019	-.035	.015
Contribution to family income [4]	.037	.062 *	.069 *	.000
Importance of income to family [5]	.081 **	.117 **	.039	.056 *

** p<.001, *p<.01
[1] (1 = RPN, 0 = RN)
[2] (1=Female, 0 = Male)
[3] Measured in months
[4] (1 = 0-25 %, 2 = 26-50%, 3 = 51-75%, 4 = 76-100%)
[5] (1 = not at all important – 5 very important)
[6] (1 = Yes, 0 = No)

9.3. Associations Between Physical Health and Employment Patterns and Preferences

Nurses who had a diagnosed musculoskeletal disorder (MSD), obtained a score of 1 if they responded “yes” to the question, “do you suffer from any of the following long-term conditions that have been diagnosed by a health professional?” and 0 if they responded “no”. For self-reported MSD, the scale items and scale properties are explained in Section 6.4. As presented in Table 41, MSDs were more likely to be reported if nurses worked full-time and worked on float. Those who preferred a different work status were more likely to report MSD. Casual nurses were less likely to report MSD. No other significant correlations were found between MSD, employment status, contract status, overtime hours, or satisfaction with shift work. Nurses who worked unpaid overtime hours were more likely to report MSD. None of the work factors were associated with diagnosed allergies, one of the most common health problems. Those who were not satisfied with their shifts, schedules, and pay also self-reported MSD and diagnosed allergies [See Table 41].

Table 41: Associations Between Physical Health and Employment Patterns, Employment Conditions and Preferences

	Diagnosed MSD[5]	Self-reported MSD	Diagnosed allergies[5]
Work Status			
Full-time[1]	.066 *	.067 *	.000
Part-time[1]	-.042	-.038	.000
Casual[1]	-.047	-.055 *	.000
Prefer different status[1]	.064 *	.084 **	.051
Work PT or casual but prefer FT[1]	-.053	.010	-.060
Work FT or casual but prefer PT[1]	.052	-.013	.023
Work FT or PT but prefer casual[1]	-.003	.005	.058
Contract Status			
Temporary position[2]	-.042	-.039	.040
Prefer permanent position[3]	.013	.036	-.002
Job share[1]	-.005	-.038	-.009
Prefer to job share[1]	.015	-.029	.033
Work on float[1]	.075 **	.007	.009
Prefer to work on float[1]	.004	-.013	-.004
Will float to get FT job[1]	-.052	.039	.005
Overtime			
Worked paid overtime[4]	-.013	-.010	.012
Paid overtime preferred[4]	-.011	-.023	.000
Worked unpaid overtime[4]	.039	.092 **	-.005
Satisfaction With Shift Work, Schedule, Pay			
Satisfaction with day/evening/night shift	-.022	-.127 **	-.057 *
Satisfaction with distribution of weekday /weekend shift	.013	-.102 **	-.083 **
Satisfaction with on call rotation	.049	-.100	-.068
Satisfaction with work schedule	-.008	-.124 **	-.073 **
Satisfaction with pay	-.045	-.143 **	-.033

****** p<.001, *p<.01

[1] (1 = Yes, 0 = No)

[2] (1 = Temporary, 0 = Permanent)

[3] (1 = Prefer temporary, 0 = Prefer permanent)

[4] Number of hours

[5] (1 = Yes, 0 = No)

Looking at the demographic characteristics, as shown in Table 42, results showed that older nurses and those with longer work experience tended to also report diagnosed and self-reported MSDs. Those nurses whose income is important to the family and those who contribute a higher percentage to the family also reported MSDs. Those with children under 12 did not report having MSDs. Other factors, i.e. gender, position, marital status (except widowed), education (except university or higher degree) had no association with reporting MSDs.

