

**FACTORS RELATED TO JOB SATISFACTION OF
NURSES IN TERTIARY HOSPITALS OF DALI,
THE PEOPLE'S REPUBLIC OF CHINA**



MASTER OF NURSING SCIENCE

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**GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
JUNE 2019**

**FACTORS RELATED TO JOB SATISFACTION OF
NURSES IN TERTIARY HOSPITALS OF DALI,
THE PEOPLE’S REPUBLIC OF CHINA**



CHEN HEYAN

**A THESIS SUBMITTED TO CHIANG MAI UNIVERSITY IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF NURSING SCIENCE**

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Examination Committee:

Thitit Akkadechanunt Chairman

(Asst. Prof. Dr. Thitinut Akkadechanunt)

R. Chontawan Member

(Assoc. Prof. Dr. Ratanawadee Chontawan)

Apiradee Nantsupawat Member

(Asst. Prof. Dr. Apiradee Nantsupawat)

Petsunee Thungjaroenkul Member

(Asst. Prof. Dr. Petsunee Thungjaroenkul)

Advisory Committee:

Apiradee Nantsupawat Advisor

(Asst. Prof. Dr. Apiradee Nantsupawat)

Petsunee Thungjaroenkul Co-advisor

(Asst. Prof. Dr. Petsunee Thungjaroenkul)

25 June 2019

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Chen Heyan



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Thesis Title	Factors Related to Job Satisfaction of Nurses in Tertiary Hospitals of Dali, the People's Republic of China
Author	Mrs. Chen Heyan
Degree	Master of Nursing Science
Advisory Committee	Assistant Professor Dr. Apiradee Nantsupawat Advisor Assistant Professor Dr. Petsunee Thungjaroenkul Co-advisor

ABSTRACT

The job satisfaction of nurses is crucial to the quality of health care services. Several factors are related to job satisfaction. This research aimed to explore job satisfaction and to identify the relationship between job satisfaction and related factors including professional commitment, educational level, and employee status among nurses in tertiary general hospitals in Dali, the People's Republic of China. The sample consisted of 368 nurses from 2 tertiary general hospitals. Research instruments were the Professional Commitment Scale (PCS) and the Job Satisfaction Questionnaire (JSQ). The Cronbach's alpha coefficients of the PCS and JSQ were .91 and .92 respectively. Data were analyzed using descriptive statistics, Spearman's rank-order correlation coefficient and multiple regression.

The results of the study indicated:

1. The overall mean score of job satisfaction as perceived by nurses was at a moderate level.
2. There was no correlation between educational level and job satisfaction.
3. There was no correlation between employee status and job satisfaction.

4. Professional commitment accounted for 11 percent of the variance in job satisfaction.

Results could be used as baseline information for nurse administrators and hospital administrators in developing appropriate strategies to improve professional commitment in order to enhance nurse job satisfaction.



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หัวข้อวิทยานิพนธ์	ปัจจัยที่มีความสัมพันธ์กับความพึงพอใจในงานของพยาบาลในโรงพยาบาลระดับตติยภูมิของตำหนัก สาธารณรัฐประชาชนจีน		
ผู้เขียน	นางเงิน เหมเย็น		
ปริญญา	พยาบาลศาสตรมหาบัณฑิต		
คณะกรรมการที่ปรึกษา	ผู้ช่วยศาสตราจารย์ ดร. อภิรดี นันทกุลวัฒน์	อาจารย์ที่ปรึกษาหลัก	
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บทคัดย่อ

ความพึงพอใจในงานของพยาบาลมีความสำคัญต่อการบริการสุขภาพ โดยพบว่ามีหลายปัจจัยที่เกี่ยวข้องกับความพึงพอใจในงาน การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อสำรวจความพึงพอใจในงานและเพื่อหาความสัมพันธ์ระหว่างความพึงพอใจในงานและปัจจัยที่เกี่ยวข้องได้แก่ความผูกพันต่อวิชาชีพ ระดับการศึกษาและสถานภาพการจ้างงานของพยาบาลในโรงพยาบาลระดับตติยภูมิของตำหนัก สาธารณรัฐประชาชนจีน กลุ่มตัวอย่างประกอบด้วยพยาบาลจำนวน 368 คนจากโรงพยาบาลระดับตติยภูมิ 2 แห่ง เครื่องมือวิจัยประกอบด้วยแบบวัดความผูกพันต่อวิชาชีพ (Professional Commitment Scale: PCS) และแบบสอบถามความพึงพอใจในงาน (Job Satisfaction Questionnaire: JSQ) ซึ่งได้ค่าสัมประสิทธิ์อัลฟาของครอนบาคมีค่าเท่ากับ .91 และ .92 ตามลำดับ วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา ค่าสัมประสิทธิ์สหสัมพันธ์ของสเปียร์แมนและการวิเคราะห์การถดถอยพหุคูณ

ผลการวิจัยพบว่า:

1. คะแนนเฉลี่ยความพึงพอใจในงานโดยรวมตามการรับรู้ของพยาบาลอยู่ในระดับปานกลาง
2. ระดับการศึกษาและความพึงพอใจในงานไม่มีความสัมพันธ์กัน
3. สถานภาพการจ้างงานและความพึงพอใจในงานไม่มีความสัมพันธ์กัน
4. ความผูกพันต่อวิชาชีพสามารถอธิบายความแปรปรวนของความพึงพอใจในงานได้ร้อยละ 11

ผลการศึกษาครั้งนี้สามารถใช้เป็นข้อมูลพื้นฐานสำหรับผู้บริหารการพยาบาลและผู้บริหาร
โรงพยาบาลในการพัฒนากลยุทธ์ที่เหมาะสมในการพัฒนาความยั่งยืนในวิชาชีพเพื่อเพิ่มความพึงพอใจ
ในงานของพยาบาล



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CHAPTER 1

Introduction

Background and Significance of the Research Problem

The current widespread nursing shortage and high turnover are of great concern in Mainland China and globally (Zhang, Tao, Ellenbecker, & Liu, 2013); this is becoming more and more important for both developed and developing countries. The report of the 'Third Global Forum on Human Resources for Health' estimates that the nursing deficit will reach 12.9 million by 2035 (Campbell et al., 2013). The European Commission has made estimates that predict the shortage of nurses will reach 590,000 by 2020 (Haczynski, Skrzypczak, & Winter, 2017). In the United States, there will be a national shortage of 300 000 to 1 million registered nurse jobs in 2020 (Juraschek, Zhang, Ranganathan, & Lin, 2012). Additionally, the World Health Organization [WHO] report includes projections that nearly 40% of nurses will leave their jobs in 10 years (WHO, 2015). There is no doubt that the shortage of nurses has been a long-standing problem in the world. The most recognized reason for the shortage of care seems to be that nurses are leaving the nursing profession (Janiszewski, 2003; You, Ke, Zheng, & Wan, 2015). Moreover, maintaining adequate human resources in nursing is an international priority (WHO, 2013).

The current widespread shortage of care and high turnover rates are of great concern in China. In Shanghai city, the average turnover rate increased from 4.45% in 2006 to 5.79% in 2012 (Lu, Zhang, Sun, Zhang, & ZhouJian, 2013), 2.1% in Anhui province in 2007 (Ministry of Health, 2011), and 4.7% in Hong Kong in 2010 (Cheng, 2010). In Kunming, the average turnover rate was 4.0% (Che, Wu, & Wu, 2018). In addition, the Chinese Health Ministry reported that the density of nurses in mainland China is 2.74 per 1,000 people versus 16.2 per 1,000 nurses in Ireland, 10.7 per 1,000 nurses in the United States, and 9.5 per 1,000 nurses in Japan (OECD Health Data, 2010). The turnover rate of nurses in China is increasing (Lu, While, & Barriball, 2007). Although many factors

are related to the turnover rate of nurses, research has found the relationship between nurse turnover and job satisfaction (Blegen, 1993; Cavanagh & Coffin, 1992; Irvine & Evans, 1995). Yin and Yang's (2002) found that the strongest individual and organizational factors associated with nurse turnover were job satisfaction ($p < 0.05$). Previous studies have shown that low job satisfaction is the main reason for turnover of health care providers (Abualrub, 2007; Camerino et al., 2006). Low levels of job satisfaction are a key factor associated with high nurse turnover (Bai et al., 2015; McDonald, Rubarth, & Miers, 2012).

Job satisfaction is defined as a positive attitude towards the workplace manifested in the desire to continue working there (Herzberg, 2003). Herzberg, Mausner, and Snyderman (1959) constructed a two-dimensional paradigm of factors named “hygiene” factors and “motivator” factors have affected people's attitudes about work. Among them, they assume that job satisfaction comes from both intrinsic and extrinsic factors. Intrinsic satisfaction refers to satisfaction employees feel from the job itself (Herzberg et al., 1959). Extrinsic satisfaction refers to describing the satisfaction employee's garner that is not directly tied to the job itself (Herzberg et al., 1959). Nurse job satisfaction is very important to nursing work. When experiencing a higher level of nurse job satisfaction, morale and commitment will increase, which make it more likely that nurses will remain in the profession (Ellenbecker, Samia, Cushman, & Alster, 2008). However, dissatisfaction in nurses leads to a shortage of care while the burnout of the nursing staff eventually leads to an increase in the patient's adverse consequences (Aiken et al., 2011) and turnover intentions (Chan, Luk, Leong, Yeung, & Van, 2009; Delobelle et al., 2011). In addition, overwork, stress and an unsupported work environment are common causes of dissatisfaction among nurses (Shapiro, 2001).

According to a literature review, different results of job satisfaction studies have been found in different countries. In Turkey, Çelik and Hisar (2012) found that overall job satisfaction was at a low level (Mean = 2.33, SD = 0.72), intrinsic satisfaction was at low level (Mean = 2.22, SD = 0.71) and extrinsic satisfaction was at low level (Mean = 1.83, SD = 0.68). In Ethiopia, Negussie and Demissie (2013) demonstrated a moderate level of overall job satisfaction (Mean = 2.66, SD = 0.70), intrinsic satisfaction was at moderate level (Mean = 2.72, SD = 0.71) and extrinsic satisfaction was at low level (Mean

= 1.83, SD = 0.68). In Canada, Breau and Rhéaume (2014) found that overall job satisfaction of nurses in hospital was at a high level (Mean = 4.02, SD = 0.61), intrinsic satisfaction was at moderate level (Mean = 3.00, SD = 0.80) and extrinsic satisfaction was at high level (Mean = 3.68, SD = 0.61). In India, Azeem and Akhtar (2014) reported that overall job satisfaction of nurses in public and private hospitals was at a moderate level (Mean = 3.43, SD = 0.81), intrinsic satisfaction was at moderate level (Mean = 3.12, SD = 0.76) and extrinsic satisfaction was at moderate level (Mean = 3.66, SD = 0.69). In Jordan, Saleh, Darawad, and Al-Hussami (2014) demonstrated a moderate level of overall job satisfaction of nurses in 11 hospitals (Mean = 2.85, SD = 0.73), intrinsic satisfaction was at moderate level (Mean = 2.77, SD = 0.78) and extrinsic satisfaction was at moderate level (Mean = 2.93, SD = 0.81). In Korea, Choi and Ahn (2016) found that overall job satisfaction of nurses in five university hospitals was at a moderate level (Mean = 3.08, SD = 0.42), intrinsic satisfaction was at moderate level (Mean = 3.22, SD = 0.43) and extrinsic satisfaction was at moderate level (Mean = 2.83, SD = 0.50). In Greek, Konstantinou and Prezerakos (2018) reported that overall job satisfaction of nurses in two hospitals was at a moderate level (Mean = 3.61, SD = 0.91), intrinsic satisfaction was at moderate level (Mean = 3.42, SD = 0.83) and extrinsic satisfaction was at moderate level (Mean = 2.81, SD = 0.79). Based upon the results different countries, different researchers used the same instruments for measuring nurse job satisfaction, with the result of job satisfaction ranging from low to high level. Thus, the result was presented a varying level of job satisfaction among nurses in a different setting.

Previous studies have discerned the level of job satisfaction among nurses from China; In Changsha City, Li (2011) found that overall job satisfaction of nurses in three hospitals was at a moderate level (Mean = 3.43, SD = 0.80), intrinsic satisfaction was at moderate level (Mean = 2.91, SD = 0.75) and extrinsic satisfaction was at moderate level (Mean = 3.28, SD = 0.74). In Guangzhou City, Lin and Ma (2013) study demonstrated a moderate level of overall job satisfaction of nurses in four hospitals (Mean = 3.52, SD = 0.46), intrinsic satisfaction was at moderate level (Mean = 3.14, SD = 0.61) and extrinsic satisfaction was at moderate level (Mean = 2.83, SD = 0.63). In Tianjin City, Yang, Ye, Guo, and Li (2014) reported that overall job satisfaction of nurses in four hospitals was at a moderate level (Mean = 2.81, SD = 0.98), intrinsic satisfaction was at moderate level (Mean = 2.82, SD = 0.68) and extrinsic job satisfaction was at moderate level (Mean =

2.83, SD = 0.63). In Chengdu City, Hu et al. (2011) found that overall job satisfaction of nurses in Chengdu university hospitals was at a moderate level (Mean = 2.91, SD = 0.88), intrinsic satisfaction was at moderate level (Mean = 2.84, SD = 0.78) and extrinsic job satisfaction was at moderate level (Mean = 2.88, SD = 0.73). In Taiwan, Hsu, Wang, Lin, Shih, and Lin (2015) study demonstrated a high level of overall job satisfaction of nurses in Taiwan hospital (Mean = 3.81, SD = 0.36), intrinsic satisfaction was at high level (Mean = 3.74, SD = 0.38) and extrinsic satisfaction was at high level (Mean = 3.74, SD = 0.78). Due to the culture of these different regions, the reform of the medical system, the differences in geography and economy, the results of nurse job satisfactions were not the same.

Previous studies found that some personal factors were related to job satisfaction such as educational level and employee status. Nurses' educational level refers to achievement of nursing educational program (Liu et al., 2012). There is a difference of nursing educational level in each country. Unlike in many other countries, modern Chinese nursing education at the tertiary level had an early start (Xu, Xu, & Zhang, 2000). There are five levels of nursing education in mainland China: a secondary diploma offered by a health school; an associate degree equivalent to an associate degree offered by a higher vocational college; a Bachelor degree refers to title of degree awarded at undergraduate level of higher health education institution; Masters degree in nursing are 3 years in length, and enroll baccalaureate nursing graduates; PhD in nursing are 3 years in length and it guiding nurses in education, research, leadership and management skills. (Ministry of Health, 2011; Xu et al., 2000).

Several studies explored the relationship between nurses' educational level and job satisfaction. The results were inconsistent. Kalisch, Lee, and Rochman (2010) found in Michigan, USA, high educated ($P < 0.05$) was associated with a higher level of satisfaction. Abualrub and Alghamdi (2012) indicated that there was a positive significant relationship between education level and job satisfaction in Saudi Arabia ($p < 0.05$). By contrary, three studies indicated that the educational level was not significantly correlated with job satisfaction (Ahmad & Oranye, 2010; Delobelle et al., 2011; Pitkäaho, Ryyänänen, Partanen, & Vehviläinen-Julkunen, 2011). Based on studies in China, the relationship between nurses education level and job satisfaction is inconsistent. H. Lu et al.

(2007) found that nurses with a bachelor's degree (average grade = 234.92) reported lower job satisfaction than nurses with an associate degree (average grade = 259.98) or diploma (average grade = 257.68). Lu, Lin, Wu, Hsieh, and Chang (2002) found in Taiwan, educational level had a weak negative correlation with job satisfaction ($r = -0.101$). Liu et al. (2012) indicated that relatively fewer nurses with an associate degree ($n = 715$, 42.8%) reported they were satisfied in their jobs compared with those with diploma ($n = 190$, 62.3%) and bachelor degree ($n = 215$, 78.2%) in Shanghai, China. Thus, the results of the relationship between nurses' educational level and job satisfaction among nurses was grossly different in a different setting.

Another personal factor is employee status. Employee status refers to an employee's relative position within a population of employees (Ang, 2012). According to review, there are two types of employee status, which are temporary nurse and permanent nurse. Temporary nurse refers to a nurse who signs a short-term labor contract with the hospital, in China, temporary nurses are also known as “contract nurses” (Dong & Phillips, 2008); the conditions of employment are contractual as positions are made by an individual employer, presumably based on current needs and resources (Ang, 2012). The employment relationship is between the hospital and individual. Permanent nurse refers to a nurse who signs a lifetime labor contract with the government (Ang, 2012). Their employment relationship is between the government and individual. Therefore, a permanent nurse was guaranteed by the government and could not be dismissed by an individual employer (You et al., 2013). More than 50% of nurses in China are temporary nurses (Zhang et al., 2014). Temporary nurses are employed by the hospital, to solve staffing shortages, but with lower salaries and fewer opportunities for promotion compared with nurses whose positions are allocated by the government (Wang & Geraghty, 2017).

Previous studies explored the relationship between employee status and job satisfaction. In Turkey, Golbasi, Kelleci, and Dogan (2008) indicated that the internal job satisfaction of contract nurses was determined to be higher than that of permanent nurses, and the differences were found to be statistically significant ($p < 0.05$). In South Korea, Han, Moon, and Yun (2009) found statistically significant differences between permanent nurses and temporary nurses of job satisfaction ($t = 2.79$, $p = .006$). In Finland,

Ylitörmänen, Turunen, and Kvist (2012) compared the two types of nurses, finding that temporary nurses are more satisfied with the job requirements than permanent nurses ($P = .026$). In China, Yu (2016) asserted that contract-based nurses were less satisfied with their pay and benefits than permanent nurses with more job security ($P < 0.01$). In Yunnan province, Jin, Fang, Feng, and Dai (2012) established that temporary nurses had more dissatisfaction than permanent nurses ($P < 0.001$). Liu et al. (2012) confirmed in Guangdong Province that permanent nurses experienced more serious work dissatisfaction than temporary nurses ($P < 0.001$). Among the studies some inconsistencies were found in the relationship between employee status and job satisfaction.

