



**UNIVERSITI PUTRA MALAYSIA**

***JOB SATISFACTION AMONG NURSES IN GENERAL HOSPITALS IN  
CHENGDE CITY, CHINA***

**LIU JING HUA**

**FPSK(m) 2015 74**



**JOB SATISFACTION AMONG NURSES IN GENERAL HOSPITALS IN  
CHENGDE CITY, CHINA**

By

**LIU JING HUA**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in  
Fulfilment of the Requirements for the Degree of Master of Science**

**December 2015**

All material contained within the thesis, including without limitation text, logos, icons, photographs and all other artwork, is copyright material of Universiti Putra Malaysia unless otherwise stated. Use may be made of any material contained within the thesis for non-commercial purposes from the copyright holder. Commercial use of material may only be made with the express, prior, written permission of Universiti Putra Malaysia.

Copyright © Universiti Putra Malaysia



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the Degree of Master of Science

## **JOB SATISFACTION AMONG NURSES IN GENERAL HOSPITALS IN CHENGDE CITY, CHINA**

By

**LIU JING HUA**

**December 2015**

**Chair : Muhammad Hanafiah Juni, MD, MPH**  
**Faculty : Medicine and Health Sciences**

**Introduction:** Hospitals in China continuously witnesses the challenge of nursing shortage. Job satisfaction is strongly related to the retention of skilled nurses. Although many studies regarding to nurses' job satisfaction have been reported in China, there is a paucity of publications on hospital's level impacting on nurses' job satisfaction.

**Objective:** The aim of this study were to determine nurses' job satisfaction in general hospitals and to compare nurses' job satisfaction between second and third level hospital in Chengde City, Hebei Province, China.

**Methods:** A cross-sectional study was conducted among 490 nurses in general hospitals. Data collection used a self-administered questionnaire. Job satisfaction was measured using Chinese Nurses Job Satisfaction Scale (CNJSS). Data were analyzed using IBM SPSS version 20.0. Descriptive statistics used Mean and Standard deviation. Comparison of overall job satisfaction score between two groups used t-test and one-way ANOVA for more than two groups. One-way MANOVA was conducted to compare the mean scores of job satisfaction sub-scales between second and third level hospital. The level of significance was set at  $\alpha = 0.05$ .

**Results:** The response rate was 91.4%. The mean (M)  $\pm$  standard deviation (SD) overall job satisfaction in general hospitals was  $2.86 \pm 0.31$ . Nurses rated co-worker ( $3.94 \pm 0.45$ ) as the most satisfied facet and work itself ( $2.11 \pm 0.47$ ) as the most dissatisfied facet among the eight job satisfaction sub-scales. In terms of the comparisons of overall job satisfaction in general hospitals, significant differences were found between gender ( $P < 0.001$ ), age group ( $P < 0.001$ ), educational background ( $P < 0.001$ ) and hospital's level ( $P < 0.001$ ). Nurses' overall job satisfaction in second-level hospital was significantly higher than those in third-level hospital ( $P < 0.001$ ). Further analyses on the comparisons of eight job satisfaction sub-scales between second and third level hospital showed that nurses in second-level hospital were more satisfied with co-worker ( $P < 0.001$ ), family-work balance ( $P < 0.001$ ) and praise/recognition ( $P < 0.001$ ), while less satisfied with pay than nurses in third-level hospital ( $P < 0.001$ ).

**Conclusion:** Nurses in Chengde City were most satisfied with co-worker and most dissatisfied with work itself. In second-level hospital, nurses were more satisfied with co-worker, family-work balance and praise/recognition, while less satisfied with pay than those in third-level hospital.

**Keywords:** China, Chinese Nurses Job Satisfaction Scales (CNJSS), job satisfaction, nurses, hospital.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia  
sebagai memenuhi keperluan untuk Ijazah Master Sains

## **KEPUASAN KERJA DI KALANGAN JURURAWAT DI HOSPITAL BESAR DI BANDAR CHENGDE, CHINA**

Oleh

**LIU JING HUA**

**Disember 2015**

**Pengerusi : Muhammad Hanafiah Juni, MD, MPH**  
**Fakulti : Perubatan dan Sains Kesihatan**

**Pengenalan:** Kebelakangan ini, hospital di China mengalami masalah kekurangan tenaga kerja jururawat. Pengekaln jururawat mahir adalah faktor utama yang mempengaruhi kepuasan kerja dikalangan jururawat. Walaupun banyak kajian mengenai kepuasan kerja di kalangan jururawat telah dilaporkan di China, namun masih terdapat kekurangan penerbitan di peringkat hospital yang berkaitan kesan kepuasan kerja di kalangan jururawat.

**Matlamat:** Matlamat kajian ini adalah untuk mengkaji dan membandingkan kepuasan jururawat yang berkhidmat di hospital besar dengan hospital tahap kedua dan ketiga di bandaraya Chengde di Hebei, China.

**Kaedah:** Kajian keratan rentas dari segi soal selidik telah dijalankan di antara 490 orang jururawat yang berkhidmat di hospital besar. Kepuasan kerja dikalangan jururawat dinilai dengan menggunakan Skala Kepuasan Jururawat Cina terhadap Kerja (CNJSS). Kaedah data analisis yang digunakan adalah IBM SPSS versi 20.0. Statistik deskriptif dianalisis dengan menggunakan purata  $\pm$  sisihan piawai. Perbandingan kepuasan terhadap kerja secara keseluruhan antara dua kumpulan dianalisis dengan menggunakan ujian-t dan ANOVA sehalu untuk tujuan perbandingan lebih daripada dua kumpulan. MANOVA sehalu digunakan untuk membandingkan purata skala kepuasan jururawat terhadap pekerjaan di antara hospital tahap kedua dan ketiga. Kepentingan data ditetapkan pada tahap  $\alpha = 0.05$ .

**Keputusan:** Peratus maklum balas yang dicapai adalah sebanyak 91.4%. Kajian menunjukkan purata kepuasan kerja dikalangan jururawat di hospital besar ialah  $2.86 \pm 0.31$ . Di antara lapan sub-skala kepuasan terhadap kerja, jururawat menilai berkerja dengan rakan sekerja sebagai aspek yang paling berpuas hati ( $3.94 \pm 0.45$ ) dan aspek yang paling tidak berpuas hati adalah apabila kerja bersendirian ( $2.11 \pm 0.47$ ). Dari segi perbandingan antara kepuasan kerja dikalangan jururawat di hospital besar secara keseluruhannya ialah jantina ( $P < 0.001$ ), kumpulan umur ( $P < 0.001$ ), latar belakang tahap pendidikan ( $P < 0.001$ ) dan tahap hospital ( $P < 0.001$ ) telah menunjukkan perbezaan yang

signifikan. Selain daripada itu, jururawat yang berkhidmat di hospital tahap kedua lebih berpuas hati terhadap kerja mereka berbanding dengan mereka yang berkhidmat di hospital tahap ketiga ( $P < 0.001$ ). Kajian lanjut berkenaan dengan perbandingan antara lapan sub-skala kepuasan kerja dikalangan jururawat di antara hospital tahap kedua dan ketiga menunjukkan jururawat yang bekerja di hospital tahap kedua lebih berpuas hati apabila bekerja dengan rakan sekerja ( $P < 0.001$ ), mempunyai pengagihan keluarga dan kerja yang seimbang ( $P < 0.001$ ) dan menerima pujian dan penghargaan ( $P < 0.001$ ). Manakala, dari segi penerimaan gaji, jururawat yang berkhidmat di hospital tahap kedua kurang berpuas hati jika dibandingkan dengan mereka yang berkhidmat di hospital tahap ketiga ( $P < 0.001$ ).

**Kesimpulan:** Jururawat di Chengde City sangat berpuas hati dengan rakan sekerja dan paling tidak berpuas hati dengan kerjanya. Di hospital peringkat kedua, jururawat lebih berpuas hati dengan rakan sekerja, keseimbangan kerja - keluarga dan penghargaan / pengiktirafan, manakala kurang berpuas hati dengan gaji berbanding mereka yang berada di hospital peringkat ketiga.

**Kata kunci:** China, Skala Kepuasan Jururawat Cina terhadap Kerja (CNJSS), kepuasan terhadap kerja, jururawat, hospital.

## ACKNOWLEDGEMENTS

First and foremost, I would like to express my sincere appreciation to my supervisor, Assoc. Prof. Dr. Muhammad Hanafiah Juni, for the continuous support to my study and research works, for his endless patience, encouragement, motivation, enthusiasm, immense knowledge, and his expert guidance throughout the progress of my research.