Table 42: Associations Between Physical Health and Relevant Demographic Characteristics

Factors	Diagnosed MSD[6]	Self-reported MSD	Diagnosed allergies[6]
Education[6]:			
High School or less	-018	.001	.031
College or Nursing School	-.006	-.002	-.019
University or higher	-.004	-.061 *	.006
Marital status[6]:			
Married/Common	-.048	-.018	-.039
Widowed	.070 *	.025	.013
Divorced/Separated	.008	-.012	.028
Never Married	.030	.021	.025
Other	-.005	.013	-.015
Position[1]	.045	.042	-.013
Gender[2]	-.052	.011	-.020
Age	.136 **	.056 *	-.036
Children under 12[6]	-.082 **	-.126 **	.014
Tenure in profession[3]	.118 **	.025	-.030
Tenure at hospital[3]	.140 **	.097 **	-.004
Tenure in current job[3]	.111 **	.065 *	-.011
Contribution to family income[4]	.038	.064 *	-.008
Importance of income to family[5]	.064 *	.085 **	-.008

****** p<.001, *p<.01

[1] (1 = RPN, 0 = RN)

[2] (1=Female, 0 = Male)

[3] Measured in months

[4] (1 = 0-25 %, 2 = 26-50%, 3 = 51-75%, 4 = 76-100%)

[5] (1 = not at all important – 5 very important)

[6] (1 = Yes, 0 = No)

9.4. Associations Between Commitment and Employment Patterns and Preferences

As presented in Table 43, there were no significant correlations between commitment to career and current work status. Nurses who indicated a preference for a different status had lower career commitment scores. Nurses who preferred to work full-time showed commitment to career, and those who preferred to work part-time had lower career commitment. Casual work and preference for casual work were not associated with career commitment. Workers who had temporary positions were less committed to their careers but there was no association between job sharing, preference for job sharing, working on a float position, or preference to work on float to get a job and commitment to career. With respect to overtime measures, there was a weak association between working unpaid overtime and career commitment. Nurses who expressed a high degree of satisfaction with the distribution of day, evening and night shifts they worked, the distribution of weekday/weekend shifts they worked, their work schedules and their rates of pay were committed to their careers.

Now turning to the Commitment to Hospital scales, working full-time was significantly and positively associated with Affective Commitment. Nurses who had high scores in Affective Commitment to their hospitals did not wish to change their work status and tended not to work in temporary positions. Affective Commitment was not associated with other work status, contract status, and overtime factors. Those who expressed Affective Commitment to their hospitals were also highly satisfied with their schedules, the distribution of shift work they worked and their pay rates.

Nurses who had high levels of Continuance Commitment were full-time rather than casual nurses. Those who preferred part-time work had high Continuance Commitment. Opposite associations were found with Continuance Commitment and preference to work on a

casual basis and preferences for temporary positions. Those who had high Continuance Commitment were willing to work float to get full-time jobs. There were no other significant relationships between Continuance Commitment and contract status (permanent/temporary status, float and job share status and preferences), satisfaction with shift work schedules and satisfaction with pay.

Work status as full-time, part-time and casual, were not associated with Normative Commitment. Nurses with high Normative Commitment scores did not prefer to change their work status. Those with high Normative Commitment were the ones who preferred to work full-time. Normative Commitment was not associated with preferences for part-time or casual work or with job share positions, working on a float or preferences for these types of contracts, or overtime factors. Those who expressed Normative Commitment to their hospitals were also satisfied with their shifts, work schedules, and pay. There was no association between Normative Commitment and satisfaction with on-call rotation.

Table 43: Associations Between Commitment and Employment Patterns, Conditions and Preferences

Factors Affecting Nurse Outcomes	Commitment to Career	Commitment to Hospital		
		Affective	Continuance	Normative
Work status				
Full-time [1]	-.018	.059 *	.146 **	.036
Part-time[1]	.001	-.045	-.049	-.033
Casual[1]	.031	-.029	-.183 **	-.009
Prefer different status[1]	-.089 **	-.099 **	.015	-.080 **
Work PT or casual but prefer FT[1]	.154 **	.096	-.067	.120 *
Work FT or casual but prefer PT[1]	-.147 *	-.072	.166 **	-.070
Work FT or PT but prefer casual[1]	-.001	-.034	-.174 **	-.076
Contract Status				
Temporary position[2]	-.081 **	-.074 **	-.041	-.055 *
Prefer permanent position[3]	.020	-.027	-.078 **	-.037
Job share[1]	.012	.030	.019	.026
Prefer to job share[1]	.008	.023	-.009	.026
Work on float[1]	.033	-.014	.002	-.014
Prefer to work on float[1]	-.004	-.025	-.027	-.018
Will float to get FT job[1]	-.004	.039	.111 **	.017
Overtime				
Worked paid overtime[4]	.026	.021	-.035	.006
Paid overtime preferred[4]	.034	.047	-.006	.053
Worked unpaid overtime[4]	.057 *	.029	-.011	.009
Satisfaction with shift work, schedule and pay				
Satisfaction with day/evening/night shift[5]	.136 **	.144 **	.003	.151 **
Satisfaction with distribution of weekday /weekend shift[5]	.138 **	.167 **	.021	.165 **
Satisfaction with on call rotation[5]	.120	.216 **	-.099	.073
Satisfaction with work schedule[5]	.175 **	.234 **	-.024	.222 **
Satisfaction with pay[5]	.124 **	.080 **	-.040	.074 **