Moreover, professional commitment has been found to relate to job satisfaction. Professional commitment is defined as an employee's involvement in careers in accepting professional values, nursing ethics, willingness to maintain membership, and a clear desire to establish professional beliefs (Poter, Steers, Mowday, & Boulian, 1974). It contains three related factors: 1) a strong belief in and acceptance of the organization's goals and values; 2) a willingness to exert considerable effort on behalf of the organization; and 3) a strong desire to maintain membership in the organization (Poter et al., 1974). Professional commitment has been found to be an important component of health care, and it is 'one of the important factors determining people's work behaviors' (Kannan & Pillai, 2008). Nurse with a high degree of professional commitment are willing to make considerable efforts to achieve their career goals and they are more likely to engage in activities that favor their profession (Caricati et al. 2014). When nurses think their professions are valuable, they can develop a love of their profession because of their firm belief in care, thereby improving nurse satisfaction (Yang, Liu, Chen, & Pan, 2014).

Through the literature review, several studies demonstrated that there is a relationship between nurses' professional commitment and job satisfaction. Lu et al. (2002) found there was a positive relationship between professional commitment and job satisfaction among nurses in China ($r = 0.27$, $p < 0.01$). Lu, Chang, and Wu (2007) found that professional commitment has a direct effect on job satisfaction among nurses in Taiwan, which yielded a path coefficient of $\gamma = .54$ ($P < .05$). Yang et al. (2012) found that professional commitment is a robust predictor of job satisfaction among registered nurses in Taiwan, which independently explained 29% of job satisfaction ($p = 0.000$). Caricati

et al. (2013) found professional commitment ($\beta = 0.23$, $Z = 6.64$, $P < 0.001$) directly and significantly predicted job satisfaction among nurses in Italy. Hsu et al. (2017) found nurses' professional commitment was strongly related to job satisfaction among nurses in Taiwan ($r = 0.51$, $p < .01$); aspects of professional commitment explained 32% of the variance in job satisfaction. Barać, Prlić, Plužarić, Farčić, and Kovačević (2018) found there was a significant positive correlation between professional commitment and job satisfaction among nurses in Croatia ($r = 0.464$, $p < 0.01$). Therefore, there is an association between professional commitment and job satisfaction in different settings.

Yunnan Province, located in Southwest China, is a highly diverse terrestrial region with different nationalities and ethnic customs. Due to its remote geographical location, the level of economic and medical care lags far behind other developed cities in China (J. Yang et al., 2014). Hospitals in Yunnan province are divided into three levels according to their function, equipment, and technology. A first level hospital (primary hospitals) is a community hospital that provides primary health care services directly. A second level hospital (secondary hospital) is a county-level hospital that provides comprehensive medical and health care services for a county and conducts some teaching and research activities. A third-level hospital (tertiary hospital) is a general interregional hospital that provides comprehensive, high quality and professional medical services with a high level of medical education and research (Ministry of Health, 2017). The number of tertiary hospitals in Yunnan province is 32 and the occupation rate is 100.8%, the ratio of nurses to population was 2.22:1000; nurses in each ward provide care for at least 10-14 patients (National Bureau of Statistic of China, 2017).

Dali is a city in the Northwest part of Yunnan Province. There are two tertiary hospitals in Dali. The affiliated hospitals of the first Affiliated Hospital of Dali University and People's Hospital in Dali Bai Nationality Autonomous Prefecture are the two largest medical institutions; which lead the way in medical education, scientific research and medical services. This means that nurses not only take on clinical care, but also research and teach. Most working nurses face heavy workloads in their daily work. The tertiary hospitals in Dali provide health care services to most patients through indoor, outdoor and emergency services. In the First Affiliated Hospital of Dali University and People's Hospital in Dali Bai Nationality Autonomous Prefecture, nursing work contains a huge

number of routine tasks, where staff nurses are required to do everything including professional and life care for patients (Liu et al., 2012). During the day shift, one nurse takes care of 10-15 patients; most departments have only one night nurse who needs to take care of 30-40 patients at night (Nursing Department Report, 2018).

The First Affiliated Hospital of Dali University and People's Hospital in Dali Bai Nationality Autonomous Prefecture were selected as the tertiary hospital by the Chinese Ministry of Health in 2016 (Ministry of Health, 2016). For the construction of the hospital, the human resources departments of the two hospitals require the education level to be an associate degree when recruiting nurses and the nurses with a bachelor's degree are given priority. If there is a secondary diploma among the in-service nurses, the hospital will encourage them to continue re-education. Such as television and distance-education programmes, 'examination-through-self-study' programmes, and programmes at local further education colleges (Xu et al., 2000); until they achieve an associate degree. From 2015 to 2017, with the support of the hospital, a total of 20 excellent nursing staff went to Chiang Mai University in Thailand to study master degree and 18 nurses have obtained graduate diplomas. Therefore, there are three main educational levels of nurses in the two hospitals; which are associate degree, bachelor degree and master degree.

On the one hand, bachelor's degree nurses have more extra benefits than associate degree nurses, such as more opportunities to participate in hospital affairs, study abroad and training or workshops. These inequity statuses may affect nurses' job satisfaction (K. Y. Lu et al., 2007). On the other hand, in China, there are five professional titles for nurses; they are junior nurse, senior nurse, nurse in charge, associate chief nurse and chief nurse respectively (Ministry of Health, 2011). Junior nurse and senior nurses want to pursue a higher educational level for the purpose of enhancing their professional titles, work capacities and responsibilities (Lin, Ma, & Zhao, 2008). However, except educational level, there have similar conditions like working hours, work experience, work performance and work contribution (Liu et al., 2012). It is not easy for a nurse to advance their professional title. In addition, The Chinese Nursing Association (CNA), as one of the national society belonged to China Association for Science and Technology, forcefully promotes the development of Chinese nursing, the growth of qualified nurses

and the advancement of medical care (Pang et al., 2004). Many nurses want to join a nursing association, but it is very difficult with the exception of the chief nurse.

There are two main types of employment for Chinese hospital nurses: permanent nurses and temporary nurses (Yun, Jie, & Anli, 2010). Permanent nurses are granted lifelong employment, guaranteed by the state, which provides a plethora of benefits. Temporary nurses are employed by hospitals, often hired by hospitals to charge lower wages with no or reduced benefits (Wang, Shang, Chen, Hou, & Ying, 2008). Contract nurses had no difference with permanent nurses in terms of work intensity, time and pressure, but they were poorer in salary and welfare, and were prone to negative emotions such as psychological imbalance (K. Y. Lu et al., 2007). Equal job responsibilities have caused widespread concern about fairness and potential job dissatisfaction among temporary nurses (Zhou & Wang, 2010). According to reports, the proportion of contract nurses employed in Chinese hospitals varies from hospital to hospital, ranging from 20% to 54% (Wang et al., 2008; Zhao & Zhang, 2010). In recent years, two tertiary hospitals in Dali city rarely recruit permanent nurses and increasingly recruit temporary nurse (Nursing Department Report, 2018).

As a medical service center in southwest China, tertiary general hospital in Dali bears tremendous burdens (Liu, Yang, Zhang, & Yang, 2016). Most nurses not only need to deal with a lot of work, they have pressures of responsibility providing continuous high levels of care over long periods of time, compared with doctors, nurse have long working hours. Nurses also need to face tense nurse-patient relationship and a high risk of participating in medical disputes. In the high-risk, high-stress environment, the job stability of nurses is threatened (Yan & Zhang, 2011). Meanwhile, nurses' sense of achievement is reduced because they have long hours, work for extended periods without an opportunity to garner new knowledge and skills. In addition, the nurses of the two tertiary hospitals lack the support of the organization and managers, such as administrators haven't encouraged staff nurses to participate in the management of the organization; most of staff nurses were not given an opportunity, information or support. Additionally, hospitals lack of respectful relations within the health care team, bullying between co-workers has occurred sometimes; which adds to a lower level of job satisfaction.

In conclusion, with the continuous reform of the economy, China has made some major policy changes in health care. The hospital provides comprehensive, high-quality professional medical services and ensures access to quality medical services; which may create nurse turnover and dissatisfaction in the nursing profession. Moreover, some studies have explored job satisfaction and related factors including professional commitment, nurses' educational level, and employee status among nurses, but the findings have been inconsistent. The aim of this study is to describe the relationships between job satisfaction and related factors including professional commitment, nurses' educational level, and employee status among nurses in tertiary general hospitals in Dali, The People's Republic of China. Results of the study provided an insight to the level of nurse's job satisfaction and related factors. Furthermore, a better understanding of job satisfaction and related factors could aid hospital managers in retaining nursing staff.

Research Objectives

1. To explore job satisfaction among nurses in tertiary general hospitals in Dali, the People's Republic of China.
2. To identify the relationships between job satisfaction and related factors including professional commitment, educational level, and employee status among nurses in tertiary general hospitals in Dali, the People's Republic of China.

Research Questions

1. What is the level of job satisfaction as perceived by nurses in tertiary general hospitals in Dali, the People's Republic of China?
2. Are there any relationships between job satisfaction and related factors including professional commitment, educational level, and employee status among nurses in tertiary general hospitals in Dali, the People's Republic of China?

Definition of Terms

Job satisfaction refers to the positive attitude towards the workplace has manifested in the desire to continue working in the hospital as perceived by nurses, including intrinsic satisfaction and extrinsic satisfaction based on Herzberg and colleagues' Two-Factor Theory (Weiss, Dawis, & England, 1967). Job satisfaction was measured by Chinese modify version of Job Satisfaction Questionnaire (JSQ) (Yeh, Liu, Ke, Chen, & Wang, 2004).

Factors related to job satisfaction refers to variables that affect job satisfaction. These factors are professional commitment, educational level and employee status.

Professional commitment refers to an nurse's involvement in careers in accepting professional values, nursing ethics, willingness to maintain membership, and a clear desire to establish professional beliefs, it contains three related factors: a strong belief in and acceptance of the organization's goals and values; a willingness to exert considerable effort on behalf of the organization; and a strong desire to maintain membership in the organization (Poter et al., 1974). Professional commitment was measured by Chinese version of Professional Commitment Scale. It was developed by Lu, Chiou, and Chang (2000).

Educational level refers to achievement of nursing educational program. In this study, the nurses were achieved associate degree, bachelor degree and master degree of nursing education.

Employee status refers to employment contract of nurses with hospital. There are 2 types of employee status in China: 1) Temporary nurse refers to a nurse who signs a short-term labor contract with the hospital; 2) Permanent nurse refers to a nurse who signs a lifetime labor contract with the government.

Nurses refer to persons who graduated from an approved nursing educational institute, holds the nursing licensure granted by Ministry of Health People's Republic of China, and working at tertiary hospital of Dali.

Tertiary general hospitals refer to hospitals under Ministry of Health People's Republic of China. It has occupancy more than 500 beds and provides variety of care by different medical units such as medical, surgical, pediatric, obstetrics, gynecology, and geriatrics. This is also considered as teaching and research hospital. Two tertiary hospitals in Dali were chosen, this include the Affiliated Hospital of Dali University and People's Hospital in Dali Bai Nationality Autonomous Prefecture.



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CHAPTER 2

Literature Review

This chapter describes the literature review and conceptual framework of the study. The literature review covered the enlisted topics:

1. Job Satisfaction
 - 1.1 Definition of job satisfaction
 - 1.2 Theories and conceptual of job satisfaction
 - 1.3 Measurement of job satisfaction
 - 1.4 Research studies related to job satisfaction
2. Factors related to job satisfaction
 - 2.1 Professional commitment
 - 2.1.1 Definition of professional commitment
 - 2.1.2 Conceptual model and component of professional commitment
 - 2.1.3 Measurement of professional commitment
 - 2.1.4 Studies related to professional commitment
 - 2.1.5 Relationship between professional commitment and job satisfaction
 - 2.2 Educational level
 - 2.2.1 Definition of educational level
 - 2.2.2 Relationship between educational level and job satisfaction
 - 2.3 Employee status
 - 2.3.1 Definition of employee status
 - 2.3.2 Relationship between employee status and job satisfaction
3. Situation of job satisfaction among nurses in tertiary general hospital, Yunnan Province, the People's Republic of China
4. Conceptual framework

Job Satisfaction

Definition of Job Satisfaction

There are many articles and studies reports stating various definitions of job satisfaction. Different authors defined the job satisfaction in different ways:

Herzberg et al. (1959) defined job satisfaction as a function of satisfaction with the various elements of the job.

Smith, Kendall, and Hulin (1969) defined job satisfaction is the general feeling an employee has towards their job.

Worf (1970) defined the job satisfaction as whether or not the job met the employee's physical and psychological needs for the things within the work situation.

Price and Muller (1986) define job satisfaction as refers to the degree to which an employee holds a positive affect attitude towards his or her employment.

Mueller and McCloskey (1990) defined nurses' job satisfaction as 'the degree of positive affective orientation toward employment'.

Traynor and Wade (1993) defined that job satisfaction refers to a person's positive affective appraisal of one's job.

Fung (1998) defined job satisfaction to be an affective reaction to a job that results from the comparison of perceived outcomes which those that are desire.

Adams and Bond (2000) define job satisfaction as the degree of positive affect that a job offers.

Ivancevich and Matteson (2002) define job satisfaction as the overall perception of the individual's work and their attitudes toward various aspects of the work, as well as attitudes and perceptions that may influence the degree of matching between individuals and organizations.

Herzberg (2003) defined job satisfaction as a positive attitude towards the workplace manifested in the desire to continue working there.

Tourangeau, McGillis Hall, Doran, and Petch (2006) define job satisfaction as the positive and negative attitudes and feelings of workers toward work.

Aziri (2008) argues that the perception of job satisfaction seems to be due to the ability of the work to meet physical and psychological needs.

From the above definitions of job satisfaction, the definition of job satisfaction by Herzberg (2003) defined job satisfaction as a positive attitude towards the workplace manifested in the desire to continue working there, is a widely accepted definition, also for nursing work characteristic. Thus, Herzberg (2003) was used in this research.

Theories and Conceptual of Job Satisfaction

There are number of theories and models have been developed to understand job satisfaction. In the following part, several theories and models will be introduced.

Maslow's Hierarchical Needs Theory (1943, 1970). Maslow's needs hierarchy theory was one of the first theories to examine the important contributors to job satisfaction. It is the most cited and well know theory in the studies of human resources. The theory holds that human needs constitute a five-level hierarchy that includes physiological needs, security, belonging/love, self-esteem, and self-fulfillment. Biological and physiological needs: air, food, drink, shelter, warmth, sex, sleep. Security needs: protection elements, security, order, law, restrictions, stability and freedom from fear. Social needs: belonging, feelings and love, from working groups, family, friends, romantic relationships. Respect for needs: achievement, mastery, independence, status, dominance, prestige, self-esteem and respect from others. Self-realization needs: to achieve personal potential, self-realization, and seek personal growth and peak experience. Higher order needs in Maslow's theory are esteem and self-actualization need. Lower order needs are physiological, safety and social needs. When a need is satisfied it is no longer a need and the need at the next level up to the hierarchy could be used to motivate those employees. He also speculates that a person cannot identify or

pursue the next higher demand in the hierarchy until she or his currently recognized needs are fully or fully satisfied, a concept known as eugenics.

Herzberg et al.'s theory of motivators and hygiene factors (1959). It also known as the Two-factor theory or Motivation-Hygiene Theory, it has received widespread attention of having a practical approach toward motivating employees. Herzberg's theory is one of the most significant content theories in job satisfaction (Dion, 2006). Herzberg et al. (1959) constructed a two-dimensional paradigm of factors named "hygiene" factors and "motivator" factors have affected people's attitudes about work. Wherein they hypothesized that job satisfaction results from both intrinsic and extrinsic factors. Intrinsic factors are motivating factors; extrinsic factors are related to the external working environment. Meanwhile, Herzberg called the themes of the dissatisfying events "hygiene factors, according to the theory, the absence of hygiene factors can create job dissatisfaction, but their presence does not motivate or create satisfaction. Herzberg called the themes of the satisfying incidents "motivator factors", these motivators were associated with long-term positive effects in job performance. Although the absence of these factors is not necessarily dissatisfying, when present, they can be a motivational force.

Motivating factors refers to which can encourage employees to work harder, the presence of motivators causes employees to work harder, they are found within the actual job itself. Motivating factors include:

Achievement. A job must give an employee a sense of achievement. This will provide a proud feeling of having done something difficult but worthwhile.

Recognition. A job must provide an employee with praise and recognition of their successes. This recognition should come from both their superiors and their peers.

The work itself. The job itself must be interesting, varied, and provide enough of a challenge to keep employees motivated.

Responsibility. Employees should "own" their work. They should hold themselves responsible for this completion and not feel as though they are being micromanaged.

Advancement. Promotion opportunities should exist for the employee.

Growth. The job should give employees the opportunity to learn new skills. This can happen either on the job or through more formal training.

Hygiene factors refer to the absence of hygiene factors will cause employees to work less hard. Hygiene factors are not present in the actual job itself but surround the job. Hygiene factors include:

Company policies. These should be fair and clear to every employee. They must also be equivalent to those of competitors.

Supervision. Supervision must be fair and appropriate. The employee should be given as much autonomy as is reasonable.

Relationships. There should be no tolerance for bullying or cliques. A healthy, amiable, and appropriate relationship should exist between peers, superiors, and subordinates.

Work conditions. Equipment and the working environment should be safe, fit for purpose, and hygienic.

Salary. The pay structure should be fair and reasonable. It should also be competitive with other organizations in the same industry.

Status. The organization should maintain the status of all employees within the organization. Performing meaningful work can provide a sense of status.

Security. It is important that employees feel that their job is secure and they are not under the constant threat of being laid-off.

Job satisfaction model (Traynor and Wade 1993). Traynor and Wade (1993) built the job satisfaction model based on the literature review and British nursing publications and discussion from key informants. Traynor and Wade (1993) identified five dimensions of job satisfaction: Personal satisfaction: refers to the extent to which caregivers believe they can provide quality care, see their work as a personal reward, and

the opportunities they think their work is fun, challenging, and provide them with practical skills. Satisfaction with workload: refers to the time available to complete the work, the time available for patient care, the time spent on management, the level of staffing, and the overall workload. Satisfaction with professional support: refers to management and cooperation support, supervision and guidance, and an opportunity to discuss one's concerns, teamwork and perceived value. Satisfaction with pay and prospects: refers to salary, rating, career prospects and job security. Satisfaction with training: reference to job satisfaction deals with opportunities for further training, in-service courses, time off or funding to attend courses and with the adequacy of training for the role performed.