Besides, I gratefully acknowledge my supervisory committee members, Dr. Salmiah Md. Said and Assoc. Prof. Dr. Anita Abd. Rahman, and for their statistical expertise and invaluable assistance in helping me with my proposal seminal, developing questionnaire, data analyses and thesis writing.

My sincere thanks also go to members of the Thesis Examination Committee: Assoc. Prof. Dr. Kulanthayan (Chairman) and Dr. Huda Zainuddin (Internal Examiner) who were from Faculty of Medicine and Health Sciences in Universiti Putra Malaysia; and Dr. Aziah Daud (External Examiner) who worked in School of Medical Sciences, Universiti Sains Malaysia. I would express my gratitude to them for their valuable time in viewing my thesis, and also for their professional advises and suggestions in my thesis correction after VIVA.

I thank my classmates: Rubiah Anak Ajan for helping me how to improve my oral English, for the sleepless nights we were working together before deadlines, and for all the fun we have had in the last three years.

I would like to express gratitude to the leaders of Chengde Central Hospital: Prof. Li Jian Hua and Assoc. Prof. Li Jiang Hui for giving me the opportunity to pursue my master degree and willingness to trust me for my professional enrichment abroad. I also would like to express my sincere appreciation to the dean of nursing department in Chengde Central Hospital: Miss Cheng Shu Ling, for her cheerful support and willingness in help me to obtain the necessary data.

My greatest gratitude goes to nurses who working in Chengde Central Hospital, Chengde County Hospital, and Wei Chang County Hospital for allowing me to conduct my research and I thank all the respondents of nurses working in these three general hospitals in Chengde City, China who spent their valuable time answering my questionnaire even though they're busy with their commitment but still had time in providing me feedback to my survey questions.

I would like to thank my research assistants: Yang Bo, Sun Jian Jun, Guan Xiao Tong and Sheng Guo Fang for their time in helping me distributing the questionnaires, accompanying with me to the selected hospitals and offering me advice how to overcome my difficulties during data collection.



And to the people who've been there all the way through: My father Liu Feng Ting, my mother Sun Gui Fen, my elderly sister Liu Jing Li, my sister in law Kuang Ya Nan, my younger brother Liu Jing Li and brother in law Lu Xiao Fei for supporting me spiritually throughout my life and always inspiring me to pursue higher education.

Finally, I am indebted to my wonderful husband, Dong Xian Ling, for his patience and constant belief in my ability. He also personally contributed to this thesis, helping me with paraphrasing, editing, formatting as well as gave me valuable ideas on how to write a real thesis.



This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

**Muhammad Hanafiah Juni, MD, MPH**

Associate Professor  
Faculty of Medicine and Health Sciences  
Universiti Putra Malaysia  
(Chairman)

**Anita Binti Abd. Rahman, MD, MP**

Medical Lecturer  
Faculty of Medicine and Health Sciences  
Universiti Putra Malaysia  
(Member)

**Salmiah Md. Said, MD, MPH**

Medical Lecturer  
Faculty of Medicine and Health Sciences  
Universiti Putra Malaysia  
(Member)

---

**BUJANG KIM HUAT, PhD**

Professor and Dean  
School of Graduate Studies  
Universiti Putra Malaysia

Date:

## Declaration by graduate student

I hereby confirm that:

- This thesis is my original work;
- Quotations, illustrations and citations have been duly referenced;
- This thesis has not been submitted previously or concurrently for any other degree at any other institutions;
- Intellectual property from the thesis and copyright of thesis are fully-owned by Universiti Putra Malaysia, as according to the Universiti Putra Malaysia (Research) Rules 2012;
- Written permission must be obtained from supervisor and the office of Deputy Vice-Chancellor (Research and Innovation) before thesis is published (in the form of written, printed or in electronic form) including books, journals, modules, proceedings, popular writings, seminar papers, manuscripts, posters, reports, lecture notes, learning modules or any other materials as stated in the Universiti Putra Malaysia (Research) Rules 2012;
- There is no plagiarism or data falsification/fabrication in the thesis, and scholarly integrity is upheld as according to the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) and the Universiti Putra Malaysia (Research) Rules 2012. The thesis has undergone plagiarism detection software.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name and Matric No.: Liu Jing Hua (GS37033)

## Declaration by Members of Supervisory Committee

This is to confirm that:

- The research conducted and the writing of this thesis was under our supervision;
- Supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) are adhered to.

Signature: \_\_\_\_\_  
Name of  
Chairman of  
Supervisory  
Committee: Assoc. Prof. Muhammad Hanafiah Juni

Signature: \_\_\_\_\_  
Name of  
Member of  
Supervisory  
Committee: Assoc. Prof. Anita Binti Abd. Rahman

Signature: \_\_\_\_\_  
Name of  
Member of  
Supervisory  
Committee: Dr. Salmiah Md. Said

## TABLE OF CONTENTS

<b>ABSTRACT</b>	<b>Page</b>
<b>ABSTRAK</b>	i
<b>ACKNOWLEDGEMENTS</b>	iii
<b>APPROVAL</b>	v
<b>DECLARATION</b>	vii
<b>LIST OF TABLES</b>	ix
<b>LIST OF FIGURES</b>	xiv
<b>LIST OF ABBREVIATIONS</b>	xv
	xvi
 <b>CHAPTER</b>	
 <b>1 INTRODUCTION</b>	 1
1.1 Research Background	1
1.1.1 Chinese Healthcare Delivery System	1
1.1.2 Professional Rank and Education for Nurses	2
1.1.3 Unbalanced Health Care Distribution across Regions	3
1.1.4 Nursing in China	3
1.2 Nurses' Job Satisfaction	5
1.3 Problem Statement	5
1.4 Significance of the Study	6
1.5 Research Questions	6
1.6 Objectives	7
1.6.1 General Objective	7
1.6.2 Specific Objectives	7
1.7 Hypotheses	7
1.8 Thesis Outline	8
 <b>2 LITERATURE REVIEW</b>	 9
2.1 Definition of Job Satisfaction	9
2.2 Job Satisfaction in Nursing	9
2.2.1 Nursing Shortage	10
2.2.2 High Turnover Rate	11
2.2.3 Nurses' Job Satisfaction	12
2.3 Determinants of Nurses' Job Satisfaction	13
2.3.1 Intra-personal Determinants	14
2.3.2 Inter-personal Determinants	16
2.3.3 Extra-personal Determinants	17
2.4 Instruments to Measure Job Satisfaction	19
2.5 Conceptual Framework	20
 <b>3 METHODOLOGY</b>	 22
3.1 Study Location	22
3.2 Study Design	22
3.3 Study Duration	22
3.4 Sampling	22
3.4.1 Study Population	22
3.4.2 Sampling Population	22

3.4.3	Sampling Unit	22
3.4.4	Sampling Frame	22
3.4.5	Selection Criteria	23
3.4.6	Sample Size	23
3.4.7	Sampling Method	24
3.5	Study Instrument	26
3.5.1	Chinese Nurse Job Satisfaction Scale	26
3.5.2	Reliability and Validity of Chinese Nurse Job Satisfaction Scale	26
3.6	Variables	27
3.6.1	Independent Variable	27
3.6.2	Dependent Variable	27
3.7	Operational Definition	27
3.7.1	Job Satisfaction	27
3.7.2	Gender	27
3.7.3	Age group	27
3.7.4	Marital Status	28
3.7.5	Working Years in Current Employment	28
3.7.6	Hospital's Level	28
3.7.7	Types of Working Unit	28
3.7.8	Educational Background	28
3.7.9	Professional Rank	28
3.8	Data Collection	28
3.9	Data Analysis	29
3.10	Ethical Consideration	29
<b>4</b>	<b>RESULTS</b>	31
4.1	Response Rate	31
4.2	Respondents' Characteristics	32
4.2.1	Distribution of Respondents by Socio-demographics	32
4.2.2	Distribution of Respondents by Job Profiles	33
4.2.3	Comparisons of Respondents' Characteristics between Second and Third Level Hospital	33
4.3	Nurses' Job Satisfaction in General Hospitals	35
4.3.1	Normality Test	35
4.3.2	Overall Job Satisfaction and Eight Sub-scales	36
4.4	Comparisons of Job Satisfaction with Previous Findings in China	36
4.5	Comparisons of Overall Job Satisfaction for Socio-demographics	37
4.5.1	Comparisons of Overall Job Satisfaction for Gender	37
4.5.2	Comparisons of Overall Job Satisfaction for Age Group	38
4.5.3	Comparisons of Overall Job Satisfaction for Education	38
4.6	Comparisons of Overall Job Satisfaction for Job Profiles	39
4.6.1	Comparisons of Overall Job Satisfaction for Hospitals' Levels	40
4.6.2	Comparisons of Overall Job Satisfaction for Professional Rank	40
4.7	Comparisons of Sub-scales between Second and Third level Hospitals	40