****** p<.001, *p<.01

[1] (1 = Yes, 0 = No)

[2] (1 = Temporary, 0 = Permanent)

[3] (1 = Prefer temporary, 0 = Prefer permanent)

[4] Number of hours

[5] (1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree)

9.5. Associations Between Job Satisfaction and Employment Patterns, and Preferences

To measure job satisfaction, we asked an overall job satisfaction question (explained in Section 6.3). We found no associations between preferred jobs and job satisfaction. Workers who were significantly more satisfied with their pay were part-time, rather than full-time or casual and did not prefer a different work status. Those nurses who were satisfied with their pay did not prefer to work paid overtime. Nurses who were satisfied with their pay were also satisfied with their shifts, on-call rotation and schedules.

Satisfaction with promotion opportunities was not associated with current work status but showed that nurses who did not prefer a different employment status were satisfied with their opportunities for promotion. There were no significant relationships between satisfaction with promotion opportunities and employment, contract status, or overtime. Nurses who were satisfied with promotion opportunities also were satisfied with shift work, on-call rotation, schedules and pay.

Those who were satisfied with their immediate supervisor worked full-time, worked unpaid overtime and did not prefer to change their work status. There were no other associations between work status, contract status or overtime and satisfaction with supervisors. Nurses who were satisfied with shift work, schedules and pay, were also satisfied with their supervisors.

Next, we analyzed satisfaction with fringe benefits. Nurses who were satisfied with their fringe benefits did not prefer a different work status. They also did not prefer to work full-time or work paid overtime hours. Those satisfied with benefits were the ones who preferred casual jobs. No other significant associations between satisfaction with fringe benefits and employment status, contract status or overtime were found. Nurses who were satisfied with shift work, schedules and pay, were also satisfied with their fringe benefits.

Nurses who were satisfied with the contingent rewards did not prefer to change their employment status and indicated preferences to work in permanent positions. Nurses less satisfied with contingent rewards were in temporary positions. Nurses who were satisfied with contingent rewards were also satisfied with shift work, schedules and pay.

Satisfaction with the type of work done was significant for casual nurses who showed lower levels of satisfaction with type of work done. Nurses who were satisfied with the type of work they were doing did not prefer to change their work status to part-time, full-time or casual. They were more likely to work unpaid overtime. Nurses who were satisfied with the type of work done were more likely to be satisfied with their shift work, schedules and pay. All other variables were not significantly associated with satisfaction with the type of work done.

Total job satisfaction (JSS) is a summation of scores of the six facets of job satisfaction. Those who were not satisfied with their jobs preferred a different work status. They tended to be in permanent positions. Nurses who had high total job satisfaction scores were more likely to be satisfied with their shift work, schedules and pay. All other variables were not significantly associated with total job satisfaction. [See Table 44].

Table 44: Associations Between Job Satisfaction and Employment Patterns, Conditions and Preferences