Vroom's theory by Victor Vroom (1964). A theory known as the valence, instrumentality and expectancy theory resulted from Vroom's initial theory (1964). The theory suggests that individual job satisfaction is a function of employees' perceptions of certain outcomes and the likelihood of achieving them. More specifically, if employees earn less than they expected, or if they think they have been treated unfairly, they will be dissatisfied. The three main concepts in the theory include: instrumentality, which refers to the concept of whether employees truly accept what they want; expectation, the employee's perception of different levels of expectations and confidence. The third concept is titer, which refers to the emotional orientation and value of the expected outcome or reward for employees (Hansen, 2007; Vroom, 1964).

Job Characteristics Theory (Hackman & Oldham, 1976). Hackman and Oldham (1976) developed the most widely recognized model of job characteristics. This model recognized certain job characteristics that contribute to certain psychological states and that the strength of employees' need for growth has an important moderating effect. The job characteristics model proposes that three psychological states of a jobholder result in improved work performance, internal motivation, and lower absenteeism and turnover. The motivated, satisfied, and productive employee is one who (1) experiences meaningfulness of work performed (2) experiences responsibility for work outcomes (3) has knowledge of the results of the work performed, Achieving these three psychological states serves as reinforcement to the employee and as a source of internal motivation to continue doing

the job well. According to Hackman and Oldham five core dimensions of job characteristics are as follows:

Skill variety. This refers to the extent to which the job requires the employee to draw from a number of different skills and abilities as well as upon a range of knowledge.

Task Identity. The degree of which the job requires completion of a whole and identifiable piece of work that is doing a job from beginning to end with a visible outcome.

Task significance. This involves the importance of the task. It involves both internal significance (i.e. how important the task is to the organization) and external significance (i.e. how proud employees are to tell their relatives, friends and neighbors what they do and where they work).

Autonomy. This refers to job independence. How much freedom and control employees have to perform their job, for example, schedule their work, make decisions or determine the means to accomplish the objectives.

Task feedback. This refers to objective information about progress and performance that can come from the job itself, from supervisors or from any other information system.

In Summary, in all the theories and model of job satisfaction, the Herzberg et al.'s theory of motivators and hygiene factors (1959) has been well accepted in the nursing literature, and this theory was very popular in China. Therefore, in this study, the Herzberg et al.'s theory of motivators and hygiene factors (1959) was used.

Measurement of Job Satisfaction

There is existing instrument to measure job satisfaction. They are described as below.

Mueller and McCloskey Satisfaction Scale (MMSS). Mueller and McCloskey (1990). Original scale was developed in the 1974s, McCloskey developed originally a three dimensional nursing job satisfaction scale and conceptualized into safety rewards,

social rewards and psychological rewards. This scale was developed based on theories of Maslow and Burn. Mueller and McCloskey (1990) revised McCloskey's original job satisfaction scale done in 1974. This scale developed a multidimensional questionnaire for hospital staff nurses, including 8 subscales: 1) extrinsic rewards, 2) scheduling, 3) the balance of family and work, 4) co-worker, 5) interaction opportunities, 6) professional opportunities, 7) praise and recognition, and 8) control responsibility. It consisted of 31 items and ranged on a 5-point Likert scale, ranging from very dissatisfied (1) to very satisfied (5). The internal consistency was 0.89. The test-retest reliability for the subscales is ranged from 0.08 to 0.64.

Minnesota Satisfaction Questionnaire (MSQ). The MSQ was developed by Weiss et al.(1967).There are including Long-Form MSQ and Short-Form MSQ .The short form scale was designed to measure intrinsic and extrinsic satisfaction based upon Herzberg and colleagues' Two-Factor Theory (Weiss et al., 1967).Short-Form MSQ,a 5-point Likert-type scale with 20 items (1 "very dissatisfied with this aspect of my job", 2 "dissatisfied with this aspect of my job", 3 "can't decide if I'm satisfied or dissatisfied with this aspect of my job", 4 "satisfied with this aspect of my job" and 5 "very satisfied with this aspect of my job"). Sum or average the project responses to create a total score - the lower the score, the lower the job satisfaction. This scale has been widely used in the literature as a well-known and stable time instrument, and previous studies have produced an excellent coefficient α . The instrument's Cronbach's alphas were .86 for intrinsic satisfaction, .80 for extrinsic satisfaction and .90 for overall satisfaction.

Measure of Job Satisfaction (MJS). Traynor and Wade (1993) developed this instrument based on Herzberg's two factor models. According to Traynor and Wade (1983), the original scale was 43-items. After testing the factor, the loading less than 0.35 are omitted. Therefore, the scale remains 38-items. This MJS with five point Likert scale ranges from very satisfied (5) to very dissatisfied (1) for each item and calculates the mean score to describe overall job satisfaction. A higher overall score indicates the greater job satisfaction and vice versa. The Cronbach alpha was computed of the subscales (personal satisfaction 0.88; satisfaction with workload 0.88; satisfaction with professional support 0.86; satisfaction with training 0.87; satisfaction with pay and prospect 0.84 respectively) and for the overall job satisfaction scale 0.93 (Traynor &Wade, 1993).

The Nurse Satisfaction Scale (NSS). The NSS was developed by Ng (1993) to measure job satisfaction among nurses. The questionnaire is multidimensional and has 24 items. The items generating from the Spector's (1985) job satisfaction scale and interview among 30 nurses. The response format is a seven-point Likert scale, ranging from 'strongly agree' (1) to 'strongly disagree' (7). Reliability and construct validity are showed in the following parts. The test-retest reliability was measured over 5 months. The internal consistency reliability was tested in sample1 and sample separately and the internal consistency reliability was 0.84 and 0.85. The test-retest reliability was 0.75. To test the construct validity, Ng (1993) compared the instrument with an Organizational Commitment Scale ($r=0.64$). The construct validity was demonstrated by means of cross-validity.

Job satisfaction questionnaire. Yeh et al. (2004) modified from Short-Form Minnesota Satisfaction Questionnaire (MSQ) based on Herzberg and colleagues' Two-Factor Theory (Weiss et al., 1967). According to Herzberg and colleagues' Two-Factor Theory (Weiss et al., 1967), Yeh et al. (2004) divides the MSQ of 20 items into two dimensions: intrinsic satisfaction (12 item) and extrinsic satisfaction (8 item), and modifies eight original items among them, to make the content more biased towards the nurse. To score the Job Satisfaction Scale, a 5-point Likert-type scale ranging from 1 point (very dissatisfied) to 5 points (very satisfied) was used. The higher score means higher job satisfaction. It was divided into three levels as Yeh et al. (2004) stated: Low level: 1.00-2.33, Moderate level: 2.34-3.67, High level: 3.68-5.00. This instrument's Cronbach's α was .91, and .88 for intrinsic satisfaction, .87 for extrinsic satisfaction.

Nurses' job satisfaction scale (NJSS). The NJSS was developed by Lin, Wang, Li, and Huang (2007) after a systematic review of the literature. The NJSS comprised the five domains most commonly used in the literature: job environment, human relationship, feedback, benefit and promotion, and workload and includes 21 items. The item was scored on a 5-point Likert scale ranging from 1 point (very dissatisfied) to 5 points (very satisfied). The total score ranged from 21 (lowest job satisfaction) to 105(highest job satisfaction). The Cronbach's alpha coefficient of total score was 0.92, implying that the instrument was internally and consistently structured.

In summary, the job satisfaction measuring including Mueller and McCloskey Satisfaction Scale (MMSS), Measure of Job Satisfaction (MJS), The Nurse Satisfaction Scale (NSS), Job satisfaction questionnaire and Nurses' job satisfaction scale (NJSS). All of them have good validity and reliability. However, job satisfaction questionnaire by Yeh et al. (2004) is more appropriate for Chinese subjects than other western developed job satisfaction instruments. In addition, this scale already tested in China. Thus, the job satisfaction questionnaire by Yeh et al. (2004) was used in this research.

Research Studies Related to Job Satisfaction

Some studies about nurses' job satisfaction were conducted in many countries; Based on literature review, the most widely used scale is MSQ by Weiss et al. (1967) and JSQ by Yeh et al. (2004), both scale are based on Herzberg and colleagues' Two-Factor Theory (Weiss et al., 1967).

In Taiwan, Yeh et al. (2004) explored the job satisfaction and turnover intention among 340 nurses in public hospitals. Job satisfaction was measured by Job Satisfaction Questionnaire (JSQ) (Yeh et al., 2004), this scale modified from MSQ. The results showed that overall job satisfaction was at moderate level (Mean = 3.45, SD = 0.55); intrinsic satisfaction was at moderate level (Mean = 3.54, SD = 0.57); extrinsic satisfaction was at moderate level (Mean = 3.32, SD = 0.63).

In Changsha City, China, Li (2001) explored the influence of empathy ability on job satisfaction among 426 obstetric nurses using MSQ by Weiss et al. (1967). The results showed that overall job satisfaction was at moderate level (Mean = 3.43, SD = 0.80); intrinsic satisfaction was at moderate level (Mean = 2.91, SD = 0.75); extrinsic satisfaction was at moderate level (Mean = 3.28, SD = 0.74).

In Turkey, Çelik and Hisar (2012) studied the influence of the professionalism behavior of nurses working in health institutions on job satisfaction among 531 nurses. Job satisfaction was measured by MSQ (Weiss et al., 1967). The results showed that overall job satisfaction was at low level (Mean = 2.33, SD = 0.72); intrinsic satisfaction was at low level (Mean = 2.22, SD = 0.71); extrinsic satisfaction was at low level (Mean = 1.83, SD = 0.68).

In Ethiopia, Negussie and Demissie (2013) examined the relationship between leadership styles of nurse managers and nurses' job satisfaction among 175 nurses, using the MSQ (Weiss et al., 1967). The results showed that overall job satisfaction was at moderate level (Mean = 2.66, SD = 0.70); intrinsic satisfaction was at moderate level (Mean = 2.72, SD = 0.71); extrinsic satisfaction was at low level (Mean = 1.83, SD = 0.68).

In Guangzhou City, China, Lin and Ma (2013) examined job satisfaction of nurses in the pediatric department and the influential factors among 454 nurses, job satisfaction was measured using MSQ by Weiss et al. (1967). The results showed that overall job satisfaction was at moderate level (Mean = 3.52, SD = 0.46); intrinsic satisfaction was at moderate level (Mean = 3.14, SD = 0.61); extrinsic satisfaction was at moderate level (Mean = 2.83, SD = 0.63).

In Tianjin City, China, Y. B. Yang et al. (2014) examined the level of organizational commitment and job satisfaction among 600 full-time qualified nurses employed by five tertiary first-class hospitals in Tianjin. job satisfaction was measured using MSQ by Weiss et al. (1967). The results showed that overall job satisfaction was at moderate level (Mean = 2.81, SD = 0.98); intrinsic satisfaction was at moderate level (Mean = 2.82, SD = 0.68); extrinsic satisfaction was at moderate level (Mean = 2.83, SD = 0.63).

In Chengdu City, China, Hu et al. (2011) studied the factors related to job satisfaction among 129 nurses using MSQ by Weiss et al. (1967). The results showed that overall job satisfaction was at moderate level (Mean = 2.91, SD = 0.88); intrinsic satisfaction was at moderate level (Mean = 2.84, SD = 0.78); extrinsic satisfaction was at moderate level (Mean = 2.88, SD = 0.73).

In Canada, Breau and Rhéaume (2014) examined the relationship between empowerment and work environment on job satisfaction among 533 ICU nurses, job satisfaction was measured using MSQ by Weiss et al. (1967). The results showed that overall job satisfaction was at high level (Mean = 4.02, SD = 0.61); intrinsic satisfaction was at moderate level (Mean = 3.00, SD = 0.80); extrinsic satisfaction was at high level (Mean = 3.68, SD = 0.61).

In India, Azeem and Akhtar (2014) examined the influence of job satisfaction on organizational commitment of healthcare employees among 275 nurses; job satisfaction was measured by short form of the MSQ (Weiss et al., 1967). The results showed that overall job satisfaction was at moderate level (Mean = 3.43, SD = 0.81); intrinsic satisfaction was at moderate level (Mean = 3.12, SD = 0.76); extrinsic satisfaction was at moderate level (Mean = 3.66, SD = 0.69).

In Jordan, Saleh et al. (2014) examined the relationship between organizational commitment and work satisfaction among 210 registered nurses, using the MSQ (Weiss et al., 1967). The results showed that overall job satisfaction was at moderate level (Mean = 2.85, SD = 0.73); intrinsic satisfaction was at moderate level (Mean = 2.77, SD = 0.78); extrinsic satisfaction was at moderate level (Mean = 2.93, SD = 0.81).

In Taiwan, Hsu et al. (2015) explored the relationship between professional commitment and job satisfaction among 132 registered nurses, using the Job Satisfaction Questionnaire by Yeh et al. (2004) modify from MSQ. The result showed that overall job satisfaction was at high level (Mean = 3.81, SD = 0.36); intrinsic satisfaction was at high level (Mean = 3.74, SD = 0.38); extrinsic satisfaction was at high level (Mean = 3.74, SD = 0.78).

In Korea, Choi and Ahn (2016) studied the influence of nurse managers' authentic leadership on nurses' job satisfaction among 273 registered nurses, job satisfaction was measured using MSQ by Weiss et al. (1967). The results showed that overall job satisfaction was at moderate level (Mean = 3.08, SD = 0.42); intrinsic satisfaction was at moderate level (Mean = 3.22, SD = 0.43); extrinsic satisfaction was at moderate level (Mean = 2.83, SD = 0.50).

In Greek, Konstantinou and Prezerakos (2018) explored the relationship between leadership styles and job satisfaction among 200 nurses, using the Greek version of the MSQ (Weiss et al., 1967). The results showed that overall job satisfaction was at moderate level (Mean = 3.61, SD = 0.91); intrinsic satisfaction was at moderate level (Mean = 3.42, SD = 0.83); extrinsic satisfaction was at moderate level (Mean = 2.81, SD = 0.79).

Based on the above, the previous studies related to JS were conducted in Western and Asian countries, with the result of JS ranging from low to high level. Thus, the result was presented a varying level of JS among nurses in a different setting. However, Dali city is different from other regions, and there are many minority people, the economy is in developing, the population, culture is different, and the research of job satisfaction is still limited.

Factors Related to Job Satisfaction

Identification of factors, some personal factors was related to job satisfaction such as nurses' educational level and employee status. Besides personal factors, the relationship between professional commitment and job satisfaction was shown in numerous studies.

Professional Commitment

Definition of professional commitment.

Mowday, Steers, and Porter (1979) define professional commitment as an employee's involvement in careers in accepting professional values, nursing ethics, willingness to maintain membership, and a clear desire to establish professional beliefs.

Lachman and Aranya (1986) defined professional commitment as (a) the belief in and acceptance of professional goals and values, (b) willingness to exert considerable effort on behalf of the profession, and (c) a strong desire to maintain professional membership.

Meyer and Allen (1991) defined professional commitment as the degree of emotional involvement, identification, and attachment of workers to their profession, as well as workers' positive attitude toward their profession. It contains three components which are affective commitment, normative commitment and continuance commitment.

Gardner (1992) defines nursing professional commitment as a career that builds a meaningful lifelong pursuit and observes that the process is dynamic, with multiple models and styles.

Lee, Carswell, and Allen (2000) define professional commitment as an employee's emotional attachment to his or her profession, including an individual's recognition and acceptance of a person's professional values, or consistency with work, and a willingness to remain a member of the profession.

Gould and Fontenla (2006) defined professional commitment as the intention to stay and work as a nurse feeling responsibility toward the profession, being involved in the profession and a tendency to enhance career promotion.

García et al. (2019) defines professional commitment as the acquisition of knowledge and skills to form ethical values through values provide good care services, recognize the inherent autonomy, self-regulation and responsibility of the nursing profession, which creates a sense of belonging to the profession. .

Summary, professional commitment is defined as an employee's involvement in careers in accepting professional values, nursing ethics, willingness to maintain membership, and a clear desire to establish professional beliefs (Poter et al., 1974). This definition contains all of the foundation of professional commitment and is a widely accepted definition. Thus, definition was used in this study.

Conceptual model and component of professional commitment.

Meyer, Allen, and Smith's (1993) Three-Component Model of Professional Commitment. Meyer et al. (1993) identified three distinct themes in the definition of professional commitment: commitment as an affective attachment to the organization, commitment as a perceived cost associated with leaving the organization, and commitment as an obligation to remain in the organization. They referred to these three forms of commitment as affective, continuance, and normative commitment, respectively. Professional commitment is a multidimensional model, and the most widely used model is Meyer and Allen's three-dimensional model, which distinguishes among affective, normative, and continuance commitment (Meyer et al., 1993).

Professional Affective Commitment (PAC) is defined as the identification with, involvement in and emotional attachment to the profession. Thus, project workers

demonstrating strong affective commitment remain members of project management community because they chose to do so (Meyer et al, 1993).

Professional Continuance Commitment (PCC) is defined as commitment based on the employee's recognition of the costs associated with leaving the profession. Thus, project workers with strong continuance commitment perceive that they have much to lose if they leave this profession (Meyer et al, 1993).

Professional Normative Commitment (PNC) refers to commitment based on a feeling of obligation towards the profession. The project workers feel that they ought to remain in the project management profession (Meyer et al, 1993).

Porter and Mowday's Affective-dependence Model. This model developed by Porter, Steers, Mowday, and Boulian (1974), they described that commitment was influenced by affective more significant than economic factors. The commitment can be affected by affective instead of economic actors and represent something beyond mere passive loyalty to an organization (Poter et al, 1974). Employee's retention is not only because of economic factors but also affective influence and maybe the latter are more significant. Moreover, commitment could be deduced not only from the expressions of a personal beliefs and views but also from their action. They claimed commitment was combined with three parts of strong acceptance, participation, and loyalty. Commitment was characterized by three related factors which are as follows:

1. Personal highly commitment to an organization's goals, strong acceptance, strong belief in and acceptance of the organization's values;
2. A willingness to exert considerable effort on behalf of the organization, participation willing to contribute a great quantity power toward those ends would tend to remain with the organization in an effort to aid in the realization of much highly-valued objectives.
3. A strong desire to maintain membership in the organization, this is a psychological state which has implications for the employee's decision to continue membership in the organization and to remain as a loyal and "commitment" employs.