<b>5</b>	<b>DISCUSSION</b>	43
5.1	Respondents' Characteristics	43
5.2	Nurses' Job Satisfaction in General Hospitals	44
5.2.1	Overall Job Satisfaction	44
5.2.2	Satisfaction with Co-worker	44
5.2.3	Satisfaction with Work Itself	45
5.3	Comparisons of Job Satisfaction with Previous Findings in China	45
5.4	Comparisons of Overall Job Satisfaction for Socio-demographics	46
5.4.1	Gender	46
5.4.2	Marital Status	46
5.4.3	Age Group	47
5.4.4	Educational Background	47
5.5	Comparisons of Overall Job Satisfaction for Job Profiles	47
5.5.1	Types of Working Unit	47
5.5.2	Professional Rank	48
5.5.3	Working Years in Current Employment	48
5.6	Comparisons of Sub-scales between Second and Third Level Hospital	48
<b>6</b>	<b>CONCLUSION AND RECOMMENDATIONS</b>	51
6.1	Conclusion	51
6.2	Strength of the Study	51
6.3	Limitation of the Study	52
6.4	Recommendation	52
	<b>REFERENCES</b>	53
	<b>APPENDICES</b>	61
	<b>BIODATA OF STUDENT</b>	88
	<b>PUBLICATION</b>	89

## LIST OF TABLES

Table	Page
2.1 Detailed information of scales to examine nurses' job satisfaction.	19
3.1 Distribution of nurses in general hospitals in Chengde City.	24
4.1 Distribution of respondents by socio-demographic and job profiles (N=448).	32
4.2 Comparisons of respondents' socio-demographic and job profile between second and third level hospital (N=448).	34
4.3 Mean, standard deviation and skewness for nurses' job satisfaction.	35
4.4 Comparisons of overall job satisfaction with previous findings in China.	36
4.5 Comparisons of overall job satisfaction for socio-demographics.	37
4.6 Comparisons of nurses' overall job satisfaction for job profiles.	39
4.7 Pearson collations associated with the nurses' job satisfaction sub-scales.	40
4.8 Skewness values for job satisfaction sub-scales split by hospital's level.	41
4.9 Comparisons of sub-scales between second and third level hospitals.	42
5.1 Associations between educational background and professional rank.	76
5.2 Associations between age group and professional rank.	76



## LIST OF FIGURES

Figure		Page
1	Government administrative levels and hospitals' classification.	1
2	Conceptual framework of nurses' job satisfaction.	21
3	Random sampling method of two stage sampling.	25
4	Response Rate of the Research.	31
5	Bar chart of overall job satisfaction and sub-scales	77
6	Bar chart of sub-scales between hospital levels.	78



## LIST OF ABBREVIATIONS

AGFI	Adjusted Goodness of Fit Index
ANOVA	Analysis of Variance
CFA	Confirmatory Factor Analysis
CNJSS	Chinese Nurse Job Satisfaction Scale
CNR	Chinese Ren Min Bi
GIF	Goodness of Fit Index
HHNJS	Home Healthcare Nurses' Job Satisfaction Scale
IBM	International Business Machine
ICU	Intensive Care Unit
JKEUPM	Ethics Committee for Research Involving Human Subjects of University Putra Malaysia
JSS	Job Satisfaction Scale
M	Mean
M $\pm$ SD	Mean $\pm$ Standard Deviation
MANOVA	Multivariate Analysis of Variance
MD	Mean Difference
MMSS	McCloskey/ Mueller Satisfaction Scale
MSQ	Minnesota Satisfaction Questionnaire
NOSS	Nurses' Occupational Stress Scale
OCS	Organizational Commitment Scale
PIC	Professional Identification Scale
RN	Registered Nurse
SD	Standard Deviation
TV	Television
SPSS	Statistical Package for the Social Sciences
UPM	University Putra Malaysia
UK	United Kingdom
USA	United States America
WHO	World Health Organization
WTO	World Trade Organization

## CHAPTER 1

### INTRODUCTION

#### 1.1 Research Background

##### 1.1.1 Chinese Healthcare Delivery System

Since the establishment of People's Republic of China in 1949, especially the ongoing economic reform and opening up in the past decades, China has witnessed remarkable development in health care system. The achievements such as basic health services covering urban and rural residents, reinforced disease prevention and control, expansion of health insurance coverage and rapid development of health technology have steadily improved the health status of Chinese people. To date, although the private ownership of health facilities and private clinical practices have been freed from strict governmental labor market controls, the public system still accounts for the dominant role in the health delivery system. According to Health Service Delivery Profile in 2012, the public system covers 90% of emergency and inpatient services, while the private sectors has increased its market share in outpatient care.

The government of China was organized along five administrative levels: national, provincial, city, county and community (in urban) or township (in rural). China has 32 provincial regions including 23 provinces, 5 autonomous regions and 4 direct-controlled municipalities. Each provincial region has many cities in prefecture-level, a city has several counties, and dozens of communities or townships are composed of a county. The public health network has been established along the same five administrative levels (see Figure 1) including institutions of diseases control and prevention, health education, infant and maternal care, health supervision and mental health, etc.

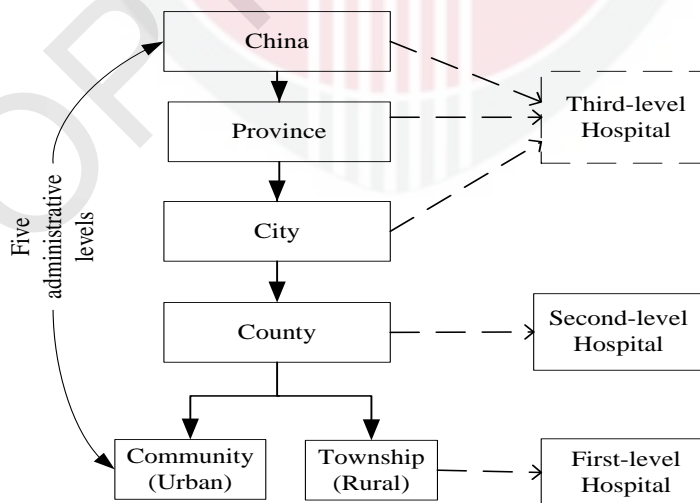


Figure 1. Government Administrative Levels and Hospital's Classification

Hospital as a kind of public health institution mainly provide general services including outpatient, inpatient, all sorts of physical examination and diagnosis. Government-owned hospitals are classified into three-levels. A first-level hospital, as the lowest level hospital, which locates in a certain community (in urban) or township (in rural), generally has no more than 100 beds, provides primary healthcare services to a certain community or township and shoulders the function of disease prevention and immunization, junior medical treatment, health education as well as family planning for a community or township. Both second-level hospital and third-level hospital were organized as general hospitals. A second-level hospital is county-level hospital which provides comprehensive health services for a county as well as shoulder the responsibility of technical support for community hospitals or township clinics. The number of beds in second-level hospital is between 101 and 500; Third-level hospital is general hospital which has more than 500 beds. It is responsible for comprehensive, high-quality, and specialized medical services to a city in prefecture-level, or provincial and national level as well as execute the task of medical education and scientific research.

### **1.1.2 Professional Rank and Education for Nurses**

“Health Technicians Title and Promotion Regulations” in 1979 regulated four levels of Technical Position for registered nurse (RN): junior RN, senior RN, associate professor nurse and professor nurse depending on nurse’s professional knowledge, working years, and the ability of clinical practice and health research. The higher levels of the technical position a nurse possesses the more proportion of salary and social welfare funds such as housing accumulation funds, work-related injury insurance, health insurance, and childbirth insurance she /he has.