Factors Affecting Nurse Outcomes	Satisfaction with pay[5]	Satisfaction with promotion opportunities[5]	Satisfaction with immediate supervisor[5]	Satisfaction with fringe benefits[5]
Work Status				
Full-time[1]	-.072 **	.017	.053 *	-.025
Part-time[1]	.095 **	-.023	-.034	.022
Casual[1]	-.035	.008	-.037	.008
Prefer different status[1]	-.077 **	-.106 **	-.089 **	-.121 **
Work PT or casual but prefer FT[1]	.010	-.075	-.016	-.126 *
Work FT or casual but prefer PT[1]	-.046	.044	.049	.040
Work FT or PT but prefer casual[1]	.063	.047	-.057	.137 *
Contract Status				
Temporary position[2]	.026	.024	.025	.027
Prefer permanent position[3]	-.005	-.032	-.025	-.021
Job share[1]	-.023	.051	.001	.012
Prefer to job share[1]	-.046	-.009	-.007	.006
Work on float[1]	-.021	-.001	-.021	-.017
Prefer to work on float[1]	-.004	.043	-.022	-.019
Will float to get FT job[1]	-.062	.038	.025	.003
Overtime				
Worked paid overtime[4]	-.046	-.018	-.032	-.007
Paid overtime preferred[4]	-.084 **	-.024	-.012	-.076 **
Worked unpaid overtime[4]	-.035	-.004	.060 *	-.008
Satisfaction With Shift Work, Schedules, Pay				
Satisfaction with day/evening/night shift[5]	.163 ** [6]	.185 **	.162 **	.138 **
Satisfaction with distribution of weekday /weekend shift[5]	.182 ** [6]	.172 **	.173 **	.138 **
Satisfaction with on call rotation[5]	.161 * [6]	.256 **	.202 **	.094
Satisfaction with work schedule[5]	.170** [6]	.236 **	.255 **	.168 **
Satisfaction with pay[5,6]	.740 ** [6]	.198 **	.126 **	.301 **

****** p<.001, *p<.01

[1] (1 = Yes, 0 = No)

[2] (1 = Temporary, 0 = Permanent)

[3] (1 = Prefer temporary, 0 = Prefer permanent)

[4] Number of hours

[5] (1 = Very dissatisfied, … 5 = Very satisfied)

[6] Two factors are worded differently but measure the same concept. They are, therefore, highly correlated.

Table 44: Associations Between Job Satisfaction and Employment Patterns, Conditions and Preferences (continued)

	Satisfaction with contingent rewards	Satisfaction with type of work done	Total Job Satisfaction (JSS)
Work Status			
Full-time[1]	.006	-.006	-.016
Part-time[1]	-.021	.039	.020
Casual[1]	.027	-.058 *	-.006
Prefer different status[1]	-.117 **	-.073 **	-.153 **
Work PT or casual but prefer FT[1]	.084	.107	.026
Work FT or casual but prefer PT[1]	-.053	-.104	-.044
Work FT or PT but prefer casual[1]	-.045	.004	.033
Contract Status			
Temporary position[2]	.060 *	.033	.064 *
Prefer permanent position[3]	-.056 *	-.011	-.049
Job share[1]	.047	.000	.024
Prefer to job share[1]	.012	-.018	-.017
Work on float[1]	.015	-.002	-.016
Prefer to work on float[1]	.011	-.030	-.005
Will float to get FT job[1]	.024	-.007	-.001
Overtime			
Worked paid overtime[4]	-.010	.032	-.017
Paid overtime preferred[4]	-.010	.011	-.047
Worked unpaid overtime[4]	-.015	.056 *	-.019
Satisfaction With Shift Work, Schedules, Pay			
Satisfaction with day/evening/night shift[5]	.179 **	.155 **	.249 **
Satisfaction with distribution of weekday /weekend shift[5]	.186 **	.150 **	.261 **
Satisfaction with on call rotation[5]	.270 **	.166 **	.340 **
Satisfaction with work schedule[5]	.263 **	.199 **	.334 **
Satisfaction with pay[5]	.250 **	.160 **	.437 **

****** p<.001, *p<.01

[1] (1 = Yes, 0 = No)

[2] (1 = Temporary, 0 = Permanent)

[3] (1 = Prefer temporary, 0 = Prefer permanent)

[4] Number of hours

[5] (1=Very dissatisfied, 2=Dissatisfied, 3=Neither dissatisfied nor satisfied, 4=Satisfied, 5=Very satisfied)

9.6. Associations Between Propensity to Leave, Absenteeism, Employment Patterns, and Preferences

For propensity to leave, we examined the propensity to leave the hospital and to leave the profession. Those who were less likely to leave were full-time nurses and those more likely to leave the hospital were casual nurses. There were no associations between the propensity to leave the hospital and part-time work. Nurses more likely to leave their hospitals and the profession were the ones who preferred a different employment status and preferred to work on a casual basis. Nurses who had lower propensity to leave the hospital were the ones who were willing to work on a float pool to get a full-time job. No other correlations with work status or contract status were significant. Nurses who had lower propensity to leave the hospital and the nursing profession were the ones who preferred to work paid overtime hours and were those who worked longer paid overtime.