Role Theory. This theory developed by Mead (1934). Role theory provides a theoretical grounding for a professional commitment perspective. Mead (1934) defined role theory as “a cluster of social cues that guide and direct an individual’s behavior in a given setting”. Within role theory, patterned behaviors and expectations for behaviors are understood by performers (Mead, 1934). In other words, behaviors are communicated interdependently in relation to the social structure. The theory is based on the observation that people behave in a predictable way, and that an individual’s behavior is context specific, based on social position and other factors. Role theory concerns self-motivated behaviors in an organization along with social life features that are based on a communicative reciprocal process. In the role theory, the role theory determines the close relationship between individual behavior and society, and the experiential measurability from the perspective of specific role theory. In other words, behavior and social structure are interdependent. Emotional (results from satisfying experiences) and normative (career motivation) commitments contribute to professional commitment (Nogueras, 2006).

Rusbult’s Investment Model. Rusbult’s Investment Model developed by Rusbult (1983). Rusbult’s theory of commitment is rooted in interdependence theory, proposed by John Thibaut and Harold Kelley in the late 1950s. The investment model of the commitment process is rooted in interdependence theory and stems from the broader scientific age spirit of the 1960s and 1970s, which attempts to understand the seemingly irrational persistence of social behavior. The investment model was originally developed to promote social psychology, rather than focusing on positive emotions to predict persistence in interpersonal relationships. According to preliminary tests, the investment model believes that commitment to the goal is influenced by three independent factors: satisfaction, substitution quality, and investment size (Rusbult, 1983). Instead, the commitment is designed to mediate the effects of these three dependencies, including persistence. The investment model has proven to be remarkably generalizable across a range of commitment targets, including commitment toward both interpersonal (e.g., abusive relationships, friendships) and non-interpersonal (e.g., job, sports participation, support for public policies) targets. Assume that commitments achieve persistence by affecting a range of relationship maintenance phenomena. The investment model has proven to be significantly universal across a range of commitment goals, including commitment to interpersonal and non-interpersonal goals (Rusbult, 1983).

Johnson's Tripartite Typology of Commitment developed by Johnson (1991).

Michael Johnson's tripartite framework departs from the previous two models in conceptualizing commitment as a multidimensional rather than one-dimensional construct. Johnson prescribes three different types of commitment: structural commitment, or the sense of having to maintain a relationship; moral commitment, or the sense that a person should maintain a relationship; and personal commitment, or the sense of wanting to maintain a relationship. Structural commitment has four components: potential alternatives to the current relationship; perceived social pressure to remain with a current partner; irretrievable investments accrued over the course of a relationship; and the perceived difficulty of terminating the relationship (Johnson, 1991). In Levinger's terms, each of these components is held to make it difficult to end a relationship due largely to external constraints. Personal commitment also has three components: overall attraction to a partner; attraction to the relationship itself; and one's relational identity (i.e., the extent to which a person views the relationship as part of his or her self concept) (Johnson, Caughlin, & Huston, 1999).

Side-bet theory. Side-bet theory was developed by Becker (1960). This theory has been more than 40 years since Howard Becker (1960) introduced his side-bet theory of commitment. Becker described commitment as a tendency to engage in "consistent lines of activity", and argued that it develops as a "person finds that his involvement in social organization has, in effect, made side bets for him and thus constrained his future". Becker suggested that they fall into several broad categories: generalized cultural expectations about responsible behavior, self-presentation concerns, impersonal bureaucratic arrangements, and individual adjustments to social positions, and non-work concerns. Although generally not considered a stand-alone theory of organizational commitment today, it continues to be influential as a result of its incorporation into popular multi-dimensional models of organizational commitment, including three-component model (Meyer & Allen, 1991).

In summary, in all the theories and model of professional commitment, Affective-dependence Model (Poter et al., 1974) has been widely used and accepted by researcher in the nursing field. Therefore, it was adopted in the study.

Measurement of professional commitment. There are various instruments to measure professional commitment. Some of the existing instruments are as follow:

Professional Commitment Questionnaire by Lachman and Aranya (1986). The questionnaire was developed by Lachman and Aranya (1986) based on literature review. The instrument includes four items (1. I feel very loyal to the nursing profession. 2. For me, nursing is the best of all professions. 3. I am proud to tell others that I am part of this profession. 4. I really care about the fate of the nursing profession). Where each item is measured using a 7-point scale (1 = strongly disagree; 2 = moderately disagree; 3 = slightly disagree; 4 = uncertain; 5 = slightly agree; 6 = moderately agree; and 7 = strongly agree). The instrument's Cronbach's α reliability coefficient was .82; the reliability is acceptable.

The Tri-components model of employee commitment scale by Allen and Meyer (1991). This scale was developed by Allen and Meyer (1991) based on Meyer and Allen's (1991) Three-Component Model of Commitment, which comprised of two main parts. The first part intended to collect personal characteristics of nursing academic staff such as age, academic degree, specialty area, years of experience and marital status. The second part consisted of 23 items to assess tri-component model of employee commitment (affective 8 items, continuance 7 items and normative 8 items). Answers were recorded on a five-point scale (1=totally inaccurate and 5=totally accurate). High scores indicate a strong commitment to the profession. The instrument's Cronbach's α for the three dimensions (affective, continuance, and normative professional commitment) to be .79, .83, and .83 respectively.

Professional Commitment Scale by Lu et al. (2000). The Professional Commitment Scale was developed by Lu, Chiou, et al. in 2002 and based on Affective-dependence Model (Poter et al., 1974). This scale is composed of 26 items in total. It has three subscales including willingness to make effort (13 items); maintaining as a membership (8 items) and belief in goals and values (5 items). Item responses were rated on a four point scale (1-strongly do not support, 4-strongly support). Higher scores represent higher levels of commitment to the profession. Score of total scale is standardized between 26 and 104. Internal consistency using Cronbach's was .94.

Nurses' Professional Commitment Scale (NPCS) developed by Lin et al. (2007) after a systematic review of the literature. The NPCS measured 26 questions score on a 5-point Likert scale ranging from 1 point (strongly disagree) to 5 point (strongly agree); the total NPCS score is 26-130. Scores 0-43, 44-86, and 87-130 are respectively interpreted as poor, moderate, and great professional commitment. Nurses' Professional Commitment Scale (NPCS), divided into 5 part, which are 1) Understanding of nursing (items 1-6); 2) Nursing compliance nursing compliance (items 7-10); 3) Involvement of nursing professionals (items 11-16); 4) Devotion to nursing profession (items 17-21); 5) Retention of nursing professionals (items 22-26). The reliability of the NPCS was confirmed by Lin et al. (2007) with a Cronbach's alpha of 0.91

Career Commitment Scale developed by Blau (1985) and based on three-component model of commitment (Meyer & Allen, 1991). The Career Commitment Scale is a seven-item measure of one's attitude toward one's profession/vocation – that is, an employee's degree of commitment to a profession or career field (e.g., "I like this vocation too much to give it up"). Items are rated from 1 (strongly disagree) to 5 (strongly agree). Thus, a high score on career commitment indicates stronger commitment. Higher scores indicate a higher level of career commitment with a possible range of scores from 5 to 35. The CCS has a reported reliability of alpha between .76 and .84, an internal consistency, which has ranged from .87 and .85, and a test-retest reliability of .67 (Bedeian, Kemery, & Pizzolatto, 1991; Blau, 1985).

In summary, the professional commitment measuring including Professional Commitment Questionnaire, the Tri-components model of employee commitment scale, Professional Commitment Scale and Nurses' Professional Commitment Scale (NPCS), Career Commitment Scale, all of them have good validity and reliability. However, Professional Commitment Scale by Lu et al. (2000) is more appropriate for Chinese subjects than other western developed professional commitment instruments. In addition, this scale already tested in China. Thus, the Professional Commitment Scale by Lu et al. (2000) was used in this research.

Studies related to professional commitment. From the literature review, several studies have been found exploring the level of professional commitment. These studies are presented as follows:

In Taiwan, Lu et al. (2002) investigated the relationships among turnover intentions, professional commitment, and job satisfaction among 2550 registered nurses. Professional commitment measured by Professional Commitment Scale (Lu et al., 2000). The results showed that professional commitment was at moderate level (Mean = 71.22, SD = 10.59).

In Taiwan, K. Y. Lu et al. (2007) examined relationships between professional commitment and job satisfaction among 287 nurses. In this study, professional commitment measured by Professional Commitment Scale (PCS) (Lu et al., 2000). The results showed that professional commitment was at high level (Mean = 84.3, SD = 12.9).

In Taiwan City, China, Yuke (2008) investigated of the professional commitment among 345 clinical nurses. Professional commitment measured by Professional Commitment Scale (PCS) (Lu et al., 2000). The results showed that professional commitment was at moderate level (Mean = 77.5, SD = 12.1).

In turkey, Çetinkaya, Özmen, and Temel (2015) studied the factors related to professional commitment among 266 nurses using the Professional Commitment Scale (PCS) (Lu et al., 2000). The results showed that professional commitment was at moderate level (Mean = 73.31, SD = 13.48).

In Taiwan, Hsu et al. (2017) explored the relationship between professional commitment and job satisfaction among 132 registered nurses. In this study, professional commitment measured by Professional Commitment Scale (PCS) (Lu et al., 2000). The results showed that professional commitment was at moderate level (Mean = 72.5, SD = 11.1).

In turkey, Canan and Ergin (2017) examined professional commitment and stress management situations of nurses from different generations. Professional commitment measured by Professional Commitment Scale (PCS) (Lu et al, 2000). The result shows that the mean of professional commitment for X Generation (1966-1979) was 57.90 (SD = 9.76), the mean of professional commitment for Y Generation (1980-1995) was 59.66 (SD = 12.18), which was moderate level of professional commitment.

Based on the above, the previous studies related to PC were conducted in Turkey and Taiwan, with the result of PC ranging from low to high level, the studies with Lu's PCQ showed that the overall score range from 56.99- 84.3. Thus, the result was presented a varying level of PC among nurses in a difference setting. Even though there has four studies for PC were conducted in Taiwan, however, Dali city is different from Taiwan, the economy of Dali is in developing, the population, culture is different, and the research of professional commitment is still limited.

Relationship between professional commitment and job satisfaction.

According to literature review, scholars have explored the relationships between professional commitment and job satisfaction among different professionals. In this part, studies focus on the relations between professional commitment and job satisfaction reviewed as follow:

Nursing area.

In Taiwan, Lu et al. (2002) investigated the relationships among turnover intentions, professional commitment, and job satisfaction among 2550 registered nurses. Professional commitment measured by Professional Commitment Scale (Lu et al., 2000), job satisfaction was measured by Job Satisfaction Scale (Lu et al., 2002). The results showed that job satisfaction was positively correlated with professional commitment ($r = 0.27, p < 0.01$).

In Taiwan, K. Y. Lu et al. (2007) examined relationships between professional commitment and job satisfaction among 287 nurses. In this study, professional commitment measured by Professional Commitment Scale (PCS) (Lu et al., 2000). Job satisfaction was measured by Job Satisfaction Scale (JSS) (Johnston, 1997). The result showed that professional commitment has a direct effect on job satisfaction, which yielded a path coefficient of $\gamma = .54 (P < .05)$.

In Taiwan, Yang et al. (2012) examined the relationship between professional commitment and job satisfaction among 405 nurses. Professional commitment measured by Professional Commitment Scale (Irving, Coleman, & Cooper, 1997). Job satisfaction was measured by Nurses' Job Satisfaction Scale (NJSS) (Lin et al., 2007). The results

showed that professional commitment is a robust predictor of job satisfaction, which independently explained 29% of job satisfaction ($p = 0.000$).

In Taiwan, Vivienne et al. (2012) investigated the relationships among the self-efficacy, professional commitment, and job satisfaction of diabetic health-care personnel among 202 nurses. The professional commitment measured by Professional Commitment Scale (PCS) (Lin et al., 2007) and job satisfaction measured by Job Satisfaction Scale (JSS) (Lin et al., 2007). The results showed that professional commitment was significantly positively correlated with job satisfaction ($r = 0.28$, $p = 0.000$). The most important predictor of job satisfaction was professional commitment, which independently explained 27.6% of job satisfaction ($p = 0.000$).

In Italy, Caricati et al. (2014) examined work climate, work values and professional commitment as predictors of job satisfaction among 185 nurses who come from four hospitals in the North Central region. Professional commitment measured by Professional Commitment Scale was developed by Mlicki and Ellemers (1996). Job satisfaction was measured of the McCloskey / Mueller Satisfaction Scale (McCloskey 1974, Mueller & McCloskey 1990). The results showed that professional commitment ($\beta = 0.23$, $Z = 6.64$, $P < 0.001$) directly and significantly predicted job satisfaction.

In Taiwan, Hsu et al. (2017) explored the relationship between professional commitment and job satisfaction among 132 registered nurses. In this study, professional commitment measured by Professional Commitment Scale (PCS) (Lu et al., 2000) and Job Satisfaction Scale by Yeh et al. (2004) measured job satisfaction for this study. The result showed that nurses' professional commitment was strongly related to job satisfaction ($r = 0.51$, $p < .01$); aspects of professional commitment explained 32% of the variance in job satisfaction.

In Croatia, Barać et al. (2018) explored the mediating role of nurses' professional commitment in the relationship between core self-evaluation and job satisfaction. In this study, professional commitment measured by Professional Commitment Scale (PCS) (Lin et al., 2007). Job satisfaction was measured by Job Satisfaction Survey (JSS) (Spector, 1985). The result showed that there is a significant positive correlation between professional commitment and job satisfaction ($r = 0.464$, $p < 0.01$).

Other areas.

In the United States, Sorensen and McKim (2014) conducted a study to perceived work-life balance ability, job satisfaction, and professional commitment among agriculture teachers, including all school-based agricultural teachers in Oregon (N = 111) in the school year 2013-2014. Professional commitment measured by professional commitment scales (Blau, 1985) and job satisfaction measured by General Job Satisfaction subscale from the Job Diagnostic Survey (Hackman & Oldham, 1975). The results showed that there was a positive correlation between professional commitment and job satisfaction ($r = .71, P < .05$).

In India, Basu (2016) examined a study to confirm the relationship between job satisfaction and job satisfaction among 98 secondary school teachers. The study used the Teacher Professional Commitment Scale (Sawhne & Mohali, 2015) and the Job Satisfaction Survey (Kumar & Mutha, 1985). The results showed that there is a high positive correlation between the data provided and the professional commitment and job satisfaction of secondary school teachers ($r = 0.845, p < .01$).

In summary, from literature review, there are the association between professional commitment and job satisfaction in different settings. The background of care means that the more professional the nurses are, the higher the job satisfaction, the more likely they are to focus on the profession and organization. Some of these studies were conducted in Taiwan, China, but in mainland China, professional skills and job functions are different. Therefore, the research on the correlation between clinical nurses' professional commitment and job satisfaction is significance to China's exploration.

Educational Level

Definition of educational level. There are some definitions by different authors have been reviewed as follows.

Educational level refers to a broad part of the educational ladder, i.e. progress from very basic to more complex learning experiences, including all areas and planned groups that may occur at a specific stage of progress (International Standard Classification of Education, 1997).

Education level refers to academic credentials of degree an individual has obtained (Thomas & Daniel, 2009).

Education level refers to achievement of nursing educational program.

In this study, nurses' educational level refers to achievement of nursing educational program.

Type of educational level. According to review, there are 5 types of educational level in China.

Secondary Diploma refers to courses are three-year nursing courses designed to teach clinical skills.

Associate degree refers to title of degree awarded at Associate level of middle health education institution. The goal of training Associate degree nurses is to clinical practice, after 3 years of nurse training, the degree recipients have basic nursing, professional knowledge and skills.

Bachelor degree refers to title of degree awarded at undergraduate level of higher health education institution. After 4 to 5 years of nurse training and 48 weeks of clinical practice, the degree recipients have a good grasp of basic nursing, professional knowledge and basic skills.

Master degree refers to prepare experts in either clinical practice that emphasizes advanced clinical practice or in research that focuses on research training.

Doctoral degree refers to guiding nurses in education, research, leadership and management skills.

Relationship between nurses' educational level and job satisfaction.

In China, K. Y. Lu et al. (2007) surveyed 512 medical and surgical nurses' job satisfaction and related factors in two teaching hospitals. The results showed that the job satisfaction of nurses with bachelor's degree (mean rank = 234.92) was lower than that of nurses with associate's degree (mean rank = 259.98) or diploma (mean rank = 257.68).

There was no significant difference in job satisfaction among the respondents of different education programs ($P > 0.05$).

In Kampala, Nabirye, Brown, Pryor, and Maples (2011) assessed the job satisfaction of 333 nurses from four hospitals. The results showed that the difference in job satisfaction between nursing education levels was statistically significant ($F = 3.961$, $P = 0.002$).

In Michigan, USA, Kalisch et al. (2010) explored factors affecting job satisfaction in 3,675 nursing staff in five hospitals and 80 patient care units. The results of the study showed that high academic qualifications ($P < 0.05$) were associated with higher satisfaction.

In Taiwan, Lu et al. (2002) investigated the relationship between career commitment and job satisfaction for 2,250 registered nurses. The results of the study showed that the level of education was negatively correlated with job satisfaction ($r = -0.101$).

In Shanghai, China, Liu et al. (2012) explored nurses' perceptions and experiences on the job satisfaction of 2,850 nurses in 19 large general hospitals. The results showed that relatively few nurses with associate degrees ($n = 715$, 42.8%) reported that compared with diplomas ($n = 190$, 62.3%) or bachelor's degrees ($n = 215$, 78.2%), their Job Satisfaction).

In Saudi, Abualrub and Alghamdi (2012) examine the impact of leadership styles of nurse managers on nurses' job satisfaction among 600 nurses. The findings showed that there was a significant positive relationship between education level and job satisfaction ($p < 0.05$).

Sichuan Province, China, Zhang and Wu (2015) investigated job satisfaction of clinical nurses with different educational background among 860 clinical nurses. The results showed that the high the education is, the low job satisfaction are, nurses with an associate degree or secondary diploma delivered were more satisfied than bachelor degree ($p = .000$).

In summary, these studies provided empirical support and evidences for the relationship between nurses' educational level and job satisfaction among nurses in hospital settings. Educational level is a very important factor related to job satisfaction; however, the relevant study between nurses' educational level and job satisfaction in China is limited. Hence, it was necessary to explore the relationship between nurses' educational level and job satisfaction. Further research to understand the relationship between nurses' education levels and job satisfaction can help the health care community specifically address key determinants of job satisfaction for associate and undergraduate nurses.

Employee Status

Definition of employee status. There are some definitions by different authors have been reviewed as follows.