At present, there are three levels of basic nursing education in Mainland China. They are diploma programmer, associate degree programmer, and bachelor degree or above programmer. Diploma programmer is provided by nursing vocational and technical schools. Students who are interested in nursing and have finished the courses of middle school can enroll in nursing-based technical school where students can get basic medicine knowledge and basic skills on nursing practice during three years of full time courses. Associate degree programmer is mainly delivered by colleges-based education of nursing where student can get symmetrical knowledge of medicine and grasp the advanced skills on nursing practice. Students who graduate from high school or students who finished their diploma programmer could enroll in these nursing colleges. Generally, colleges of nursing provide full time courses to students for three years. Bachelor degree and above programmers are provided by universities (H. Lu, While, & Barriball, 2007a). Students who graduated from high school with a high mark which is above the level given by the medical university or students who finished their associate degree could be recruited in medical university for their bachelor degree or above programmer. In the medical university, student could not only access to the symmetrical knowledge of medicine and advanced skills on nursing practice, but also they can enrich their abilities of scientific research in the nursing profession.

### **1.1.3 Unbalanced Health Care Distribution across Regions**

With devolution of health financing responsibility to local governments, the unbalanced social and economic development in different regions as well as financial constraints of local government have expanded the gap of medical condition between developed and developing regions, which result in unbalanced health care distribution across regions. Usually cities in eastern China such as Shanghai, Beijing, and Guangzhou are more developed than cities in western China. According to China Health Service Delivery Profile (2012), the unbalanced distribution of health care lies in three aspects of inequity among people including the unbalanced allocation of health workers, health service utilizations and health outcomes.

First, inequity is noticeable in unbalanced allocation of health workers. According to China Health Statistics Yearbook of 2012, in 2011, the ratio of professional health workers/1000 population in developed eastern region was 5.49 which was larger than that in developing regions. China Health Service Delivery Profile in 2012 showed that the ratio of beds/1000 people was 7.55 in Shanghai in 2011. This value was more than two times of the ratio in Guizhou Province which is an under-developed province located in western of China. Second, inequity is evident in health service utilizations. Again from China Health Service Delivery Profile in 2011, 35.83% of inpatient services had been utilized by 20% richest residents, while 20% poorest residents only utilized 10.9% of inpatient services in Heilongjiang Province. Third, inequity is also apparent in health outcomes of different regions. For example, the maternal mortality in Tibet (developing province) was about 150 times as much as in Jiangsu province (developed province) in 2011.

Given to the financial constraints in developing regions, the lack of qualified doctors and poorly equipped medical facilities cost patients more time and money yet provide proper quality health outcomes. Whereas, in developed regions such as Beijing, Shanghai and Guangzhou, the local governments invest more money on the contribution of highly qualified medical teams and advanced medical technologies and armamentarium (Chinese Statistical Association, 2012).

### **1.1.4 Nursing in China**

With the development of economic and society, Chinese government had made a series of changes in the nursing profession. On one hand, in the 1980s, the government of China had reaffirmed that nursing like medicine, as an independent profession, required well-qualified personnel with knowledge and skills. Professional status of nurses had been awarded a protected title by the National Ministry of Health (Li & Lambert, 2008). On the other hand, a significant change in healthcare system of China was that the traditional disease-centered nursing care model had been gradually replaced by the patient-centered holistic nursing care model.

To ensure the safety and effectiveness of nursing practice in the working area some regulatory mechanisms have been established in China. “Nurses’ Registration Ordinance”, which was published in 1993, providing a licensing examination and registration system to the nurses in the nursing care delivery system. Apart from that, China adopted “The Nurse Regulation” in 2008, which requires all nurses working in clinical departments be certified as registered nurses, and the registered nurses must provide “full, comprehensive, professional and holistic nursing care, including condition observation, treatment disposal, psychological care, guidance and other health care tasks” (Ministry of health of the People’s Republic of China, 2010). These developments have coincided with a growing recognition of the professional status of nurses. Thus, nurses in China must take the responsibilities of all the patients daily activities including caring and observing the disease, psychological assisting and physical activities such as eating, drinking and dressing which push higher stress, greater hazards and higher intensity to nurses.

In recent years, physician-patient relationship in China is becoming more and more tension (China Daily, 2010). The economic development and the improvement of people’s living standard had resulted in the increased patient’ anticipation for good treatment outcome from hospital and doctor. However, the current medical technology could not match the need of patient. Therefore, the patients would perform some extreme behaviors when the medication outcome could not match to the standard they had anticipated. News reported on TV or other media showed that incidence of nurses injure in hospitals is increasing dramatically. This tension relationship between patients and hospitals is drawing more and more broadly attention in the society for its negative effect on increasing hospital staffs’ work pressure and job burnout, and therefore, are more likely to accomplish job dissatisfaction and intention to seek employment in other fields (Cao et al., 2013).

World Health Organization (2006) reported the global issue of human resources shortages in health care system, especially nurses in developing countries. Developed countries open their labor market to recruit nurses from developing countries which alleviate the problem for undeveloped countries. China as a developing countries is also suffering from the serious challenges ongoing nursing shortage and high nurses’ turnover rate (Ministry of Health of the People’s Republic of China, 2008).

Evidences showed that the ratio of nurse to 1000 population (1.66/1000) in China was largely lower than global level of (4.06/1000) (Ministry of health of the People’s Republic of China., 2012). There are 53.7% of nurses in Beijing (Lu et al., 2007) and 40% of nurses in Shanghai (Liu et al., 2011) had intention to leave nursing. Failing in recruitment and retention skilled nurses are compounded by an increasing demand for health care due to advances in medical technology, longer life expectancy, and the subsequent number of people living with serious illness and chronic disease (Health Service Delivery Profile, 2012).



## **1.2 Nurses' Job Satisfaction**

Job satisfaction was defined as the degree to which the personal attitude positively influences a job or its components (Adams & Bond, 2000). However, the definition of job satisfaction differs between individuals because of its multifaceted and complex concept (Hayes et al., 2010). Individual's attitude towards job satisfaction depends not only on the job nature characteristics but also on the anticipation of individuals for what his/her job should provide (Lu et al., 2012).

Nurse's job satisfaction was conceived as the extent to which a nurse fulfill herself or himself in the nursing profession (Hayes, Bonner, & Pryor, 2010). Nurses' job satisfaction can be conceptualized as an independent variable affecting nurses' behaviors such as retention and turnover in hospitals, or as a dependent variable occurring as a result of personal characteristics and job related characteristics or as a response to organizational features in the work settings (Stamps, 1997).

Nurses' job satisfaction has been linked to positive patient outcomes (Adams & Bond, 2000; Aiken et al., 2002) as well as a greater perceived quality of healthcare (Murrells, Robinson, & Griffiths, 2008). When higher level of nurse's job satisfaction was experienced, there was an increase in morale and commitment, which make it less likely to turnover from nursing profession (Ellenbecker & Cushman, 2012; Sourdif, 2004).

A body of studies have founded that organizational and job related factors have an influence on job satisfaction among nurses. These factors include pay (Bjørk et al., 2007), autonomy (Larrabee et al., 2003), support (Kwak et al., 2010), supervision satisfaction (Fang, 2001), management and leadership (Coomber & Barriball, 2007), workload and work condition (Lu et al., 2012), interaction/social relationship (Ahmad & Oranye, 2010; Bjørk et al., 2007), educational and promotional opportunities (Best & Thurston, 2004; Kwak et al., 2010), staffing and scheduling (Kirschling, Colgan, & Andrews, 2011). Apart from the nature of the job, individual's characteristics also have an effect on the job satisfaction. The demographic characteristics such as age, gender, marital status, educational background, professional rank, and work experiences have been proved pointing to nurses' job satisfaction (Liu et al., 2012).

## **1.3 Problem Statement**

Ongoing nursing shortage has been raising a global concern, China is still struggling with the challenges of nursing shortage and high nurses' turnover rate (Liu et al., 2012; Lu et al., 2007; Wang, 2002) as well as unbalanced medical development between developing and developed city (Chinese Statistical Association, 2012). Nurse' job satisfaction was considered as a predictor of recruitment and retention of skilled nurses (Ellenbecker et al., 2008), also associated with quality of nursing care and professional performance (Zhang, Tao, Ellenbecker, & Liu, 2013).

Evidences that a moderate level of nurses' job satisfaction has become a worldwide concern (Aiken et al., 2012; Fang, 2001; Liu et al., 2012; Mrayyan, 2006; Zhang et al.,

2013; Zheng & Liu, 2010). In China, around half of nurses dissatisfied with their jobs (Wang, 2002; Liu et al., 2012; Zhang et al., 2014), and 40 % nurses in Shanghai (Liu et al., 2012) and 53.7% nurses in Beijing (Lu et al., 2007) had an intention to leave nursing profession had highlighted the need to identify the factors related to nurses' job satisfaction and exploration the current condition of job satisfaction among Chinese nurses.