Nurses who were less likely to leave their hospitals and the nursing profession were the ones satisfied with the distribution of their day and weekend shifts. Those with lower propensity to leave their hospitals were satisfied with their on-call rotation. Those with lower propensity to leave the hospital and the nursing profession were the ones who expressed satisfaction with their schedules and their pay.

Now turning to absenteeism, those more likely to be absent from work were full-time nurses, those who preferred a different employment status, worked on float, and were those willing to work float to get a full-time job. On the other hand, part-time workers were less likely to be absent from work. None of the other variables were associated with absenteeism [See Table 45].

Table 45: Associations Between Propensity to Leave the Hospital, Absenteeism, Employment Patterns, and Preferences

	Propensity to Leave the Hospital	Propensity to Leave the Profession	Absenteeism
Work Status			
Full-time[1]	-.085 **	.010	.068 *
Part-time[1]	.037	-.030	-.064 *
Casual[1]	.091 **	.034	-.013
Prefer different status[1]	.164 **	.062 *	.082 **
Work PT or casual but prefer FT[1]	-.024	-.199 **	-.066
Work FT or casual but prefer PT[1]	-.067	.109	.067
Work FT or PT but prefer casual[1]	.152 **	.138 *	-.007
Contract status			
Temporary position[2]	-.046	-.045	-.003
Prefer permanent position[3]	.036	.024	-.021
Job share[1]	.006	.019	-.022
Prefer job share[1]	-.003	.020	-.026
Work on float[1]	.008	.002	.079 **
Prefer to work on float[1]	.025	.007	-.025
Will float to get FT job[1]	-.081 **	-.003	.081 **
Overtime			
Paid overtime hours[4]	-.068 *	-.055 *	-.022
Paid overtime hours preferred[4]	-.076 **	-.061 *	-.016
Unpaid overtime hours[4]	-.015	-.017	-.028
Satisfaction with shift work, Schedule and Pay			
Satisfaction with distribution of day/night shifts	-.228 **	-.117 **	-.034
Satisfaction with distribution of day/weekend shifts	-.216 **	-.096**	.015
Satisfaction with on-call rotation	-.211 **	-.012	.038
Satisfaction with work schedule	-.279 **	-.113 **	-.032
Satisfaction with pay	-.143 **	-.099 **	.015

****** p<.001, *p<.01

[1] (1 = Yes, 0 = No)

[2] (1 = Temporary, 0 = Permanent)

[3] (1 = Prefer temporary, 0 = Prefer permanent)

[4] Number of hours

9.7. Associations Between Commitment, Job Satisfaction, Propensity to Leave, and Stress and Burnout

Commitment to career, commitment to the hospital and overall job satisfaction were highly associated with stress and burnout. Those who showed lower degrees of commitment and job dissatisfaction were also stressed and showed symptoms of burnout. Those with higher the levels of career commitment, commitment to the hospital and overall job satisfaction were also the ones who showed the greater sense of personal accomplishment from their jobs [See Table 46].

Table 46: Associations Between Commitment and Stress, and Burnout

Factors	Commitment to Career	Affective Commitment	Continuance Commitment	Normative Commitment	Overall Job Satisfaction
Stress scale	-.328 **	-.254 **	.199 **	-.192 **	-.429 **
Burnout					
Emotional exhaustion	-.365 **	-.293 **	.196 **	-.207 **	-.482 **
Depersonal-ization	-.310 **	-.243 **	.065 *	-.199 **	-.316 **
Personal accomplish-ments	.354 **	.239 **	-.065 *	.184 **	.248 **

****** $p<.001$, *$p<.01$

Job satisfaction, including total job satisfaction (a combination of all 6 subscales), were all related to symptoms of stress and burnout [See Table 47]. Those who were not satisfied with their jobs showed symptoms of stress. In addition, as presented in Table 48, the nurses' propensities to leave their hospitals as well as the nursing profession were highly related to their stress and burnout symptoms. Those who considered leaving their employment and profession showed symptoms of stress and burnout. Moreover, those who showed a high rate of absenteeism were also the ones showing symptoms of stress. Stress and absenteeism were related to a lesser extent and absenteeism was not associated with burnout.