Employee status refers to employee identity and legal status and classification of employees or persons working on their Own (Shang et al., 2014).

Employee status refers to the position of being legally employed by a particular company (Campbell et al., 2013).

Employee status refers to an employee's relative position within a population of employees (Ang, 2012)

In this study, nurses' employee status refers to an employee's relative position within a population of employees.

Type of employee status. According to review, there are 2 types of employee status included.

Temporary nurse refers to a nurse who signs a short-term labor contract with the hospital; the employment conditions for contract-based positions are set by individual employers and are based primarily on current needs and resources. The employment relationship is between the hospital and individual.

Permanent nurse refers to a nurse who signs a lifetime labor contract with the government. Their employment relationship is between the government and individual. Permanent nurses are guaranteed by the government.

Relationship between employee status and job satisfaction. In Turkey, Golbasi et al. (2008) described and compared job satisfaction of 186 nurses working in hospitals. The results showed that the internal job satisfaction of temporary nurses was determined as higher than permanent nurses, and the difference was statistically significant ($p < 0.05$).

In Korea, Han et al. (2009) conducted to describe and compare job satisfaction between permanent and temporary nurses among 416 nurses from 19 hospitals. The results showed that, the mean score of permanent was 26.33 the mean score of permanent was 25.01. A statistically significant difference was found between the groups ($t = 2.79$, $p = .006$).

In Finland, Ylitörmänen et al. (2012) identified differences in job satisfaction among nursing staff in terms of demographic variables. The results showed that the temporary nurses were more satisfied than the permanent nurses ($P = .026$).

In Yunnan province, China, Jin et al. (2012) analysis of job satisfaction and related influencing factors of temporary nurses in tertiary hospitals among 1832 nurses. The results showed that temporary nurses more dissatisfaction than permanent nurses ($P < 0.001$).

In Guangzhou City, China, Liu et al. (2012) studied the relationship between hospital work environment and job satisfaction of 1,104 bedside nurses in 21 hospitals. The results showed that permanent nurses experienced more serious work dissatisfaction than temporary nurses ($P < 0.001$).

In Shanghai City, China, Yu (2016) investigated the effects of nurses' employment contracts and unfair welfare structure on job satisfaction among 2250 nurses. The results showed that the degree of dissatisfaction of temporary nurses with their remuneration and welfare was significantly higher than that of permanent nurses with higher level of job security ($P < 0.01$).

In summary, there are few studies found in nursing that explored the relationship between employee status and job satisfaction. Among the studies some inconsistencies were found on overall satisfaction and also in employee status. So it is encouraging to explore the relationship between employee status and job satisfaction in diverse backgrounds to explore the satisfaction of nurses in different employee status.

Situation of Job Satisfaction among Nurses in Tertiary General Hospital, Yunnan Province, the People's Republic of China

The Chinese government is divided into five administrative levels: national, provincial, municipal, county and community (rural) or township (city). Public health networks are established at the same administrative level, including disease control and prevention institutions, health education, and infant care and health surveillance. As a public health institution, the hospital mainly provides general services such as outpatient service, hospitalization, various medical examinations and diagnosis. The hospital is divided into three levels according to its functions, equipment and technology. Primary hospitals, secondary hospital and tertiary hospitals are respectively (Ministry of Health, 2011). Most nurses working in tertiary hospitals face heavy workloads in their daily work (Lin, 2012).

China's 2,232 tertiary public hospitals accounted for only 7.66% of all types of health institutions, but still provide 48.70% of outpatient services and 42.50% of inpatient services (Ministry of Health, 2017). Yunnan province has a multitude of medical services center in southwest China, Yunnan tertiary hospitals provide comprehensive, high-quality, professional medical services. By the end of 2016, the number of nurses was 105,966; who needed to need service for 47.71 million residents (National Bureau of Statistic of China, 2017). Obviously a nursing shortage and heavy workload existed. The “Nurse Regulations” published in 2008 require all clinical caregivers to provide “comprehensive, comprehensive, professional and comprehensive care, including condition observation, treatment and treatment, psychological care, mentoring and other health care tasks” (Ministry of Health of the People's Republic of China, 2010), thus these may further increase the workload of nurses and increase nurse turnover.

As the economy continues to reform, China has made some major policy changes in health care that have had an impact on the delivery of health care (Ho, 1995). These developments have made people aware of the importance of the professional status of nurses. In China, there are secondary nursing education program and postsecondary nursing education program. For secondary nursing education program, there are two types of secondary nursing programs: one enrolls high school graduates and has a 2-to-3-year curriculum, another admits middle/junior high school graduates and has a 3-to-4-year curriculum. Upon completion of a secondary nursing program, graduates are eligible to take the NNLE, and those who pass the national test are qualified to work as RNs (Chan, 1999). In China, 99% of the 1.2 million nurses are trained in these programs (Xu et al., 2000). For postsecondary nursing education program, it includes an associate degree, a bachelor degree, a master degree and a PHD. An associate degree has a 3-year curriculum and, approximately 1000 nurses graduate from zhuanke program each year (Chan, 2009). Bachelor degree have a 4-year curriculum, which is equivalent to most medical education programs in length, and it has been the government priority for development in Dali. Masters degree in nursing are 3 years in length, and enroll baccalaureate nursing graduates through competitive national examinations developed by each individual program. PHD in nursing is 3 years in length and it guides nurses in education, research and management skills.

Although the number of nurses with bachelor's or master's degrees has increased in China in recent years, this number is limited compared to nurses with secondary or higher diplomas (Shang et al., 2014). There are only 14.6% of nurses who hold a bachelor degree and above and there are 62.5% nurses who have earned an associated degree, and baccalaureate nurses comprise only a small proportion (3.2%) (Ministry of Health, 2016). This means the level of nursing education in China is still in the development stage, and lags behind many countries. According to Ministry of Health, within five years each health worker should participate in a continuing education program of at least 120 hours (Ministry of Health, 2009). Due to shortage of nurses, nurses in general hospitals rarely have chances to attend the training or workshop (Chen et al., 2012). The knowledge of a university-educated nurse can lead to a broader perspective, higher expectations and satisfaction than an associate degree nurse (Shang et al., 2014).

Chinese nurses are divided into contract nurses and permanent nurses. The system of contract nurses in China has been underway for nearly 20 years, with the advancement of the personnel reform system of the national health institutions, the proportion of contract nurses in nursing at all levels has also increased (Shang et al., 2014). Along with the continuing transformation of the Chinese economic system, there is an increasing proportion of contract-based nurses (Chao, Shih, & Hsu, 2016). The proportion of contract-based nurses employed by Chinese hospitals has been reported to vary by hospitals from 20 to 54% (Wang et al., 2008). In two tertiary hospitals in Dali, the majority of new nurses are hired as temporary nurses; almost no permanent nurses are recruited. For example, the First Affiliated Hospital of Dali University, only three permanent nurses are recruited every three to five years. There is usually no difference in the descriptions of job responsibilities between temporary nurse and permanent nurse, but differences in remuneration exist. Therefore, the practice of unequal payment for equal job responsibilities has raised general concerns about equity as well as potential job dissatisfaction among contract-based nurses (Zhou & Wang, 2010).

In Yunnan Province, the researchers used a cluster sampling method to conduct a questionnaire survey of all employed and registered contract nurses in six tertiary general hospitals in Yunnan Province. The job satisfaction of contract nurses was generally low, and the average job satisfaction score was 3.22 ± 0.552 points, of which 607 people with an average score of less than 3.03 points, accounting for 33.1% (Jin et al., 2012). Although the proportion of contract nurses in various regions is increasing year by year, the job satisfaction of contract nurses has been at a low level (Jin et al., 2012). Although the state has formulated policies that stipulate “equal pay for equal work”, but the contract nurses had no difference with permanent nurses in terms of work intensity, time and pressure, but they were poorer in salary and welfare, and were prone to negative emotions such as psychological imbalance (Lu et al., 2002).

High workload is a problem in health care professions in China (K. Y. Lu et al., 2007). The healthcare system has changed from a government-led to a more market-led system; patient-centred holistic nursing care model has gradually replaced the traditional disease-centred nursing care model (Ministry of Health of the People's Republic of China, 2010). Changes in the healthcare system and nursing care model have increased the

workload and responsibilities of nurses. For example, both of the tertiary hospitals in Dali require nurses to provide full, comprehensive, professional and holistic nursing care, including routine treatment disposal, condition observation, patient guidance and other health care duties. Nurses are not only responsible for the professional care of patients; they are also responsible for assisting patients with activities of daily living. Meanwhile, most departments have an increasing number of patients (Nursing Department Report, 2018), which has led most nurses to complaining about being overloaded. These changes have not only led to increased overload and burnout, but also reduced the enthusiasm of nurses. For this reason, Lu et al. (2002) stated that nurses might feel stressed, exhausted, and anxious; therefore it is difficult to achieve high job satisfaction in their work.

Because most of the nurses in hospital are women, Clark (1997) stated that females reported higher levels of most kind of job satisfaction than males, even when a large number of subjects and job characteristics were controlled. On the one hand, some female nurses may have some extent of positive affective appraisal of their job; they hope to achieve a certain degree of realization in personal value, work ability and personal development. But on the other hand, they are facing all types of scheduling conflicts related to their family and financial issues. Because they have to seek a balance between their family and their work, this may hinder their ability to participate in more formal education or training courses. Male nurses hope to achieve a certain degree of personal value, work ability, and personal development, so the demand for the work environment is higher than other aspects (Clark, 1997).

The workload for hospitals and nurses in infant birthing units has increased recently. Starting on January 1, 2016, all Chinese couples are allowed to have two children. This marks the end of China's one-child policy, which has restricted the majority of Chinese families to only one child for the last 35 years (Baochang, Feng, Zhigang, & Erli, 2007). The new policy will allow almost all Chinese people to have their preferred number of children. So some couples choose to have a second baby, but it also leads to a certain impact on the job. This situation is very common for nurses in the two tertiary hospitals of Dali, so they have to seek a balance between their family and their work; this may hinder their ability to continue their education and increase the job knowledge.

Two tertiary hospitals in Dali, young nurses are the main force of the department; the tasks and burdens are heavier, and the pressure is greater. The nurses with work experience of less than 5 years endure intense training on the requirements and processes of the hospital, because a good nurse must go through a training program and assessment test. So at this stage, their enthusiasm for work gradually decreases and they tend to get bored and uncertain about their work. Besides, they do the same nursing work as nurses with longer working experience, and they are not given full play to the advantages of their senior nurses. On the other hand, the content of nursing work is to take care of the patients, which determines that the nursing work must be very meticulous. The work is meticulous in nature and physically demanding, and the social evaluation received is lower than that of other medical personnel. The sense of inequality makes the nurse feel frustrated with his own occupational status.

In short, the current shortage of nurses in China highlights the importance of understanding nurse job satisfaction and related factors, enabling medical institutions to implement effective interventions to improve the professional commitment and job satisfaction of nursing staff. This understanding will help to ensure patient safety and improve the quality of care, but also contribute to the healthy development of health care.

Conceptual Framework

The conceptual framework of this study based on literature review. Factors related to job satisfaction included professional commitment, educational level, and employee status. Job satisfaction is the nurse who positive attitude towards the workplace has manifested in the desire to continue working in the hospital (Herzberg, 2003). Professional commitment (PC) is an employee's involvement in careers in accepting professional values, nursing ethics, willingness to maintain membership, and a clear desire to establish professional beliefs (Poter et al., 1974). It contains three factors which are 1) a strong belief in and acceptance of the organization's goals and values; 2) a willingness to exert considerable effort on behalf of the organization; and 3) a strong desire to maintain membership in the organization. The relationship between job satisfaction and related factor including professional commitment, educational level, and employee status were examined in this study.

CHAPTER 3

Methodology

This chapter describes the method of the present study. It consists of description of the research design, population and sample, research setting, research instruments, protection of human subjects, data collection procedure and data analysis.

Research Design

A descriptive correlational research design was used in this study. This study was conducted in two tertiary general hospitals in Dali, the People's Republic of China.

Population and Sample

Population

The target population was 1440 registered nurses in two tertiary general hospitals in Dali city, including the first affiliated Hospital of Dali University (675) and People's Hospital in Dali Bai Nationality Autonomous Prefecture. (765).

Sample

Sampling criteria.

Inclusion criteria for this study as follows:

1. Nurse who have worked in the selected hospital at least one year.
2. Nurses who take role to provide care for the patients.

Exclusion criteria for this study as follows:

Nurses who are not in the hospital, such as on vacation, maternity leave, sick leave, study in outside.

Sample size. The sample size of this study was calculated according to the formula of Yamane (1973) as follows:

$$n = N / (1 + N(e)^2)$$

A 95% confidence level and $p=0.5$ was be assumed

N =total number of accessible population

n =sample size

e =the error in the sample, defines as 5 %

The sample size $n = 1440 \div (1 + 1440 \times 0.0025^2) = 313$

According to above formula, the sample size need in this study was 313 nurses. Considering the possible loss of subjects, 20% of the sample size (Israel, 1992), 63 nurses, were added into the sample. Therefore, total sample was 376 nurses.

Sampling Technique

1. The target hospitals included two hospitals.
2. A proportionate sampling method was used to determine the number of nurses of each hospital. Total 376 nurses were sampled from two hospitals.
3. A proportionate stratified random sampling method was employed to determine the number of nurses selected from eight clinical nursing departments in each hospital. Medical department, surgical department, Out-Patient department (OPD), Pediatric department, Obstetrics Gynecology YN (OB-G), Operating room (OR), Emergency room (ER), and Intensive care unit (ICU) will be involved in this study.
4. This process was used until the required numbers of nurses was obtained. Subjects participating in the reliability testing were excluded on sample selection. The sampling plan was as follows (Table 1 and Table 2).

Table 1

Number of Population and Sample Size of Each Hospital

Name of Hospital	Population	Sample
Hospital A	675	176
Hospital B	765	200
Total	1440	376

Note. Hospital A: The First Affiliated Hospital of Dali University,
Hospital B: People's Hospital in Dali Bai Nationality Autonomous Prefecture.

Table 2

Number of Population and Sample Size of Each department

Department	Hospital A		Hospital B	
	Population	Sample	Population	Sample
Medical	242	63	271	71
Surgical	193	50	212	55
OPD	57	15	69	18
Pediatric department	33	9	43	11
OB-GYN	45	12	45	12
OR	35	9	34	9
ER	30	8	42	11
ICU	40	10	49	13
Total	675	176	765	200

Research Setting

Data was collected from The First Affiliated Hospital of Dali University and People's Hospital in Dali Bai Nationality Autonomous Prefecture.

Research Instrument

A set of questionnaires consisted of three parts were used in this study: The Demographic Data Form; the Professional Commitment Scale; the Job satisfaction questionnaire. The details of each questionnaire are described as follows.

Part One: Demographic Data form

The demographic data form was developed by researcher and it consists of gender, age, name of working hospital, working department, marital status, educational level, job position, employee status, and years of work experience.

Part Two: The Professional Commitment Scale

Professional Commitment Scale by Lu et al. (2000) The Professional Commitment Scale was developed by Lu et al. in 2000 and based on Affective-dependence model (Porter et al., 1974). This scale is composed of 26 items in total. It has three subscales including willingness to make effort (13 items); maintaining as a membership (8 items) and belief in goals and values (5 items). Item responses were rated on a four point scale (1 - strongly do not support, 4 - strongly support). Higher scores represent higher levels of commitment to the profession. Overall score of total scale is standardized between 26 and 104. It was divided into three levels:

	Low	Moderate	High
Overall	26-52	52.1-78	78.1 - 104
Willingness to make effort	13-26	26.1-39	39.1-52
Maintaining as a membership	8-16	16.1-24	24.1-32
Belief in goals and values	5-10	10.1-15	15.1-20

Part Three: Job satisfaction questionnaire

Job satisfaction questionnaire by Yeh et al. (2004) modified from Short-Form Minnesota Satisfaction Questionnaire (MSQ). The short form scale was designed to measure intrinsic and extrinsic satisfaction based on Herzberg and colleagues' Two-Factor Theory (Weiss et al., 1967). This self-assessment scale includes 20 items addressing two subscales that measured intrinsic satisfaction and extrinsic satisfaction. To score the Job Satisfaction Scale, a 5-point Likert-type scale ranging from 1 point (very dissatisfied) to 5 points (very satisfied) was used. The higher score means higher job satisfaction. The level of job satisfaction was indicates based on a previous study by Yeh et al. (2004) as follow:

Mean score 1.00-2.33 indicates low level of job satisfaction

Mean score 2.34-3.67 indicates moderate level of job satisfaction

Mean score 3.68-5.00 indicates high level of job satisfaction

Validity and Reliability

Validity. The validity of the 20-items of Job satisfaction questionnaire (Yeh et al., 2004) and 26 of the Professional Commitment Scale (Lu et al., 2000) were confirmed. The researcher was not tested the validity of these two instruments in this study.

Reliability. Before distributing questionnaire, the Chinese version of PCS and JSQ was tested reliability by using the Cronbach's alpha coefficient. A sample of 30 nurses from the First Affiliated Hospital of Dali University and People's Hospital in Dali Bai Nationality Autonomous Prefecture who had same characteristics was randomly selected. The Cronbach's α coefficient of overall JSQ was .912 and of each dimension intrinsic satisfaction and extrinsic satisfaction were .887 and .851, respectively. The Cronbach's α coefficient of PCS was 0.917.

Protection of Human Rights

Before data collection, the research proposal was submitted to Research Ethic Review Committee of Faculty of Nursing, Chiang Mai University, Thailand. All samples were notified about the study objectives, methods, and benefits. The researcher informed that whole process was voluntary participation; they had rights to refuse, stop or withdraw the study at any time without being punished or losing any benefits. The data collection process definitely did not involve any physical and psychological harm and risk. To protect human right of samples, a Chinese version of consent form gave samples to sign the name. A statement contained a cover letter to assure confidentiality and anonymity of personal response. Only code number was used for questionnaire follow up. All information from samples was only used in this study and keep confidential. The result was showed by a group form.