However, in China, most of the surveys were conducted in developed cities, such as Beijing (Lu et al., 2007; Zheng & Liu, 2010), Shanghai (Liu et al., 2012; Zhang et al., 2013), Guangzhou (Liu et al., 2012) as well as other provincial capital cities (Tao, Zhang, Hu, & Zhang, 2012), while no study regarding to nurses' job satisfaction was conducted in Chengde City, which is a developing city. Furthermore, to date, there was no publication focusing on differences of nurses' job satisfaction across hospital's levels. Thus, by focusing on nurses who were working in general hospitals including second-level hospital and third-level hospital in developing city, the aims of this study was to determine nurses' job satisfaction in general hospitals and to compare nurses' job satisfaction between second-level hospital and third-level hospital in Chengde City, Hebei Province, China.

#### **1.4 Significance of the Study**

The significance of this research were as follows.

- i). Given to previous studies in China being conducted in developed cities otherwise in developing city, this survey would provide a baseline for nurses' job satisfaction in developing cities in China, as well as for further comparisons.
- ii). The comparisons of job satisfaction among nurses between second-level hospitals and third-level hospitals fill in the gap that there was no publication focusing on differences of nurses' job satisfaction across hospital's levels.
- iii). If any, the finding of this study could be served as a reference for the healthcare organizations to carry out some effective interventions to improve the work conditions in the nursing workforce, which are beneficial to nurses, patients and even to health services system and society.

#### **1.5 Research Questions**

- i). Are there any significant differences between nurses' characteristics and hospitals' level in Chengde City, Hebei Province, China?
- ii). How much are the scores of nurses' overall job satisfaction and job satisfaction sub-scales in general hospitals?
- iii). Are there any significant differences in nurses' overall job satisfaction score for socio-demographics (genders, marital status, age groups and educational background) in general hospitals?



- iv). Are there any significant differences in nurses' overall job satisfaction score for job profiles (hospital' level, types of working units, working years in current employment and professional rank) in general hospitals?
- v). Are there any significant differences in the mean scores of eight job satisfaction sub-scales (administration, workload, co-worker, work itself, pay, professional opportunity, praise/recognition, and family-work balance) among nurses between second-level hospital and third-level hospital?

## **1.6 Objectives**

### **1.6.1 General Objective**

The general objective of this survey was to determine nurses' job satisfaction in general hospitals and to compare nurses' job satisfaction between second-level hospital and third level hospital in Chengde City, Hebei Province, China.

### **1.6.2 Specific Objectives**

The specific objective of this study as follow:

- i). To compare respondents' characteristics between second-level hospital and third-level hospital.
- ii). To examine the mean scores of nurses' job satisfaction including overall job satisfaction and its eight job sub-scales in general hospitals.
- iii). To compare the mean score of overall job satisfaction with previous findings reported in China.
- iv). To compare nurses' overall job satisfaction score for socio-demographics (gender, marital status, age group and educational background), and job profiles (types of working unit, professional rank, working years in current employment and hospital's level).
- v). To compare the scores of eight job satisfaction sub-scales (administration, workload, co-worker, work itself, pay, professional opportunity, praise/recognition, and family-work balance) among respondents in second-level hospital and third-level hospital.

## **1.7 Hypotheses**

The alternative hypotheses were as follows:

**H<sub>1</sub>:** There are significant differences in respondents' characteristics between second and third-level hospitals.

**H<sub>2</sub>:** There is significant difference in overall job satisfaction between this study and previous findings.

**H<sub>3</sub>:** There are one or more significant differences in overall job satisfaction score for gender, marital status, age groups or educational background.

**H<sub>4</sub>:** There are one or more significant differences in overall job satisfaction score for hospitals' level, types of working unit, professional rank, or working years in current employment.

**H<sub>5</sub>:** There are one or more significant differences in job satisfaction sub-scales between second-level and third-level hospital.

## 1.8 Thesis Outline

The structure of this study was organized as follows:

- **Chapter 1: Introduction**  
This chapter described the research background along nurses' job satisfaction and problem statement. Objectives and hypotheses of this study were illustrated base on the highlighted problem statement.
- **Chapter 2: Literature Review**  
This chapter summarized the worldwide condition of nursing shortage, high nurses' turnover rate nurses' job satisfaction, which composed a negative circle. In this chapter, some of instruments that were widely used to examine nurses' job satisfaction were also pointed out, and finally came to the conceptual framework.
- **Chapter 3: Methodology**  
This chapter introduced how this study was planned and organized, which included study location, sampling, operational variables, instruments, procedural of data collection and data analysis, as well as the ethical consideration.
- **Chapter 4: Results**  
This chapter was developed to answer the research questions and fulfill the objectives of this study. Tables or figures were used to make the results being reported clearly and precisely.
- **Chapter 5: Discussion**  
This chapter discussed whether the results of the study were consistent with the hypotheses which were presented in Chapter1. At the same time, the reasonability and acceptances of findings in this study were illustrated bases on the document papers.
- **Chapter 6: Conclusion and Recommendation**  
Conclusion and recommendations for further research as well as limitation were presented in this chapter.

## REFERENCES

- Adams, A., & Bond, S. (2000). Hospital nurses' job satisfaction, individual and organizational characteristics. *Journal of Advanced Nursing*, 32(3), 536–543.
- Ahmad, N., & Oranye, N. O. (2010). Empowerment, job satisfaction and organizational commitment: A comparative analysis of nurses working in Malaysia and England. *Journal of Nursing Management*, 18, 582–591.
- Aiken, L. H., Clarke, S. P., & Sloane, D. M. (2002). Hospital staffing, organization, and quality of care: Cross-national findings. *Nursing Outlook*, 50(5), 187–194.
- Aiken, L. H., Clarke, S. P., Sloane, D. M., Julie, A., Busse, R., & Shamian, J. (2001). Nurses' reports on hospital care in five countries. *Health Affairs*, 20(3), 43–53.
- Aiken, L. H., Sermeus, W., Van den Heede, K., Sloane, D. M., Busse, R., & Kutney, L. A. (2012). Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *British Medical Journal*, 344(e1717), 1–14.
- Aiken, L. H., Sloane, D. M., Clarke, S., Poghosyan, L., Cho, E., & Aunguroch, Y. (2011). Importance of work environments on hospital outcomes in nine countries. *International Journal for Quality in Health Care*, 23(4), 357–64.
- Allen, T. D., Herst, D. E., Bruck, C. S., & Sutton, M. (2000). Consequences association with work-to-family conflict: A review and agenda for future research. *Journal of Occupational Health Psychology*, 5(2), 278–308.
- Altuntaş, S. (2014). Nurse Education Today Factors affecting the job satisfaction levels and quit intentions of academic nurses. *Nurse Education Today*, 34, 513–519.
- Attane, I. (2002). China's Family Planning Policy : An overview of its past and future. *Studies in Family Planning*, 33(1), 103–113.
- Ausserhofer, D., Zander, B., Busse, R., Schubert, M., Geest, S. D., & Schwendimann, R. (2014). revalence, patterns and predictors of nursing care left undone in European hospitals results from the multicountry cross-sectio. *BMJ Quality and Safety*, 23(2), 126–135.
- Bartram, T., Joiner, T. A., & Stanton, P. (2004). Factors affecting the job stress and the job satisfaction of Australian nurses: Implications for recruitment and retention. *Contemporary Nurse*, 17(3), 293–304.
- Best, M. F., & Thurston, N. E. (2004). Measuring nurse job satisfaction. *Journal of Nursing Administration*, 34(6), 283–290.
- Björk, I. T., Samdal, G. B., Hansen, B. S., Tørstad, S., & Hamilton, G. A. (2007). Job satisfaction in a Norwegian population of nurses: A questionnaire survey. *International Journal of Nursing Studies*, 44(5), 747–757.
- Black, L., Spetz, J., & Harrington, C. (2010). Nurses who do not nurse: Factors that predict non-nursing work in the U.S. nursing labor market. *Nursing Economic*, 28(4), 245–254.
- Boyar, S. L., Maertz, C. P., Pearson, A. W., & Keough, S. (2003). Work-family conflict: A model of link ages between work and family domain variables and turnover intentions. *Journal of Managerial Issues*, 15, 175–190.
- Boyle, D. K., Miller, P. A., Gajewski, B. J., Hart, S. E., & Dunton, N. (2006). Unit type differences in RN workgroup job satisfaction. *Western Journal of Nursing Research*, 28(6), 622–640.
- Braithwaite, M. (2008). Nurse burn out and stress in the NICU. *Advance in Neonatal Care*, 8(6), 343–347.