Table 47: Associations Between Job Satisfaction and Stress, and Burnout

Factors	Satisfaction With Pay	Satisfaction With Promotional Opportunities	Satisfaction With Immediate Supervisor	Satisfaction With Fringe Benefits
Stress scale	-.249 **	-.258 **	-.224 **	-.190 **
Burnout				
Emotional exhaustion	-.283 **	-.281 **	-.234 **	-.177 **
Depersonal-ization	-.189 **	-.158 **	-.153 **	-.093 **
Personal accomplish-ments	.108 **	.065 *	.123 **	.023

****** p<.001, *p<.01

Table 47: Associations Between Job Satisfaction and Stress, and Burnout (continued)

Factors	Satisfaction With Contingent Rewards	Satisfaction With Type of Work Done	Total Job Satisfaction
Stress scale	-.398 **	-.400 **	-.494 **
Burnout			
Emotional exhaustion	-.453 **	-.455 **	-.538 **
Depersonal-ization	-.331 **	-.386 **	-.370 **
Personal accomplish-ments	.193 **	.406 **	.250 **

****** p<.001, *p<.01

Table 48: Associations Between Hospital Outcomes and Stress, and Burnout

Factors	Propensity to Leave Hospital	Propensity to Leave the Profession	# of Days Absent
Stress scale	.368 **	.246 **	.065 *
Burnout			
Emotional exhaustion	.412 **	.269 **	.012
Depersonal-ization	.296 **	.187 **	-.004
Personal accomplish-ments	-.259 **	-.224 **	-.041

**** p<.001, *p<.01**

9.8. Associations Between Commitment and Job Satisfaction and Retention

Next we examined associations between hospital commitment and job satisfaction. Literature indicates that those who are committed to their workplaces are the ones satisfied with their jobs, and those who intend to stay with their organization and in the profession are the ones who are committed and satisfied with their jobs. Our results showed that the higher the sense of commitment to the career and to the hospital, the higher the job satisfaction (See Table 49a). The six individual facets of job satisfaction (pay, promotional opportunities, supervisor, fringe benefits, contingent rewards and type of work done) were all significantly and positively associated with affective and normative commitment to the hospital and negatively associated with continuance commitment. As shown in Table 49b, the lower propensity to leave the hospital as well as the nursing profession, the higher was the sense of career commitment, commitment to the hospital, and job satisfaction. Absenteeism was not affected by the career commitment or commitment to the hospitals. Overall job satisfaction did not appear to have an impact on number of days absent from work.

Table 49a: Associations Between Commitment and Job Satisfaction

	Career Commitment	**Affective commitment**	**Continuance commitment**	**Normative commitment**
Overall Job satisfaction	.365**	.390 **	-.034	.338 **
Satisfaction with:				
Pay	.161**	.163 **	-.090 **	.124 **
Promotion	.284**	.290 **	-.104 **	.279 **
Immediate supervisor	.218**	.243 **	-.053 *	.227 **
Fringe benefits	.127**	.106 **	-.059 *	.131 **
Contingent rewards	.311**	.383 **	-.101 **	.336 **
Work done	.436**	.365 **	-.102 **	.221 **
Job Satisfaction Scale total	.385**	.434 **	-.153 **	.344 **

****** $p<.001$, *$p<.01$

Table 49b: Associations Between Retention and Commitment

	Propensity to Leave Hospital	**Propensity to Leave Profession**	**Absenteeism**
Career commitment	-.461 **	-.450 **	.024
Affective commitment	-.656 **	-.253 **	-.013
Continuance commitment	-.053 *	.028	.031
Normative commitment	-.554 **	-.194 **	-.008
Overall job satisfaction	-.499 **	-.275 **	-.023
Pay	-.192 **	-.133 **	-.017
Promotion	-.309 **	-.172 **	-.043
Immediate supervisor	-.322 **	-.159 **	.009
Fringe benefits	-.135 **	-.080 **	-.030
Contingent rewards	-.397 **	-.216 **	-.008
Work done	-.437 **	-.328 **	.017
Job Satisfaction Scale total	-.495 **	-.279 **	-.031