Data Collection Procedure

Data was collected by using questionnaires with the following steps:

1. The researcher submitted the research proposal to the Research Ethics Review Committee, the Faculty of Nursing, Chiang Mai University, Thailand for review.
2. After receiving the approval letter from the Research Ethics Committee of the Faculty of Nursing, Chiang Mai University, the research proposal, a cover letter from CMU, application letter for permission to collect data, and Chinese version data collection questionnaires were submitted to the directors of nursing department of the two target hospitals for approval to collect data.
3. After getting approval from each hospital, the researcher met the directors of the nursing department to explain the purpose and the benefits of the study. The researcher requested the director of each nursing department to assign a research coordinator from each hospital. Then the research objective and detail of data collection process was explained to research coordinators before the coordinators starting to work.
4. The researcher got the name list of nurses from the nursing department in each hospital and use proportionate stratified random sampling method to select nurses. The nurses who had participated in the reliability test were excluded from the name list.
5. During the time, the researcher requested to officially inform all the nurse managers about the study. Then the researcher made an appointment with the head nurses to introduce the objectives and the benefits of the study.
6. Each of information sheet, consent form and questionnaire were put in sealed envelopes respectively and distribute to subjects by coordinator, questionnaire are anonymous. All participants were requested for cooperation to complete the forms in their available time.
7. The samples were asked to return the completed questionnaire within two weeks in the sealed envelope in the locked box provided in the nursing department. The box could be opened only by the researcher. Samples were requested to separate consent

forms and questionnaire before submitting into boxes and the information sheet was kept by samples.

8. The researcher distributed 376 questionnaires. The returned questionnaires were 370. The response rate was 98.40% of distributed questionnaires. Finally, 368 (97.87%) of distributed questionnaires were used to analyze after the researcher assessed completeness of questionnaires.

Data Analysis Procedure

The data collected from the subjects was coded and entered into the statistical package for the Social Science 13.0 (SPSS 13.0) for data analysis. The significant alpha was set at 0.05. The analysis was analyzed as follow:

1. Demographic data was analyzed by using frequency, percentage, range, mean and standard deviation.
2. Scores of professional commitment and job satisfaction by nurse was analyzed by using mean and standard deviation of each scale.
3. Correlation coefficient testing was used to test the relationship between professional commitment and job satisfaction, the relationship between educational level and job satisfaction, the relationship between employee status and job satisfaction. As educational level and employee status are categorical variable, should change to be dummy variable. Then, the Kolmogorov Smirnov (KS) statistic was applied to test the normality of data distribution. As the result, the data distribution was non-normal distribution. Therefore, Spearman rank correlation method was used. According to Burns and Grove (2007), $r < 0.3$ was considered as a weak relationship. $r = 0.3-0.5$ was regarded as a moderate relationship. And $r > 0.5$ was considered as a strong relationship.

4. Enter regression analysis was run to predict job satisfaction from three factors.

CHAPTER 4

Findings and Discussion

The purposes of this study were to explore job satisfaction and to identify the relationship between job satisfaction and related factors including professional commitment, educational level, and employee status among nurses in tertiary general hospital in Dali, the People's Republic of China. In this chapter, the finding is presented in 3 parts with tables and descriptions as follows:

Part I: Demographic data of the subjects

Part II: Job satisfaction of the subjects

Part III: Relationships between of job satisfaction and its related factors including professional commitment, educational level, and employee status.

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Findings

Part I: Demographic Data of the Subjects

The demographic data of the subjects are presented in table 3

Table 3

*Frequency, Percentage, Mean, Standard Deviation and the Range of Subjects
Categorized by Demographic Characteristic of the Subjects (n = 368)*

Characteristics	Frequency (n)	Percentage (%)
Age		
(X̄=31.10, SD=5.96, Range=21-55 years)		
21-30	199	54.08
31-40	140	38.04
41-50	25	6.79
51-55	4	1.09
Gender		
Male	5	1.36
Female	363	98.64
Marital status		
Single	94	25.54
Married	266	72.28
Divorced	8	2.17
Working department		
Medical Department	129	30.05
Surgical Department	105	28.53
Pediatric Department	20	5.43
Obstetrics and Gynecology	24	6.52
Outpatient department	31	8.42
Emergency Room	19	5.16
Intensive Care Unit	23	6.25
Operating Room	17	4.62

Table 3 (continued)

Characteristics	Frequency (n)	Percentage (%)
Educational level		
Associate degree	149	40.49
Bachelor degree	218	59.24
Master Degree	1	0.27
Employment status		
Temporary	277	75.27
Permanent	91	24.73
Work experience		
≤ 5 years	129	35.05
6-10 years	150	40.76
11-15 years	50	13.59
16-20 years	17	4.62
21-25 years	15	4.08
26-30 years	6	1.63
≥31 years	1	0.27

As shown in Table 3, the majority of the subjects (54.08%) aged from 21 to 30 years old. Most of the subjects (98.64%) were female and 72.28% of them were married, with 59.24% of them had finished bachelor degree of nursing education. Surgical units accounted for 28.53% of the subjects and 30.05% were from medical units. The majority of the subjects (94.02%) were staff nurse and 75.27% of them were temporary nurse. The nurses who have been working for 6-10 years occupied the largest number (40.76%).

Part II: Job Satisfaction of the Subjects

This part presents the overall score, the mean and standard deviation of overall of job satisfaction as perceived by the subjects ($n = 368$). The results are shown in tables that follow.

Table 4

Mean, Standard Deviation, and Level of Overall of Job Satisfaction as Perceived by Subjects ($n = 368$)

Job satisfaction	Mean	SD	Level
Intrinsic satisfaction	3.63	0.59	Moderate
Extrinsic satisfaction	3.57	0.65	Moderate
Overall Job satisfaction	3.60	0.56	Moderate

Table 4 showed that the overall job satisfaction as perceived by the subjects was at a moderate level (Mean = 3.60, SD = 0.56). Two dimensions were perceived by the subjects at moderate levels including intrinsic satisfaction (Mean = 3.63, SD = 0.59) and extrinsic satisfaction (Mean = 3.57, SD = 0.65).

Part III: Professional commitment of the Subjects

This part presents the overall score, the mean and standard deviation of overall and each dimension of professional commitment ($n = 368$). The results are shown in tables that follow.

Table 5

Mean, Standard Deviation, and Level of Overall of Professional Commitment as Perceived by Subjects ($n = 368$)

Professional Commitment	Mean	SD	Level
Willingness to make effort	35.01	6.03	Moderate
Maintaining as a membership	23.38	4.36	Moderate
Belief in goals and values	15.03	2.32	Moderate
Overall	73.42	9.83	Moderate

Table 5 showed that the overall professional commitment as perceived by the subjects was at a moderate level (Mean = 73.42, SD = 9.83). Three dimensions were perceived by the subjects at moderate levels including willingness to make effort (Mean = 35.01, SD = 6.03), maintaining as a membership (Mean = 23.38, SD = 4.36) and belief in goals and values (Mean = 15.03, SD = 2.32).

Part VI: Relationships Between the Overall Job Satisfaction and its Related Factors Including Professional Commitment, Educational Level and Employee Status

This part describes relationships between overall job satisfaction and its related factors including professional commitment, educational level, and employee status. Data showed not normal distribution, so Spearman's rank-order coefficient correlation statistics was used. The results are showed in Table 6.

Table 6

Relationships Between Job Satisfaction and Professional Commitment, Relationships Between Job Satisfaction and Demographic Factors Including Educational Level and Employee Status of the Subjects (n = 368)

	Intrinsic Satisfaction	Extrinsic Satisfaction	Overall job Satisfaction
Professional commitment	.363**	.287**	.367**
Educational level	-.077	-.074	-.094
Employment status	.038	.078	.074

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

In Table 6, the results of Spearman's rank-order coefficient showed that there was a moderate positive relationship between overall job satisfaction and professional commitment ($r = .367$; $p < .000$). There was a moderate positive relationship between intrinsic satisfaction and professional commitment ($r = .363$; $p < .000$); There was a weak positive relationship between extrinsic satisfaction and professional commitment ($r = .287$; $p < .000$). And there was no relationship between intrinsic, extrinsic, overall job satisfaction and educational level. There was no relationship between intrinsic, extrinsic, overall job satisfaction and employment status.

Table 7

Multiple Regression Analysis of the Factor Predicting Job Satisfaction as Perceived by Nurses (n = 368)

Factor		Unstandardized Coefficients			
		β	Std. Error	Sig	
Professional Commitment		.018	.003	.000	
Educational Level		-.053	.057	.352	
Employment Status		.065	.065	.319	
a. Dependent Variable: JS					
Model	R	R ²	Adjusted R Square	Sig F	Sig
1	.331a	.110	.102	14.936	.000

a. Predictor:(Constant),PC, EL, ES

b. Dependent Variable: JS

In Table 7, a enter regression was run to predict job satisfaction, professional commitment significantly predicted job satisfaction, $F(3,364) = 14.936$, $P < .001$, $R^2 = 11.0\%$. The factors that predicted the job satisfaction were professional commitment ($\beta = .018$, $SE = .003$), and it predict 11% of job satisfaction.

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Discussion

This section includes detailed explanation and discussion regarding each result that has been found in this study through data analysis to answer the research objectives and research questions. The explanation of each objective is as follows:

Objective I: To Explore Job Satisfaction Among Nurses in Tertiary General Hospital in Dali, the People's Republic of China

As shown in table 4, the overall score of job satisfaction was at a moderate level (Mean = 3.60, SD = 0.56). And the intrinsic satisfaction was at a moderate level (Mean = 3.63, SD = 0.60), the extrinsic satisfaction was at a moderate level (Mean = 3.57, SD = 0.65).

This finding was consistent with the previous study of Yeh et al. (2004), where overall job satisfaction was at a moderate level among 340 nurses in Taiwan (Mean = 3.45, SD = 0.55), intrinsic satisfaction was at a moderate level (Mean = 3.54, SD = 0.57) and extrinsic satisfaction was at a moderate level (Mean = 3.32, SD = 0.63). In addition, Li (2011) examined job satisfaction among 426 obstetric nurses in China, which showed that overall job satisfaction was at a moderate level (Mean = 3.43, SD = 0.80), intrinsic satisfaction was at a moderate level (Mean = 2.91, SD = 0.75) and extrinsic satisfaction was at a moderate level (Mean = 3.28, SD = 0.74). Lin and Ma (2013) examined job satisfaction among 454 nurses in Guangzhou city, the results showed that overall job satisfaction was at a moderate level (Mean = 3.52, SD = 0.46), intrinsic satisfaction was at a moderate level (Mean = 3.14, SD = 0.61) and extrinsic satisfaction was at a moderate level (Mean = 2.83, SD = 0.63). Azeem and Akhtar (2014) examined the factors that influence of job satisfaction of healthcare employees among 275 nurses in Saudi Arabia, the results showed that overall job satisfaction was at a moderate level (Mean = 3.43, SD = 0.81), intrinsic satisfaction was at a moderate level (Mean = 3.12, SD = 0.76) and extrinsic satisfaction was at a moderate level (Mean = 3.66, SD = 0.69). Additionally, studies of Konstantinou and Prezerakos (2018) among 200 nurses in Greece, which showed that overall job satisfaction was at a moderate level (Mean = 3.61, SD = 0.91), intrinsic satisfaction was at a moderate level (Mean = 3.42, SD = 0.83) and extrinsic satisfaction was at a moderate level (Mean = 2.81, SD = 0.79).

According to Herzberg, motivating factors (also called satisfiers) are primarily intrinsic job elements that lead to satisfaction (Herzberg et al., 1959), including achievement, recognition, the work itself, responsibility, advancement and growth. Hygiene factors (also called dissatisfiers) are extrinsic elements of the work environment (Herzberg et al., 1959), including hospital policies, supervision, relationships, work conditions, salary and status.

The results of the intrinsic satisfaction among nurses may be explained by the following:

According to achievement, most nurses in this study recognize that the importance of nursing work can meet the needs to pursue personal development and gain a sense of accomplishment in their work. When nurses think that their work is valuable and worthwhile, they will realize the meaning of work. The more the hospital supports the work of nursing, the nurses will have a strong sense of trust and work enthusiasm, loyalty to the hospital organization, loyalty to the nursing work, even enhance nurses' sense of pride (Teng, Shyu, & Chang, 2007). In two tertiary hospitals, manager's value the achievements of nurses at work, for nurses who perform well or contribute to nursing work, the hospital will publicly praise them and give monetary rewards, this positive support nurses receive creates feelings of achievement, greater responsibility, obligation and devotion to the organization. However, for nurses with serious nursing errors, hospital administrators always severely punish them and even dismiss them, which decrease the enthusiasm and sense of achievement of some nurses.

According to recognition ideology, recognition should come from both nurses' superiors and their peers. Hospital administrators, head nurse and nurse staff agree on the importance and necessity of nursing work since they have given positive affirmation to the professional value of nursing. In two hospitals, for nurse managers, they always provide nurse staff with praise and recognition of their successes, such as giving monetary rewards to excellent nurses every month, or nurse manager has developed strategies to foster nurse's competence and meet the career needs of all nursing staff. When nurses get feedback and leadership guidance from superiors and colleagues, it means that they have received the recognition (J Yang et al., 2004). However, not all nurses are recognized by the administrators, some nurses often have nursing errors due to lack of work experience,

severe workloads, bad work attitude or irresponsibility in the nursing work; this poses difficulties for receiving recognition from colleagues or superiors.

According to the work itself, the longer nurses worked on one particular unit, the greater the likelihood they were dissatisfied with their job (Manojlovich, 2005). Hospital health care administrators developed strategies to meet the needs of all nurses to foster their competence and interest; such as each hospital held annual competitions like nursing skills contests, nursing theory knowledge contest. On the one hand to enhance nurse's professional skill, on the other hand to make sure that the job itself interesting, varied, and provides enough of a challenge to keep young nursing staff motivated. However, hospital forces the nurses to participate in the activities sometime, taking up their rest time and increasing the burden on the nurses. Nurse competitions may put a great strain on an organization, and may lead to job satisfaction and burnout among employees. The nurses in two hospitals are kept busy all the time, the patients in the tertiary general hospital of Dali have a high rate of treatment, patients with surgery and critically ill patients, and the workload of each department is large; nurse's work with a shift system and the nursing staff feels a heavy burden. When nurses working at night shift, they have to work for longer time period and take care for more patients. Take some departments of affiliated hospitals as an example, a nurse on night shift needs to take care of 30-50 patients (Nursing Department Report, 2018), they are not able to sleep adequately owing to irregular working hours. The extended long working hours and excessive number of patients to give care has had a negative effect on working conditions and physical/psychological health of the nurses (Demir, Ulusoy, & Ulusoy, 2003).

Responsibility is a key factor among nurses. Hospital staff nurses throughout Mainland China assume the same roles and responsibilities regardless of their educational level, qualifications or work experience (Ye, Wang, & Shen, 1999). The nurses of the two hospitals also bear a lot of work responsibilities which include: assessing the physical, psychological and social status of patients, consulting with patients about planned care, evaluating the outcome of care and working closely with other members of the health care team (Li, Wang, & Zhou, 2010). In two tertiary hospital of Dali, most nurse staff attaches great importance to the realization of self-worth, being seriously responsible at nursing work and are willing to work hard for the nursing profession. However, in addition to the

daily nursing work, nurses from different departments of the two hospitals will perform some additional work according to the specialist requirements of the department. A surgical nurse for example, have to attending to patients' dressing needs, assisting patients with elimination, and assisting surgical patient with eating. This has led to a gap between nurses' expectations and actual content and it's increased the burden and pressure on nurses. What makes a job satisfying or unsatisfying does not depend only on the nature of the job, but also on the expectations and responsibility that individuals have of what their job should provide (Spector, 1997).

In regard to advancement, the possible explanation is that the two tertiary hospitals provide many opportunities to strengthen nurse's skills with more training and other learning opportunities for young nurses, such as continuing education programs and participating in nursing research; which all have the benefit of preparing nurses to advance in their careers. But additional training adds to the burden on the nurse, like excessive overtime hours that hinder nurse's ability to perform their roles responsibility while creating family-work balance. Insufficient time was seen as a cause for nurse's lower job satisfaction levels (Best & Thurston, 2004). In addition, in order to encourage nurses to obtain new competencies and expand their professional knowledge, hospitals will rotate some nurses to different departments. Job rotation can motivate nursing personnel to acquire professional knowledge, skills and insights, which can simultaneously improve job satisfaction (Bell, Mengüç, & Stefani, 2004). However, some inexperienced nurses have difficulty adapting to the new work environment and workflow, and they may experience nervousness and anxiety, which reduces job satisfaction.

According to growth, the nurses of the two hospitals have been professional trained and have valuable work experience; their professional skills are strong. The patients have given solid feedback about nurse's behavior; which has enable hospital administrators to provide nurses with praise and recognition of their successes. Moreover, nurse managers focused on the degree to which nurse's expectations concerning nursing work matched the actual work situation. At the same time, many reward programs are in place to encourage excellence in nurses such as publicly praising or increasing their welfare. Recognition has the ability to renew a nurse's satisfaction to their profession, give them

added pride in their work, and deepen their loyalty to both the nursing team and healthcare organization (Sabanciogullari & Dogan, 2015). Nurses who have high achievement with their job work actively, establish professional goals and improve the quality of care and patient satisfaction (Zarea, Negarandeh, Dehghan-Nayeri, & Rezaei-Adaryani, 2009); which means nurses with good professional achievement who have had positive feelings about their work are more effective in meeting organizational goals. However, the public acknowledges doctors as more valuable because they have a higher social position than nurses (Li, 2001). It shows that patients have different attitudes towards doctors and nurses and some doctors denied the nursing work. Partly as a result of this, nurses generated self-doubt; reduced work enthusiasm and quality of care. Nurses with low levels of self recognition have a reduction in their job satisfaction level (Laschinger, Finegan, & Wilk, 2011).

The result show that the extrinsic satisfaction was at moderate level (Mean = 3.57, SD = 0.65). the results of the extrinsic satisfaction among nurses may be explained by the following:

According to the hospital policies, two hospital's policies are fair and clear to each employee, for nurse's welfare, hospitals try to determine pay bonuses with as much objectivity as possible; most employees are willing to obey the hospital's policy. However, most nurses in two tertiary hospitals have no voice in the administrative decisions affecting their work; which are sometimes indifferent to nurse are personal needs. For example, when nurses needed help and turned to hospital leaders, they were overwhelmed by accounts of being too busy or other excuses, ignoring the nurse's requests. When the hospital administrator formulates certain policies, ignoring the opinions of head nurses. Organizational policies resulted in poor staffing levels and had an impacted on nurse job satisfaction (Li & Lambert, 2008; Seo, Ko, & Price, 2004).