- Brooks, I., & Swailes, S. (2002). Analysis of the relationship between nurse influences over flexible working and commitment to nursing. *Journal of Advanced Nursing*, 38(2), 117–126.
- Buchan, J., & Aiken, L. (2008). Solving nursing shortages: a common priority. *Journal of Clinical Nursing*, 17(24), 3262–3268.
- Campbell, S. L., Fowles, E. R., & Weber, B. J. (2004). Organizational structure and job satisfaction in public health nursing. *Public Health Nursing*, 21(6), 564–571.
- Canadian Nurses Association. (2009). The Nursing Shortage-The Nursing Workforce. Retrieved from [http://www.cna-nurses.ca/CNA/issues/hhr/default\\_e.aspx](http://www.cna-nurses.ca/CNA/issues/hhr/default_e.aspx), accessed on 12 April 2009.
- Cao, J., Ye, W. Q., Zhang, L. J., Lu, X. Y., & Sun, Y. (2009). Clinical nursing system and staff composition in Shanghai. *Journal of Nursing Administration*, 39(3), 113–114.
- Gao, Y., Shi, J., Niu, Q., & Wang, L. (2013). Work–family conflict and job satisfaction: Emotional intelligence as a moderator. *Stress and Health*, 29(3), 222–228.
- Carlson, D. S., & Kacmar, K. M. (2000). Work-family conflict in the organization: Do life role values make differences? *Journal of Management*, 26(5), 1031–1054.
- Carter, M. R., & Tourangeau, A. E. (2012). Staying in nursing: What factors determine whether nurses intend to remain employed? *Journal of Advanced Nursing*, 68(7), 1589–1600.
- Chan, M. F., Luk, A. L., Leong, S. M., Yeung, S. M., & Van, L. K. (2008). Factors influencing Macao nurses' intention to leave current employment. *Journal of Clinical Nursing*, 18, 893–901.
- Cheng, S. Z., Chen, W. Q., Chen, A. L., Xu, Z. Y., & Chen, M. H. (2008). The relationship between occupational stress and social support of clinical nurses. *Chinese Nursing Management*, 9, 38–42.
- China Daily. (2010). Tension relationship between doctor and patient in China. Retrieved from [http://www.chinadaily.com.cn/m/shandong/c/2010-01/25/content\\_9373075.htm](http://www.chinadaily.com.cn/m/shandong/c/2010-01/25/content_9373075.htm). Accessed February 20, 2011. (In Chinese)
- Chinese Statistical Association. (2012). *Statistic Yearbook of the Public of China*. Retrieved from <http://eng.dgbas.gov.tw/lp.asp?CtNode=2351&CtUnit=1072&BaseDSD=36>
- Cimete, G., Gencalp, N. S., & Keskin, G. (2003). Quality of life and job satisfaction of nurses. *Journal of Nursing Care Quality*, 18(2), 151–158.
- Coetzee, S. K., Klopper, H. C., Ellis, S. M., & Aiken, L. H. (2013). A tale of two systems- Nurses practice environment, well being, perceived quality of care and patient safety in private and public hospitals in South Africa: A questionnaire survey. *International Journal of Nursing Studies*, 50, 162–173.
- Coomber, B., & Barriball, K. L. (2007). Impact of job satisfaction components on intent to leave and turnover for hospital-based nurses: A review of the research literature. *International Journal of Nursing Studies*, 44(2), 297–314.
- Cortese, C. G. (2007). Job satisfaction of Italian nurses: An exploratory study. *Journal of Nursing Management*, 15(3), 303–12.
- Cumbey, D. A., & Alexander, J. W. (1998). The relationship of job satisfaction with organizational variables in public health nursing. *Journal of Nursing Administration*, 28(5), 39–46.
- Curtis, E. A. (2007). Job satisfaction : a survey of nurses in the Republic of Ireland. *International Vouncil of Nurses*, (54), 92–99.
- Curtis, E. A. (2008). The effects of biographical variables on job satisfaction among nurses. *British Journal of Nursing*, 8(9), 39–42.

- DeGieter, S., Hofmans, J., & Pepermans, R. (2011). Revisiting the impact of job satisfaction and organizational commitment on nurse turnover intentions: An individual difference analysis. *International Journal of Nursing Studies*, 48, 1562–1569.
- Delobelle, P., Rawlinson, J. L., Ntuli, S., Malatsi, I., Decock, R., Depoorter, & Accepted, A. M. (2011). Job satisfaction and turnover intent of primary healthcare nurses in rural South Africa a questionnaire survey.pdf. *Journal of Advanced Nursing*, 67(2), 371–383.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2000). A model of burnout and life satisfaction amongst nurses. *Journal of Advanced Nursing*, 32(2), 454–464.
- Dunn, S., Wilson, B., & Esterman, A. (2005). Perceptions of working as a nurse in an acute care setting. *Journal of Nursing Management*, 13(1), 22–31.
- Edmunds, M.W. (2010) China' nursing shortage(online).Medscape Nurses. Retrieved from <http://www.medscape.com/viewarticle/724343> on 7 September 2010
- El-Jardali, F., Dimassi, H., Dumit, N., Jamal, D., & Mouro, G. (2009). A national cross-sectional study on nurses'intent to leave and job satisfaction in Lebanon: implications for policy and practice. *BioMed Central Nursing*, 8(3), 1–13.
- Ellenbecker, C. H., & Byleckie, J. J. (2005). Home healthcare nurses'job satisfaction scale: refinement and psychometric testing. *Methodological Issues in Nuesing Research*.
- Ellenbecker, C. H., & Byleckie, J. J. (2005). Home healthcare nurses'job satisfaction scale: refinement and psychometric testing. *Journal of Advanced Nursing*, 52(1), 70–78.
- Ellenbecker, C. H., & Cushman, M. (2012). Home healthcare nurse retention and patient outcome model: discussion and model development. *Journal of Advanced Nursing*, 68(8), 1881–1893.
- Ellenbecker, C. H., Porell, F. W., Samia, L., Byleckie, J. J., & Milburn, M. (2008). Predictors of Home Healthcare Nurse Retention. *Journal of Nursing Scholarship*, 40(2), 151–160.
- Fang, Y. (2001). Turnover propensity and its causes among Singapore nurses: an empirical study. *International Journal of Human Resource Management*, 12(5), 859–871.
- Fang, Y. Q. (2001). Turnover propensity and its causes among Singapore nurses: an empirical study. *Journal of Resource Management*, 12(5), 859–871.
- Field, A. (2009). Discovering statistics using SPSS. Sage publications.
- Friese C.R., Lake E.T., Aiken L.H., Silber J.H. & Sochalski J. (2008) Hospital nurse practice environments and outcomes for surgical oncology patients. *Health Services Research* 43, 1145–1163.
- Frone, M. R., & Russell, M. (1997). Relation of work-family conflict to health outcomes: A four-years longitudianl study of employed parents. *Journal Occupational and Orgnizational Psychology*, 70, 325–335.
- Grzywacz, J. G., Frone, M. R., Brewer, C. S., & Kovner, C. T. (2006). Quantifying work-family conflict among registered nurses. *Research in Nursing & Health*, 29, 414–426.
- Halbesleben, J. R., & Wheeler, A. R. (2008). The relative roles of engagement and embeddedness in predicting job performance and intention to leave Jonathon. *Work & Stress*, 22(3), 242–256.