****** $p<.001$, $*p<.01$

10. Summary and Conclusions

In this research we examined the changes in the nursing work environment under the theme of the 'New Health Care Worker' and implications of changing employment patterns for nurses and their hospitals. The purpose of the research was to examine the effects of contemporary employment arrangements on the quality of nurses' worklife, and the implications of these employment arrangements for individual nurses and their hospitals. In this report we focus on nurses' employment status, employment conditions, and the effects of these factors on nurses' job satisfaction, commitment, retention, and absenteeism. We also examine stress, burnout, and physical occupational health problems (in particular, musculoskeletal disorders), as affecting nurse and hospital outcomes.

The study was conducted using a sequential mixed research methodology, starting with qualitative data collection and following with quantitative survey data collection. Quantitative results are reported here.

For the survey, we used O'Brien-Pallas and Baumann's (1992) Quality of Nursing Worklife Framework and other literature on the topic to develop a conceptual model for analyzing the New Health Care Worker. We examined the impact of independent factors affecting dependent factors of nurse and hospital outcomes, as mediated through mental and physical occupational health.

We included many factors in our study, such as restructuring in health care, peer and organizational support, and work-family conflict. However, this report focuses only on the effects of employment patterns, conditions, and preferences on nurse and hospital outcomes. Only the major conclusions are discussed here.

In terms of current employment conditions, we found that many nurses are employed on a full-time basis and prefer that employment status for the income, benefits, and stability it provides to their lives. More than a third are working in either part-time or casual work, and nurses choose this type of employment for the control it gives them over their work schedule, and for self-fulfilment/enjoyment. A substantial majority of the nurses are employed in the type of job (full-time, part-time, or casual) that they prefer. However, there seems to be a mismatch between some nurses' preferred employment and current employment status (for about one fifth of the nurses in each type of work arrangement). If such a mismatch can be resolved, the overall result might be more satisfied nurses in the health care system.

As expected in a tight nursing labour market, among those nurses who are already employed, more than a quarter are working (paid or unpaid) overtime because the existing nursing staff is insufficient, thus they are unable to complete their work in the regular paid hours. Most nurses are satisfied with their shift arrangements, and pay and benefits, although about one in five nurses are dissatisfied with these aspects of their employment. Managers may consider making scheduling changes as most nurses reported a preference for self-scheduling. Many nurses said that there are not enough full-time and part-time nurses in their hospitals. Nurse to patient ratios could be a concern for this population of nurses, with approximately two-thirds of respondents working at a higher ratio than what they identified as their ideal/preferred.

Although there seems to be some mismatch between the current employment and employment preferences for a small number of nurses, we found that there were much larger problems in the hospitals related to stress, burnout, physical health problems, and job satisfaction among nursing personnel. These problems were affecting the nurses' commitment and propensity to leave the hospitals which were low.

With respect to physical and emotional health problems, the nurses showed some symptoms of stress and emotional exhaustion. Despite these problems, the nurses showed low levels of depersonalization, indicating that they still demonstrate care for their patients and are dedicated individuals. The nurses also felt a high degree of accomplishment from their jobs at the hospital. In terms of diagnosed physical health conditions, nurses in our survey are sicker than the comparable population and many had symptoms of musculoskeletal disorders (commonly known as repetitive strain injuries or soft-tissue damage).

Nurses' employment patterns and conditions, and respective preferences, and emotional and physical occupational health all affect their commitment and job satisfaction.

Nurses responding to our survey showed a moderate to low level of commitment to their profession. They also showed a low level of affective (emotional) and continuance commitment to their employing hospital. Even lower were levels of normative commitment in this study, (i.e. many nurses do not feel an obligation to continue employment at their hospital), thereby suggesting that nurses feel apathy for the organization.

Nurses did not show a high level of satisfaction with their jobs, although there were some variations between satisfactions with the different components of the job. In general, nurses were more satisfied with their work and the work environment (including their immediate supervisors and coworkers) and less satisfied with financial rewards (such as pay, benefits, and promotional opportunities).