Supervision is an important component of any hospital. The supervisors in two tertiary hospitals are responsible for managing staff, charged with assigning nurses and monitoring nurse's activities, making final decision and to ensure nurses adhere to hospital policies and procedures. Most clinical nurse supervisors in two hospitals were experienced; they contributed through flexible scheduling to ensuring there were adequate nurse staffs, besides encouraging and promoting interactions between nurse

staff and multidisciplinary team members. Flexibility with rostering, adequate provision of days off will enhance nurse well being and satisfaction (Peng & Li, 2007). However, some nurse supervisors have a lack of team conflict resolution skills in nursing work, providing insufficient communication, failing to recognize work accomplishments and excessive criticism nurse staff. Those reason impinge on the ability of nurses to provide quality nursing care (Dunn, Wilson, & Esterman, 2005), which in turn leads to lower levels of job satisfaction.

According to relationships, relationships are major areas from which hospital nurses derive job satisfaction (Hayes, Bonner, & Pryor, 2010). Professional relationships between nursing colleagues and medical staff highlighted the importance of team work for job satisfaction (Dunn et al., 2005). And most nurses in two hospitals had amiable and appropriate relationships between peers, superiors, and subordinates. When colleagues often help each other at work, the relationship is stable. This is in relation to the professional characteristics and job requirements of nurses' (Lu et al., 2002); which means nurses pay attention to the team's collaborative spirit in their work, and are good at establishing harmonious interpersonal relationships. Another reason may be related to the professional quality, responsibility, love and dedication of the nurse team. When nurses working hard to care and help patients, the skilled operation techniques can be recognized and praised by colleagues and superiors in time. However, bullying is also happening in nursing work; which is derived from co-workers, nursing managers, other medical staff, or patients and their families. For example, when nurses work inconsistently or disagree with others, in which one or more nurses are engaged the tension creates a hostile relationship in nursing work. The consequences of bullying may decrease job satisfaction of nurses in this study.

According to work condition of hospitals, Hospitals are complex and dynamic organizations that provide services 24 h a day (Er & Sökmen, 2018), two hospital administrators all working hard to create a good working condition for nurses, such as supporting paid continuing education, improving extra benefits for nurses; all the while ensuring the equipment in each department and the working environment is comfortable and hygienic. The ability of is nurses to enhance their job satisfaction is directly correlated to the quality of their work environment and only if their work environment provides

conditions that support them (Duffield, Roche, O'Brien-Pallas, Catling-Paull, & King, 2009). However, there are some nurses who still feel dissatisfaction with benefits, such as health care and retirement benefits. Some nurses complain that they have terrible experiences from the work environment in emergency room and ICU, like professional injury and excessive workload. Meanwhile, hospitals are not maintaining adequate staffing levels; it led to nurses' workloads becoming excessive. For pay based on the amount of work, remuneration is not only the basic embodiment of labor value, but also the main aspect of meeting the basic life needs of nursing staff. It is also a symbol of achievement and other people's recognition, and an important factor determining job satisfaction (H. Lu et al., 2007). At present, tertiary hospitals still adopt the old hierarchical wage system, without fully considering the responsibilities of different posts, the size of the workload and other factors, and the remuneration is unreasonable (Zhang et al., 2014). Nurses who worked in the tertiary general hospitals have been complaining about being overloaded (Peng & Li, 2007). Nurses spend almost 50% of their time doing paperwork and they have to take care of many patients while also having to deal with doctor's orders; meanwhile being faced modern medical equipment and nursing practice techniques.

According to nurse' status, administrators pay attention to human care and nurse career planning, so that the nurse's personal sense of accomplishment and nurse's status are satisfied, as seen at the two tertiary hospitals in Dali for example. Meanwhile, hospital administrators provide a good working atmosphere for nurses and provide help and guidance to balance the multiple relationships between work and family. In addition, front-line nurses can participate in decision-making; which would lead hospital's managers to support the work of nurses, have concern about their daily work, and provide effective advice and recommendations to help them to maximize their profession status and job satisfaction. According to Manojlovich (2005), support from their organization can ensure nurses with creative solutions to care issues, and enable them to demonstrate higher job satisfaction. However, with the continuous growth of the nursing team, the number of administrators is also increasing, although in two tertiary hospitals of Dali, most of staff nurses were not given more opportunity, information and support. Most of nurses were dissatisfied with their employment status due to the unavailability of opportunities for career advancement. The sense of inequality makes the nurse feel frustrated with their own occupational status (Han et al., 2009).

According to security, the hospital has tried to stop the violence against medical workers (Yao et al., 2014). Two tertiary hospitals protect the safety of nurses to the greatest extent and ensure the security of medical care environment, such as established a neutral and fair system to evaluate the medical dispute, increase hospital security personnel and strengthen inspections. In addition, two hospitals have invested enough funding in health care to retain the nurses that have been recruited, such as increasing bonuses, paid vacations, double overtime pay, etc. The content of nursing work is to take care of the patients, which determines that the nursing work must be very meticulous. Some parts of staff nurses duties create difficult work, and the social evaluation received is lower than that of other medical personnel. Prejudice and discrimination continue to exist in society and have adversely affected the health care system and the nursing profession (Manojlovich, 2005). In addition, patient abuse to nurses occurs in almost each hospital, physical attacks on to nurses still exists (Yao et al., 2014). If nurses don't have a sense of security at work, the job satisfaction of the nurse will be reduced (Teng et al., 2007).

Objective II: To Identify the Relationships Between Job Satisfaction and Related Factors Including Professional Commitment, Educational Level, and Employee Status Among Nurses in Tertiary General Hospital in Dali, the People's Republic of China

Relationships between job satisfaction and professional commitment among nurses in tertiary general hospital in Dali, the People's Republic of China. Table 5 illustrates that professional commitment had the moderate significant positive correlation with overall job satisfaction of the subjects ($r = .367$; $p < .01$). And there was a moderate positive relationship between intrinsic satisfaction and professional commitment ($r = .363$; $p < .000$); There was a weak positive relationship between extrinsic satisfaction and professional commitment ($r = .287$; $p < .000$). The findings indicated that as professional commitment of the subjects increased, job satisfactions of the subjects also increased.

The results of this study were congruent with previous study of Lu et al. (2007) which showed that in Taiwan, professional commitment has a direct effect on job satisfaction in which yielded a path coefficient of $\gamma = .54$ ($P < .05$); Caricati et al. (2014) found that professional commitment ($\beta = 0.23$, $Z = 6.64$, $P < 0.001$) directly and

significantly predicted job satisfaction in Italy; and also by Sorensen and McKim (2014) who found among employees in United States that job satisfaction was positively correlated with professional commitment ($r = .71, p < .05$). Barać et al. (2018) found that job satisfaction had significant positive correlations with professional commitment in Croatia. Among other professionals, some previous studies showed a positive relationship between job satisfaction and professional commitment in United States ($r = .71, p < .05$).

One possible explanation was that the nurses who have high professional commitment would regard work as their own responsibilities and obligations, and devote more effort to the organization (Y. B. Yang et al., 2004). Two tertiary hospital managers encouraged head nurses to understand nursing staff's professional interests, abilities and personalities, and develop a nursing professional development program. According to the attitude-behavior consistency principal and the theory of attitude determines behavior, nurse managers create the conditions for the professional development of nurses, thereby increasing job satisfaction (Lu et al., 2002). This is not only enhancing these nurses' sense of pride, nurses also have a sense of responsibility to return to department and hospital.

Another possible explanation was although nursing work is busy, because of its stable work ability; many young nurses developed nursing professionalism. They actively participated in the development of nursing by actively participating in nursing skills training and study in other hospitals. As they think that professions are valuable, they can develop a love of their profession because of their firm belief in care, which may increase their job satisfaction (Teng et al., 2007). The hospital can facilitate this development through some additional benefits, such as raising the allowance, increasing the opportunity for nurses to study abroad, and distributing gifts on holidays, in order to retain the nurses and increase the loyalty of the nurses to the hospital organization, thus improving the satisfaction of the nurses.

In addition, professional commitment is a multidimensional work attitude (Y. B. Yang et al., 2004) including affective commitment. Some older nurses who have spent most of life in nursing career, are willing to dedicate themselves to the development of the organization, even without any rewards, they never consider job-hopping in any temptation. However, if highly committed nurses are dissatisfied with their work; their

work as nurses is inconsistent with the values of good care they do believe, which may indirectly affect their job satisfaction (Lu et al., 2002).

Importantly, there was increasing evidence that job dissatisfaction has proven to affect various significant areas such as career success (Judge, Cable, Boudreau, & Bretz, 1995); which impacts the delivery of healthcare to the patients (Brooten et al., 2002) and nurses' job turnover (Lu et al., 2002). This indicates that nurse professional commitment is one of the direct predictors of mentioned areas of life and work. Leaders of two tertiary hospitals attach importance to the commitment of nurses, actively participating in the nurse forum, understand the needs of nurses, formulate a series of incentive policies, and strive to achieve the commitment to nurses. The more committed to their profession nurses are, the more likely they are to remain committed to the organization and the less they are intent on leaving the nursing profession (Chang, Du, & Huang, 2006). Therefore, increased commitment will allow nurses to achieve a greater degree of job satisfaction.

Relationships between job satisfaction and educational level among nurses in tertiary general hospital in Dali, the People's Republic of China. The result of this study demonstrated that there was no relationship between intrinsic, extrinsic, overall job satisfaction and educational level. ($p > 0.05$) (Table 6). The findings were consistent with the previous studies by Lu in China (2007) ($p > 0.05$). Meanwhile, the findings were inconsistent with Abualrub (2012); who found that the educational level of nurses is positively related to job satisfaction ($p < 0.05$) in Saudi Arabia. The findings were inconsistent with Lu et al. (2002) who stated that the educational level of nurses is negatively related to job satisfaction ($r = -0.101$) in Taiwan.

One possible explanation was that two hospitals validated the importance to the education of nursing by supporting and encouraging the continuous improvement of nurses; low-educated nurses have many opportunities to re-educate. Most nurses have the same responsibilities and achievements in their job. In terms of job allocation, although there are different levels of nursing education, it is reasonable for nurses to allocate their daily work (Y. B. Yang et al., 2004). In addition, the education level of nurses with guidance qualification is much higher than that of new nurses. Therefore, nurses do not show dissatisfaction in caring for patients, which will not affect nurses' professional competence and job satisfaction.

Another possible explanation was hospital policy and welfare. In terms of hospital policy, in two tertiary hospital of Dali, it became easier for nurses to enhance their educational level because they had a lot of opportunity to receive further education in-country and overseas if they wanted. Since education is an important criterion for the promotion in Chinese hospitals, nurses in general hospitals have many opportunities to participate in training or seminars (Chen et al., 2012). In terms of hospital welfare, even though there were different nursing education levels in hospital, they have the same pay and subsidy policy. Meanwhile, their level of education does not limit their opportunities for promotion and career development.

In addition, since both hospitals are affiliated hospitals of Dali University, most of the nursing talent is delivered is through Dali University, and the education level of the nurses in the two hospitals is not much different. Nurses do not have special treatment and extra benefits because of their level of education. For these reasons, nursing educational level may not influence their job satisfaction (K. Y. Lu et al., 2007).

Relationships between job satisfaction and employee status among nurses in tertiary general hospital in Dali, the People's Republic of China. The result of this study demonstrated that there was no relationship between intrinsic, extrinsic, overall job satisfaction and employment status. ($p > 0.05$) (Table 6). This result was congruent with previous studies of Xinyue in China (2013) ($p > 0.05$). Meanwhile, it was incongruent with Jin et al. (2012), who found that there was a relationship between job satisfaction and employment status ($p < 0.05$) in China, and temporary nurses more dissatisfaction than permanent nurses ($P < 0.001$). Moreover Liu (2002) found that the employee status is related to job satisfaction ($p < 0.05$) in Taiwan, and permanent nurses experienced more severe job dissatisfaction than temporary nurses ($P < 0.001$).

The possible explanation was fair opportunity and treatment. The hospital has established a number of incentive policies for both contract nurses or permanent nurses, as long as their work is excellent, they will get the same reward. In Dali, both tertiary hospitals supported both type of nurses; for example, the hospital conducted a professional assessment of temporary nurses, as long as they were outstanding enough, temporary nurse all have opportunity to become permanent nurses. In addition, the

hospital provides the same promotion opportunities for both types of nurses. Therefore, the nurse's employee status does not affect job satisfaction (Shang et al., 2014).

Two hospitals carried out a nurse training program and re-education training, temporary nurses and permanent nurses have many opportunities to participate in continuous vocational training, rotating rotation and career development within the organization. This will ensure that high quality patient care and results will be maintained despite the temporary nurses working in different care settings (Wang & Geraghty, 2017). However, both temporary and permanent nurses have the same job functions and responsibilities, which mean responsibility is not determined by the level of ability.

Another possible explanation was pay; which is widely believed to be a prerequisite for improving job satisfaction. However, in 2008, the Ministry of Health of China issued the “Nurse Regulations”, emphasizing the need for “equal pay for equal work” (Shang et al., 2014). The provision requires that each hospital, despite its employment status, provide equal wages and benefits for both types of nurses in order to eliminate the gap between permanent and temporary nurses, ensure that hospitals can attract and retain nurses, and support high-quality care. The first affiliated hospital of Dali university and people's hospital in Dali Bai nationality autonomous strictly follows the nurses’ regulations and achieves equal pay for equal work. Not only that, since the recent medical system reform two hospitals have encouraged fiscal autonomy (Zhang et al., 2013); both hospitals have taken measures to increase work efficiency by increasing the salary of nurses. For these reasons, nursing employee status may not influence their job satisfaction.

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CHAPTER 5

Conclusions, Implications, and Recommendations

In this chapter, the conclusions of the study are presented, relating the basic objectives, the findings and the discussion. Implications of the findings and the recommendations are also presented.

Conclusions

This descriptive correlation study aimed to explore job satisfaction, and to identify the relationship between job satisfaction and related factors including professional commitment, educational level, and employee status among nurses in tertiary general hospital in Dali, the People's Republic of China. Data were collected from February to March 2019. The subjects were 376 staff nurses selected by proportionate sampling method from two tertiary general hospitals in Dali which included The First Affiliated Hospital of Dali University and People's Hospital in Dali Bai Nationality Autonomous Prefecture. The instruments were a set of questionnaires including three parts: Demographic Data Form, Professional Commitment Scale (PCS) and Job satisfaction questionnaire (JSQ). The reliability of the PCS and the JSQ were .91 and .92, respectively. Data were analyzed using descriptive statistics, Spearman rank correlation method and multiple regression. The results were as follows:

1. The overall mean score of job satisfaction as perceived by the subjects was at a moderate level ($\bar{X} = 3.60$, $SD = 0.56$). Most of the subjects (51.90%) perceived job satisfaction at a high level, 45.65% of them perceived job satisfaction at a moderate level, and only 2.45% perceived it at a low level.

2. There was no correlation between educational level and intrinsic satisfaction ($r = -.077$; $p > .01$); There was no correlation between educational level and extrinsic job satisfaction ($r = -.074$; $p > .01$); There was no correlation between educational level and overall job satisfaction ($r = -.094$; $p > .01$);

3. There was no correlation between employee status and intrinsic satisfaction ($r = .038$; $p > .01$); there was no correlation between employee status and extrinsic satisfaction ($r = .078$; $p > .01$); there was no correlation between employee status and overall job satisfaction ($r = .074$; $p > .01$);

4. There was a significant moderate positive correlation between professional commitment and intrinsic satisfaction ($r = .363$; $p < .01$); there was a significant weak positive correlation between professional commitment and extrinsic satisfaction ($r = .287$; $p < .01$); there was a significant moderate positive correlation between professional commitment and overall job satisfaction ($r = .367$; $p < .01$);

5. Professional commitment significantly predicted job satisfaction, $F(3,364) = 14.936$, $P < .001$, $R^2 = 11.0\%$. Eleven percent of variability in job satisfaction can be explained by the professional commitment as perceived by nurses ($\beta = .018$, $SE = .003$, $R^2 = .110$, $P \leq .01$).

Implications

From the results of this study, the implications for nursing administration and nursing research are presented as follows:

Implications for Nursing Administration

The result could provide baseline data for hospital administrators and nurse administrators regarding professional commitment and job satisfaction. Hence, the nurse administrators can through support and enhance nurses belief in work goals, values and nurse's professional commitment to prove nursing is a valuable profession, nurse administrators need help nurses by practicing the nursing profession to actively participate in the future development of nursing.

The result of this study indicated that job satisfaction was at a moderate level among nurses in The First Affiliated Hospital of Dali University and People's Hospital in Dali Bai Nationality Autonomous Prefecture. Nurses' intrinsic satisfaction should be enhanced by improve the stability of nursing work, increase nurse's recognition and a sense of achievement in nursing profession and reduce the busyness of nursing work. Nurses'

extrinsic satisfaction should be enhanced by improve hospital policies, increase wages and bonuses, reduce workload and increase nurses' promotion opportunities and job security.

Recommendations for Future Research

Based on the findings in this study, the researchers proposed the recommendation for further research as follows:

1. Future research is needed to conduct the study in other types of hospitals or in other regions of China, because of their different resources and policies, to get better generalizability of the research results.
2. Exploring other factors related to job satisfaction in Dali.
3. Interventions need to be designed and implemented for improving nurses' overall job satisfaction, nurses' intrinsic satisfaction, and nurses' extrinsic satisfaction.

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APPENDIX A

Permission for Using Instrument

Permission for Using Instrument (Job Satisfaction)

From: tfyehtfyeh@ctust.edu.tw At 8/November/2018 07:41am
To: Chen Heyan

Dear Paula,
you can use it, and this is the article you need , the scale in the table 6, Hope it helps
you
Good luck
Te-Feng

From: Chen Heyan364946297@qq.com At 6/November/2018 16:58pm
To: tfyeh

Dear Dr. Te-Feng,
This is Paula, I come from China and I am also a graduate student from Chiang Mai
university, faculty of nursing , Thailand. My research topic is about the professional
commitment and job satisfaction among nurses. I read your article named "The study on
motivation attitude, job satisfaction and turnover intention for nonphysician formal and
temporary employees in a public hospital. "I am very interested in the instrument you
develop. May I get your permission to use "job satisfaction scale "in my research? Thank
you so much and give you my best wishes.
Best wishes
Looking forward to hearing from you
Paula

Permission for Using Instrument (Professional Commitment)

From: kueiyun123 kueiyun123@yahoo.com.tw

At13/November /2018

12:27 Pm

To: Chen Heyan

I agree that you use my developed Care Professional Commitment Scale.