- Hamama, L., Tartakovsky, E., Eroshina, K., Patrakov, E., Golubkova, A., Bogushevich, J., & Shardina, L. (2014). Nurses' job satisfaction and attitudes towards people living with HIV/AIDS in Russia. *International Nursing Review*, 61, 131–139.
- Hayes, B., Bonner, A., & Pryor, J. (2010). Factors contributing to nurse job satisfaction in the acute hospital setting: a review of recent literature. *Journal of Nursing Management*, 18(7), 804–814.
- Hayes, B., Douglas, C., & Bonner, A. (2015). Work environment, job satisfaction, stress and burnout among haemodialysis nurses. *Journal of Nursing Management*, 23, 588–598.
- Hayes, L. J., Brien-pallas, L. O., Duffield, C., Shamian, J., Buchan, J., & Stone, P. W. (2006). Nurse turnover: a literature review. *International Journal of Nursing Studies*, 43(2), 237–63.
- Hesketh, T., Lu, L., & Xing, Z. W. (2004). The effect of China's One-Child Family policy after 25 Years. *New England Journal of Medicine*, 353(11), 1171–1176.
- Hogan, W. P. (2004). Report of the review of pricing arrangements in residential aged care., Department of Health and Ageing.
- Hu, Y., Shen, J., & Jiang, A. L. (2010). Nursing shortage in China: State, causes, and strategy. *Nursing Outlook*, 58(3), 122–128.
- Ingersoll, G. L., Olsan, T., DeVinney, B. C., & Davies, J. (2002). Nurses' job satisfaction, organizational commitment, and career intent.. *Journal of Nursing Administration*, 32, 250–263.
- Khamisa, N., Oldenburg, B., Peltzer, K., & Ilic, D. (2015). Work Related Stress, Burnout, Job Satisfaction and General Health of Nurses. *International Journal of Environmental Research and Public Health*, 12(1), 652–666.
- Kilcoyne, M., & Dowling, M. (2007). Working in an overcrowded accident and emergency department: nurses' narratives. *Australian Journal of Advanced Nursing*, 25(2), 21–27.
- Kirschling, J. M., Colgan, C., & Andrews, B. (2011). Predictors of registered nurses' willingness to remain in nursing. *Nursing Economic*, 29(3), 111–117.
- Klaus, S. F., Ekerdt, D. J., Gajewski, B., & Klaus, S. F. (2012). Job satisfaction in birth cohorts of nurses. *Journal of Management*, 20, 461–471.
- Kovner, C., Brewer, C., Wu, Y. W., Cheng, Y., & Suzuki, M. (2006). Factors associated with work satisfaction of registered nurses. *Health Policy & Systems*, 38(1), 71–79.
- Kwak, C. Y., Chung, B. Y., Xu, Y., & Cho, E. J. (2010). Relationship of job satisfaction with perceived organizational support and quality of care among South Korean nurses: A questionnaire survey. *International Journal of Nursing Studies*, 47(10), 1292–1298.
- Lambert, V. A., Lambert, C. E., Itano, J., Inouye, J., Kim, S., Kuniviktikul, W., & Ito, M. (2004). Cross-cultural comparison of workplace stressors, ways of coping and demographic characteristics as predictors of physical and mental health among hospital nurses in Japan, Thailand, South Korea and USA(Hawaii). *International Journal of Nursing Studies*, 41(6), 671–684.
- Larrabee, J. H., Janney, M. A., Ostrow, C. L., Withrow, M. L., Hobbs, G. R., & Barrant, C. (2003). Predicting registered nurses job satisfaction and intent to leave. *Journal of Nursing Management*, 33(5), 271–283.
- Lee, F. K. (1998). Job satisfaction and autonomy of Hong Kong registered nurses. *Journal of Advanced Nursing*, 27(2), 355–363.
- Li, J., & Lambert, V. A. (2008). Workplace stressors, coping, demographics and job satisfaction in Chinese intensive care nurses. *Nursing in Critical Care*, 13(1), 12–24.

- Liu, C., Zhang, L. J., Ye, W. Q., Zhu, J. Y., Cao, J., Lu, X. Y., & Li, F. P. (2012). Job satisfaction and intention to leave: a questionnaire survey of hospital nurses in Shanghai of China. *Journal of Clinical Nursing*, 21(1-2), 255–263.
- Liu, K., You, L. M., Chen, S. X., Hao, Y. T., Zhu, X. W., Zhang, L. F., & Aiken, L. H. (2012). The relationship between hospital work environment and nurse outcomes in Guangdong, China: a nurse questionnaire survey. *Journal of Clinical Nursing*, 21, 1476–1485.
- Lu, H., Barriball, K. L., Zhang, X., & While, A. E. (2012). Job satisfaction among hospital nurses revisited: A systematic review. *International Journal of Nursing Studies*, 49(8), 1017–1038.
- Lu, H., While, A. E., & Barriball, K. L. (2007). Job satisfaction and its related factors: A questionnaire survey of hospital nurses in Mainland China. *International Journal of Nursing Studies*, 44(4), 574–588.
- Lu, K. Y., Lin, P. L., Wu, C. M., Hsieh, Y. L., & Chang, Y. Y. (2002). The relationship among turnover intentions, professional commitment, and job satisfaction of hospital nurses. *Journal of Professional Nursing*, 18(4), 214–219.
- Lu, T. Y., & Chen, M. Q. (1999). Professional concepts of nursing students on the Bachelor Degree Programme. *Journal of Nurses Training*, 14(10), 59–61 (in Chinese).
- Lynn, M. R., Morga, J. C., & Moore, K. A. (2009). Development and testing of the satisfaction in nursing scale. *Nursing Research*, 53(3), 166–174.
- Milisen, K., Abraham, I., Siebens, K., Darras, E., & Dierckx, de C. (2006). Work environment and workforce problems: A cross-sectional questionnaire survey of hospital nurses in Belgium. *International Journal of Nursing Studies*, 43(6), 745–754.
- Ministry of Health of the People's Republic of China. (2008). Statistical Communique of Health Development of the People's Republic of China. Retrieved from <http://www.moh.gov.cn/publicfiles/business/htmlfiles/mohwsbwstjxxzx/s8208/200904/40250.htm> (accessed 29 April 2009).
- Ministry of health of the People's Republic of China. (2010). Hospital carrying out high quality nursing service standard (trial implementation). Retrieved from <http://www.moh.gov.cn/publicfiles/business/htmlfiles/mohyzs/s3593/201012/50145.htm> on 23 December 2010.
- Ministry of health of the People's Republic of China. (2012). 2011 Statistical Communique of Health Development of the People's Republic of China. Retrieved from <http://www.moh.gov.cn/publicfiles/business/htmlfiles/mohwsbwstjxxzx/s7967/201204/54532.htm> on 29 April 2012.
- Moore, G. A., & Dienemann, J. A. (2014). Job satisfaction and career development of men in nursing. *Journal of Nursing Education and Practice*, 4(3), 1–8.
- Moustaka, E., & Constantinidis, T. C. (2010). Sources and effects of work-related stress in nursing. *Health Science Journal*, 4(4), 210–216.
- Mrayyan, M. T. (2006a). Jordandian nurses' job satisfaction, patients' satisfaction and quality of nursing care. *International Nursing Review*, 53, 224–230.
- Mrayyan, M. T. (2006b). Jordandian nurses' job satisfaction, patients' satisfaction and quality of nursing care. *International Nursing Review*, 53, 224–230.
- Mueller, C. W., & McCloskey, J. C. (1990). Nurses' job satisfaction: A proposed measure. *Nursing Research*, 39(2), 113–117.
- Murrells, T., Clinton, M., & Robinson, S. (2005). Job satisfaction in nursing: Validation of a new instrument for the UK. *Journal of Nursing Management*, 13, 296–331.