The nurses who responded to our survey did not show a high interest to stay with their employing hospital. Sick time, however, was generally low for the nurses. With close to one third of nurses reporting that they took no sick days during the past year. On average, the nurses

were absent from work for five days each year due to sickness. Interestingly, many nurses commented that there was no reward at their workplace for those with perfect attendance.

The overall results showed that nurses' full-time, part-time and casual work status and preferences for these types of work were generally not associated with their level of education, gender, age, marital status, and with having children less than 12 years of age. Those nurses with more tenure at the hospital worked full-time; those with higher tenure in their current job or in the profession preferred part-time or casual work. Those working full-time or who preferred to work part-time, indicated that their earnings were important to the family income and that they contributed a large percentage of the total family income.

Stress and burnout seemed to be important factors associated with employment patterns and preferences in the nurses who participated in this study. Nurses working full-time showed symptoms of stress and burnout, and wanted to work in part-time and casual jobs, while those working part-time and on a casual basis did not show these emotional health problems and wanted full-time jobs.

There was little, if any, relationship between diagnosed and self-reported musculoskeletal disorders or allergies – the most commonly reported illnesses by our respondents – and employment patterns and preferences. Satisfaction with shift work, work schedule and pay seemed to be important factors influencing the occupational health of nurses, with those nurses who are satisfied reporting fewer musculoskeletal disorders and allergies.

Our results showed associations between symptoms of stress and burnout (emotional exhaustion and depersonalization components). Those working full-time and preferring full-time jobs showed these symptoms, while those who worked on a casual basis and those who preferred full-time jobs were not stressed, nor did they show symptoms of burnout. Nurses who showed

these emotional occupational health problems were also the ones who were working unpaid overtime or those working on float to get full-time jobs. Stress and burnout symptoms decreased when nurses were satisfied with their shift work, work schedules, and pay.

Nurses who showed commitment to their career and commitment to the hospital were the ones working full-time, not interested in another type of job, and working on a permanent basis or preferring a permanent position. Those who showed commitment to their career and the hospital were also the nurses who were satisfied with their shift work, work schedules, and pay.

When we examined the six facets of job satisfaction and the overall job satisfaction, results showed that those who were not satisfied were the ones who preferred a different type of employment (full-time, part-time, or casual). Those who were satisfied with their jobs were also satisfied with their shifts, on-call rotation, work schedule, and pay.

Full-time nurses were not satisfied with their pay but were satisfied with their immediate supervisor. Those who were not satisfied with their jobs tended to be in temporary positions.

We examined three types of outcomes for hospitals: the propensity to leave the hospital, the propensity to leave the profession, and absenteeism (measured as number of days absent from work). Full-time workers had lower propensity to leave the hospital but were more likely to be absent from work. Those who preferred a different employment status had higher propensity to leave the hospital and profession, and had a higher absenteeism rate. Those who worked long overtime hours and preferred to work in paid overtime had lower propensity to leave the hospital and the profession. Those who were satisfied with their shift, on-call rotation, work schedule, and pay were also less likely to leave the hospital or nursing profession. These factors, however, were not associated with absenteeism.

In conclusion, while it seems that there is some dissatisfaction with employment status and preferences among a small number of the participants in this study, we learned that there are critical issues at stake here related to job satisfaction, turnover intentions, stress, and burnout in nurses. For example, those nurses who were not satisfied with their jobs were also the ones reporting symptoms of stress and burnout. Similarly, those who were intending to leave their hospital or the nursing profession were the ones who reported symptoms of stress and burnout.

Research has shown that those who are committed to their career and workplaces are the workers who are satisfied with their jobs. Our study showed the same results with nurses. Moreover, similar to other research findings, we also found associations between the lower propensity to leave the hospital and the profession if nurses were committed to their career and to their hospitals, and were satisfied with their jobs. Overall, our study shows that while structural work factors [such as work status as full-time, part-time, or casual, and contract status as permanent or temporary, or excessive overtime] are important factors affecting nurses job satisfaction, commitment and their propensity to leave (turnover), it is the psychosocial work factors (whether nurses' preferences with their jobs are fulfilled, whether they show symptoms of stress and burnout) that most strongly affect nurses' job satisfaction, commitment and turnover decisions. Further, multivariate, analysis that we will conduct will show the strength of these factors in keeping nurses in their profession and hospitals.

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