- Murrells, T., Robinson, S., & Griffiths, P. (2008). Is satisfaction a direct predictor of nursing turnover? Modelling the relationship between satisfaction, expressed intention and behaviour in a longitudinal cohort study. *Human Resources for Health*, 6(22), 1–12.
- Nantsupawat, A., Srisuphan, W., Kunaviktikul, W., Wichaikhum, O. A., Aungsuroch, Y., & Aiken, L. H. (2011). Impact of nurse work environment and staffing on hospital nurse and quality of care in Thailand. *Journal of Nursing Scholarship*, 43(4), 426–432.
- Nemcek, M. A., & James, G. D. (2007). Relationships among the nurse work environment, self-nurturance and life satisfaction. *Journal of Advanced Nursing*, 59(3), 240–247.
- Noor, N. M. (2002). The moderating effect of spouse support on the relationship between work variables and women's work-family conflict. *International Journal of Psychology*, 45(1), 12–23.
- Organization for Economic Cooperation and Development. (2009). OECD Health Data. Retrieved from <http://stats.oecd.org/Index.aspx?DataSetCode=HEALTH> (accessed 23 May 2012).
- Penz, K., Stewart, N. J., D'Arcy, C., & Morgan, D. (2008). Predictors of job satisfaction for rural acute care registered nurses in Canada. *Western Journal of Nursing Research*, 30(7), 785–800.
- Rajapaksa, S., & Rothstein, W. (2009). Factors that influence decisions of men and women nurses to leave nursing. *Journal Compilation*, 44(3), 195–205.
- Rambur, B., Palumbo, M. V., McIntosh, B., & Mongeon, J. (2003). A Statewide Analysis of RNs' Intention to Leave Their Position. *Nursing Outlook*, 51(4), 182–188.
- Reineck, C., & Furino, A. (2005). Nursing Career Fulfillment: Statistics and Statements from Registered Nurses. *Nursing Economic*, 23(3), 25–30.
- Ross, J., Jones, J., Hons, B. A., & Callaghan, P. (2009). A study of stress, job satisfaction and turnover among haemodialysis staff. *Journal of Renal Care*, 35(3), 127–133.
- Ruggiero, J. S. (2005). Health, work variables, and job satisfaction among nurses. *Journal of Nursing Administration*, 135(5), 245–263.
- Seo, Y., Ko, J., & Price, J. L. (2004). The determinants of job satisfaction among hospital nurses: a model estimation in Korea. *International Journal of Nursing Studies*, 41(4), 437–46.
- Shader, K., Broome, M. E., Broome, C. D., West, M. E., & Nasb, M. (2001). Factors influencing satisfaction and anticipated turnover for nurses in an academic medical center. *Journal of Nursing Administration*, 31(4), 210–216.
- Sourdif, J. (2004). Predictors of nurses' intent to stay at work in a university health center. *Nursing and Health Sciences*, 6(1), 59–68.
- Spetz, J., & Herrera, C. (2010). Changes in nurse satisfaction in California, 2004 to 2008. *Journal of Nursing Management*, 18(5), 564–572.
- Stamps P. (1997) *Nurses and Work Satisfaction: An Index for Measurement*, 2nd edn. Health Administration Press, Chicago, IL.
- Sun, N., He, Z., Wang, L. B., & Li, Q. J. (2009). The impact of nurse empowerment on job satisfaction. *Journal of Advanced Nursing*, 65(12), 2642–2648.
- Szecsényi, J., Goetz, K., Campbell, S., Broge, B., Reuschenbach, B., & Wensing, M. (2011). Is the job satisfaction of primary care team members associated with patient satisfaction? *BMJ Quality & Safety*, 20, 508–514.
- Tabachnick, B.G. & Fidell, L.S. (2007). *Using multivariate statistics* (5th edn). Boston: Pearson Education.



- Tao, H., Hu, J. C., Wang, L., & Liu, X. H. (2009). Development of a scale for job satisfaction assessment in nurses. *Academic Journal of Second Military Medical University*, 30(11), 1292–1296.
- Tao, H., Zhang, A. H., Hu, J. C., & Zhang, Y. Q. (2012). Regional differences in job satisfaction for Mainland Chinese nurses. *Nursing Outlook*, 60(4), 213–220.
- Thomas, L. T., & Ganster, D. C. (1995). Impact of Family-supportive work variables on WFC and strain: A control Perspective. *Journal of Applied Psychology*, 80(1), 6–15.
- Tourangeau, A. E., Cummings, G., Cranley, L. A., Ferron, E. M., & Harvey, S. . (2010). Determinants of hospital nurse intention to remain employed: Broadening our understanding. *Journal of Advanced Nursing*, 66, 22–32.
- Tourangeau, A., Hall, L. M., Doran, D., & Petch, T. (2006). Measurment of nurse job satisfaction using the McClosky/Mueller Satisfaction Scale. *Nursing Research*, 55(2), 128–136.
- Utriainen, K., & KyngÅs, H. (2009). Hospital nurses' job satisfaction: A literature review. *Journal of Nursing Management*, 17(8), 1002–1010.
- Wang, L., Tao, H., Ellenbecker, C. H., & Liu, X. H. (2012a). Job satisfaction, occupational commitment and intent to stay among Chinese nurses: A cross-sectional questionnaire survey. *Journal of Advanced Nursing*, 68(3), 539–549.
- Wang, L., Tao, H., Ellenbecker, C. H., & Liu, X. H. (2012a). Job satisfaction, occupational commitment and intention to stay among Chinese nurses: A cross-sectional questionnaire survey. *Journal of Advanced Nursing*, 68(3), 539–550.
- Wang, L., Tao, H., Ellenbecker, C. H., & Liu, X. H. (2012b). Predictors of hospital nurses' intent to stay: a cross-sectional questionnaire survey in Shanghai, China. *International Nursing Review*, 59(4), 547–554.
- Wang, L., Tao, H., Ellenbecker, C. H., & Liu, X. H. (2012b). Predictors of hospital nurses' intent to stay: A cross-sectional questionnaire survey in Shanghai,China. *International Nursing Review*, 59, 547–555.
- Wang, L., Tao, H., & Liu, X. (2008). Study on overseas nurse retention and enlighten on nursing development of Mainland China. *PLA Nursing Magazine*, 25, 31–33.
- Wang, Y. (2002). Job satisfaction of nurses in hospital. *Chinese Journal of Nursing*, 37(8), 593–594.
- Webster, J., Flint, A., & Courtney, M. (2009). A new practice environment measure based on the reality and experiences of nurses working lives. *Journal of Nursing Management*, 17, 38–48.
- Williams, L. S., & Villemez, W. J. (1993). Seekers and finders: Male entry and exit in female-dominated jobs. *Men in Non-Traditional Occupations*. London, UK: Sage.
- Wilson, B., Squires, M., Widger, K., Cranley, L., & Tourangeau, A. (2008). Job satisfaction among a multigenerational nursing workforce. *Journal of Nursing Management*, 16(6), 716–723.
- Wilson, B., Squires, M., Widger, L., Cranley, L., & Tourangeau A. (2008). Job satisfaction among a multigenerational nursing workforce. *Journal of Nursing Management*, 16(6), 716–723.
- World Health Organization. (2006). World Health Report, Working Together for Health, 1–40. Retrieved from <http://www.who.int/whr/2006/en/>
- Xie, Z. Y., Wang, A. L., & Chen, B. (2011). Nurse burnout and its association with occupational stress in a cross-sectional study in Shanghai. *Journal of Advanced Nursing*, 67(7), 1537–1546.
- Yang, J. H., Liu, Y. H., Chen, Y., & Pan, X. Y. (2014). The effect of structural empowerment and organizational commitment on Chinese nurses' job satisfaction. *Applited Nursing Research*, 27, 186–191.

- Yang, X. Y., & Cheng, Y. J. (2004). Analysis of the shortage of nursing human resources allocation in China. *Journal of Nursing Administration (China)*, 4(10), 16–18.
- Yin, J.-C. T., & Yang, K.-P. A. (2002). Nursing turnover in Taiwan: A meta-analysis of related factors. *International Journal of Nursing Studies*, 39(6), 573–581.
- You, L. M., Aiken, L. H., Sloane, D. M., Liu, K., He, G. P., & Shang, S. M. (2013). Hospital nursing, care quality, and patient satisfaction: Cross-sectional survey of nurses and patients in hospitals in china and Europe. *International Journal of Nursing Studies*, 50, 154–161.
- Zangaro, G. A., & Johantgen, M. (2009). Registered Nurses' job Satisfaction in Navy hospital. *Military Medicine*, 174(January 2009), 76–81.
- Zhang, A. H., Tao, H. ., Ellenbecker, C. H., & Liu, X. H. (2013). Job satisfaction in mainland China: comparing critical care nurses and general ward nurses. *Journal of Advanced Nursing*, 69(8), 1725–1736.
- Zhang, A. H., Tao, H., Ellenbecker, C. H., & Liu, X. H. (2013). Job satisfaction in Mainland China: Comparing critical care nurses and general ward nurses. *Journal of Advanced Nursing*, 69(8), 1725–1736.
- Zhang, L. F., You, L. M., Liu, K., Zheng, J., Fang, J. B., & Bu, X. Q. (2014). The association of Chinese hospital work environment with nurse burnout, job satisfaction, and intention to leave. *Nursing Outlook*, 62(2), 128–37.
- Zheng, X. J., & Liu, H. P. (2010). Nurse job satisfaction in 3A-grade general hospitals in Beijing. *Journal of Nursing Administration*, 10(3), 184–188.
- Zurmeily, J. (2008). The relationship of educational preparation, autonomy and critical thinking to nursing job satisfaction. *Journal of Continuing Education in Nursing*, 39(10), 453–460.