Good luck

Lu

From: Chen Heyan 364946297@qq.com

At12/November /2018

16:33 pm

To: kueiyun123

Dear professor Lu,

My name is Chen Heyan, I come from China. I am a master student at the faculty of nursing, Chiang Mai University, Thailand. My major is nursing administration. My research topic is about the professional commitment and job satisfaction among nurses in China. I have read many of your articles about the professional commitment of research nurses. Can I get your permission to use the professional commitment scale (2002 version) that you developed to measure the professional commitment of nurses? Thank you very much.

Give you my best wishes

Yours sincerely

Chen Heyan

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APPENDIX B

Research Instrument (English)

Demographic Data Form

Please check“√” into the pane in front of item or fill in the answer that is appropriate for you.

1. Age: _____
2. Gender: ☐ Male ☐ Female
3. Marital status:
☐ Single ☐ Married ☐ Divorced ☐ Separation or Widowed
4. The name of your working hospital:
☐ The First Affiliated Hospital of Dali University
☐ People's Hospital in Dali Bai Nationality Autonomous Prefecture
5. Working department
☐ Medical Department ☐ Surgical Department
☐ Pediatric Department ☐ Obstetrics and Gynecology (OB-GYN)
☐ OPD ☐ ER ☐ ICU ☐ OR
6. Educational level:
☐ Diploma ☐ Associate degree ☐ Bachelor degree ☐ Master Degree
7. Job position: ☐ nurse manager ☐ staff nurse
8. Employment status: ☐ Permanent ☐ Temporary
9. How many years you have been employed as nurses in your hospital?
_____ years

The Job Satisfaction Questionnaire

Instructions: This measurement is used to assess the job satisfaction as perceived by the individual. Please carefully read each item and identify to what extent you think the situation fits you by making "√" in the appropriate box.

5=Very Satisfaction, means I am very satisfied with this aspect of my job.

4=Satisfaction, means I am satisfied with this aspect of my job.

3=No Satisfaction, means I can't decide whether I am satisfied or not with this aspect of my job.

2=Dissatisfaction, means I am dissatisfied with this aspect of my job.

1=Very Dissatisfaction, means I am very dissatisfied with this aspect of my job.

Inner satisfaction					
1. The chance to do things for other people.	1	2	3	4	5
2. Being able to do things that don't go against my conscience	1	2	3	4	5
3. The chance to try my own methods of doing the job	1	2	3	4	5
.....					
.....					
.....					
19. Promotion opportunities given by work	1	2	3	4	5
20. My pay and the amount of work I do	1	2	3	4	5

The Professional Commitment Scale

Instructions: This measurement is used to assess the professional commitment as perceived by the individual. Please carefully read each item and identify to what extent you think the situation fits you by making "✓" in the appropriate box.

Please circle the number on the right-hand columns to indicate your agreement with the following statements:				
1=strongly do not support				
2=not support				
3=support				
4=strongly support				
Willingness to make effort				
1. Working as a member of the nursing profession; I think I can fulfill my life goals.	1	2	3	4
2. Working as a member of the nursing profession; I think I can do it by myself.	1	2	3	4
3. I like to discuss with my friends what I learned in nursing.	1	2	3	4
.....				
.....				
.....				
25. I am concerned about developments in nursing professionalization.	1	2	3	4
26. I think that nursing has important contributions to the public.	1	2	3	4

APPENDIX C

Research Instrument (Chinese)

个人基本情况问卷

请按照您目前的情况来填写或在符合您的情况前的方框内打“√”

1. 年龄: _____ 岁
2. 性别: ☐ 男性 ☐ 女性
3. 婚姻状况: ☐ 未婚 ☐ 已婚 ☐ 离异 ☐ 分居或丧偶
4. 您工作的医院名称:
☐ 大理大学第一附属医院 ☐ 大理州人民医院
5. 您所在的科室:
☐ 内科 ☐ 外科 ☐ 儿科 ☐ 妇产科 ☐ 门诊部
☐ 急诊科 ☐ 重症监护室 ☐ 手术室 ☐ 其它 (请说明)
6. 文化程度: ☐ 中专 ☐ 大专 ☐ 本科 ☐ 硕士研究生
7. 工作职位
☐ 管理者 ☐ 非管理者
8. 雇佣状态
☐ 在编 ☐ 非编
9. 你被聘用并在现在的医院工作已有 _____ 年

工作满意度量表

说明：该测量用于评估个人感知的工作满意度。请仔细阅读每个项目，并通过在相应的框中输入“√”来确定您认为情况适合您的程度。

5=非常满意，意味着我对这方面的工作非常满意。

4=满意，意味着我对这方面的工作感到满意。

3=没有满意，意味着我无法决定我是否对这方面的工作感到满意。

2=不满意，意味着我对这方面的工作不满意。

1=非常不满意，意味着我对这方面的工作非常不满意。

内在满意度					
1. 对于在这份工作中为别人做事的机会	1	2	3	4	5
2. 对于在不违背良心的状态下达成我的工作目标	1	2	3	4	5
3. 对于工作中能尝试以自己的方法来处理事情的机会	1	2	3	4	5
.....					
.....					
.....					
19. 对于这份工作所给与的升职机会	1	2	3	4	5
20. 就我的工作量而言，我对我每个月所得到的报酬（指薪资总额）	1	2	3	4	5



专业承诺量表

说明：此度量用于评估个人所感知的专业承诺。请仔细阅读每个项目，并通过在相应的框中输入“√”来确定您认为情况适合您的程度。

请圈出右侧栏中的数字，表明您同意以下声明：				
1 =非常肯定，2 =一定，3 =不确定，4 =强烈不确定				
愿意付出努力				
1. 作为护理专业人员，我想我可以实现我的人生目标	1	2	3	4
2. 作为护理专业人员；我想我可以自己做到	1	2	3	4
3. 我喜欢和朋友讨论我在护理方面学到的东西	1	2	3	4
.....				
.....				
.....				
25.我对护理专业化的发展感到担忧。	1	2	3	4
26.我认为护理对公众有重要贡献。	1	2	3	4

APPENDIX D

Certificate of Ethical Clearance

	Research Ethics Office Faculty of Nursing, Chiang Mai University	AF 04-021
		No. 048/2019
<u>Certificate of Approval</u>		
Name of Committee : Research Ethics Committee, Faculty of Nursing, Chiang Mai University Address of Committee: 110/406 Intavaroros Rd., Amphoe Muang, Chiang Mai, Thailand 50200		
Principal Investigator : Mrs. Chen Heyan Master of Nursing Science (International Program) Faculty of Nursing, Chiang Mai University		
Protocol Title : Factors Related to Job Satisfaction of Nurses in Tertiary Hospitals of Dali, the People's Republic of China Research ID: 2019 – 049 ; Study Code : 2019 – EXP028 Sponsor : None		
Documents filed	Document reference	
Research protocol	Version 1 Date February 12, 2019	
Informed consent documents	Version 2 Date February 28, 2019	
Patient information sheet	Version 1 Date February 12, 2019	
Instrument	Version 2 Date February 12, 2019	
Principal Investigator Curriculum vitae	Version 1 Date February 12, 2019	
Advertisements : (if any)	-	
Opinion of the Ethics Committee/Institutional Review Board : Expedited Review in February 2019 The Ethics Committee has reviewed the protocol and documents above and give the favorable opinion Date of Approval : February 28, 2019 Expiration Date : February 27, 2020		



Progress report is required to be submitted to the Ethics Committee for continuing review

☐ at 3 month interval

☐ at 6 month interval

☒ annually (in this case please submit at least 60 days prior to expiration date)

This Ethics Committee is organized and operates according to GCPs and relevant international ethical guidelines, the applicable laws and regulations.

Signed :

(Professor Emerita Dr. Wichit Srisuphan)

Chairperson, Faculty of Nursing, Chiang Mai University

Signed :

(Professor Dr. Wipada Kunaviktikul)

Dean, Faculty of Nursing, Chiang Mai University

GENERAL CONDITION OF APPROVAL:

1. Research Ethics Committee approval is required before implementing any changes in the consent documents or protocol unless those changes are required urgently for the safety of subjects.
2. Any event or new information that may affect the benefit/risk ratio of the study must be reported to the REC promptly.
3. Any protocol deviation/violation must be reported to the REC.
4. Review of close study report is required to be submitted to the REC.
5. Review of progress report to the REC before expiration date at 2 months.

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APPENDIX E

Information Sheet for Research Participants (English Version)

Information Sheet for Study Participants

Research Project: Factors Related to Job Satisfaction of Nurses in Tertiary Hospitals of Dali, the People's Republic of China

Research Team: Ms. Chen Heyan,

Assistant Professor Dr. Apiradee Nantsupawat,

Assistant Professor Dr. Petsunee Thungjaroenkul

Institute: Faculty of Nursing, Chiang Mai University.

Research Funding: None

You are being invited to take part in this study because you are **a nurse who working in the inpatient or outpatient department in tertiary hospitals of Dali**. The **376** nurses whom have qualities and characteristics needed for this study will be selected from **The First Affiliated Hospital of Dali University (176 nurses), and People's Hospital in Dali Bai Nationality Autonomous Prefecture (200 nurses)**.

Before you decide to take part in this study, please take time in reading this information sheet to make sure that you understand what you will be asked to do as part of this study. If you have any question regarding this study, please feel free to ask the research staff. You are also welcome to discuss this study with someone that you know and trust before you make decision.

Again, your decision making to participate this study **is completely voluntary**.
(Frame 1)

Frame 1 Taking part in this study is voluntary

- You **can refuse** to participate in this study
- You can **withdraw** from this study at any time

Your performance evaluation will not be affected if you decide not to be in this study.

Frame 2 Alternative courses of treatment if you are unable to participate in this study (if any)

Information related to this study

Nurse Job satisfaction is important in nursing work. When higher levels of nurse job satisfaction are experienced, there is an increase in morale and commitment, which make it more likely that nurses will stay in the profession. Nurse with a high degree of professional commitment are willing to make considerable efforts to achieve their career goals and they will be more likely to engage in activities that favor their organization. A better understanding of job satisfaction and related factors could aid hospital manager in retaining nursing staff.

The objectives of this study are to explore job satisfaction among nurses in tertiary general hospital in Dali, the People's Republic of China, and to identify the relationships between job satisfaction and related factors including professional commitment, educational level, and employee status among nurses in tertiary general hospital in Dali, the People's Republic of China.

Frame 3 Possible adverse events from this study

There will be no physical, mental harm or societal discomforts to the participants, since the study does not involve the use of blood or any other dangerous objects. The participants will not suffer any loss of benefits, job, or effect of their performance evaluation by taking part in or withdrawing from the study at any time in this research process. Information that is collected for this study will be kept confidential. Any information about participants will have a number on it instead of name. No one but the researchers will be able to see it.

Frame 4 Study design

A descriptive correlational research design will be used in this study

Frame 5 Participant Responsibilities

If you agree to take part in this study, you will be asked to complete a consent form and a set of questionnaires which consisted of Demographic data form, Professional Commitment Scale, Job satisfaction questionnaire. Identity time range that participant will join in this study (15-20 minutes). We hope that you will be comfortable answering all questions openly and honestly in a relax environment.

After completing questionnaire, please separate the questionnaires and consent form into two envelopes respectively and return them within two weeks. For nurses working in the First Affiliated Hospital of Dali University, please return questionnaire and consent form to the two boxes that placed in the third floor of clinic building. For nurses working in People's Hospital in Dali Bai Nationality Autonomous Prefecture, please return questionnaire and consent form to the two boxes that placed in the nursing department. The two boxes in each place are with lock and separating consent form and questionnaire.

Frame 6 Anticipated risks and benefits to study participants

Risks and how the study will minimize or avoid these risks	Benefits
<p>-Risks: Completing the questionnaires may take participants' spare time; some participants may feel sensitive when talking about their job satisfaction and professional commitment. And participant may feel tired when they completing the questionnaires.</p> <p>-Means to minimize or avoid risks: All participants have two weeks for</p>	<p>-Direct/indirect benefits: the results of this study may provide information and evidence for hospital managers to develop strategies to improve nurses' job satisfaction and enhance nurses' professional commitment for better level of healthcare in Dali tertiary hospitals.</p>

<p>completing the questionnaires and if they cannot finish, the researcher will wait for one more week. All participants have opportunity to refuse or withdraw from the study at any time as their will without any loss of benefits, and participant or withdraw from the study at any point of the research will not affect their work. If participant feel tired, they can have a break until they feel better, and then keep completing the questionnaires.</p>	
--	--

Frame 7 Possible situations that may happen during the study	
Situations	Practical guideline
If you want to withdraw consent during the study.	The participant is not required to complete the questionnaires and his/her rights and benefits will not be affected.
When have a new and significant information, which are possible effects to your decision making.	The researcher will inform you soon and you are able to decide whether to continue or discontinue participating in this study.

Your information related to this study will be kept confidentially by not identifying the name and separate placement questionnaire and consent form. Information provided by participants will be used only for the purpose of this study. The results of study will be used in general. Research consent form will be given to the participants. The presentation of the study findings in any conference or publication will not use your name. However, the Research Ethics Committee, the persons who have the authority to control the study, and the personnel from Thai FDA will be able to access your information to review information and research process.

The study provides no present or compensation for participants.

If you have any questions or experience any side effects before or while participating in this study, you can contact the person in **Frame 8**

Frame 8 Research contact person(s)

1. Chen Heyan : dermatology Department, The First Affiliated Hospital of Dali University, phone number: (+86) 13577298460
2. Assist. Prof. Dr. Apiradee Nantsupawat: Faculty of Nursing, Chiang Mai University, phone number +66-53-949-9060 (official time)

If you have any questions about your rights before or during participating in this study, please contact the Research Ethics Committee, Faculty of Nursing, Chiang Mai University. Tel. 66-53-936080 (Office hours) or Fax. 66-53-894170

There are no conflicts of interest associated with this study.

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APPENDIX F

Volunteer Research Agreement Form (English Version)

Volunteer Research Agreement Form	
<p>I have already read the above information thoroughly and have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate in this study by signing my signature in this form as an evidence of my decision making (However, this signature does not mean that I waive any right provided by law)</p>	<p>I certify that the study participant has been given an opportunity to have any questions and has been received answers clearly. The study participant voluntarily agrees to participate in this study.</p>
<p>_____</p> <p>Name of study participant</p>	<p>_____</p> <p>Name of a person who requests agreement from study participants (or the investigator)</p>
<p>_____</p> <p>Signature of study participant</p>	<p>_____</p> <p>Signature of a person who requests agreement from study participants (or the investigator)</p>
<p>_____</p> <p>Day/Month/Year</p>	<p>_____</p> <p>Day/Month/Year</p>

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APPENDIX G

Information Sheet for Research Participants (Chinese Version)

研究参与者信息单 (Chinese)

提案名称：中华人民共和国大理市三级医院护士工作满意度的相关因素研究

研究者团队：陈河燕女士，

Assistant Professor Dr.Dr.ApiradeeNantsupawat，

Assistant Professor Dr. PetsuneeThungjaroenkul。

学院：清迈大学护理学院

科研基金：无

您被邀请参与本次研究，因为您是大理三级医院的住院部或门诊部护士。具备本研究所要求的特质和特征的 376 名护士将从大理大学第一附属医院(176 名护士)和大理州人民医院（200 名护士）中随机选取。

在您决定是否参与本研究之前，请阅读信息单以确保您明白该项研究。如果您有关于本研究的任何问题，请咨询研究者，我们也欢迎您与您熟识或信任的人讨论本研究。

再者，您自愿决定是否参与本研究（表 1）。如果您决定不参与本研究，您的权利和利益将不会受到影响。

表 1：参与本研究是自愿的

- 您可以拒绝参与本研究。
- 您可以随时退出本研究。

如果您决定不参加本研究，您的绩效评估不会受到影响。

表 2 如果您无法参加本研究，可选择其他方案

有关本研究的信息

护士工作满意度对护理工作很重要。当经历更高水平的护士工作满意度时，士气和承诺就会增加，这使得护士更有可能留在这个专业。具有高度专业承诺的

护士愿意为实现他们的职业生涯做出相当大的努力，他们更有可能参与有利于他们组织的活动。更好地了解工作满意度和相关因素可以帮助医院管理人员留住护理人员。

本研究的目的是测试中华人民共和国大理市三级综合医院护士的工作满意度，并确定工作满意度与之相关因素之间的关系，包括专业承诺，教育水平和雇佣状态。

表 3: 来自本研究可能的不良事件

对参与者没有身体的，精神的伤害或者社会的不适。

因为本研究不包括使用血或者其他任何危险的对象。参与者在研究过程中的任何时候参与或者从本研究中退出将不会遭受任何利益，工作损失或者影响绩效评估。为本研究收集的信息将被保密。任何有关参与者的信息将用编号代替姓名。除了研究者没有人能够看到它。

表 4: 研究设计

描述性相关性研究设计。

表 5: 参与者的责任

如果您同意参加本研究，您将被要求填写一份同意书和一套问卷，其中包括人口统计数据表，专业承诺量表，工作满意度调查表。参与者将参加本研究的时间范围（15-20 分钟）。我们希望您能在舒适的环境中公开，诚实地回答所有问题。

完成调查问卷后，请将调查问卷和同意书分别放入两个信封中，并在两周内返还。大理大学第一附属医院的护士可以将返还的信封放入置于门诊大楼三楼皮肤科护士站的两个信箱。大理州人民医院的护士可以将返还的信封放入置于护理部的两个信箱。两个信箱已经上锁，一个放同意书，一个放调查问卷。

研究者总结对研究参与者的风险和利益见**表 6**。

表 6：研究参与者参与的风险和利益

风险和降低或者避免风险的方式：	利益
<p>- 风险：完成调查问卷可能需要参与者的业余时间；一些参与者在谈论他们的工作满意度和专业承诺时可能会感到敏感。参与者在填写问卷时可能会感到疲倦。</p> <p>- 降低或者避免风险的方式：所有参与者都有两周的时间来完成调查问卷，如果他们无法完成，研究人员将再等一周。所有参与者都有机会随时拒绝或退出研究，因为他们的遗嘱没有任何利益损失，参与者或在研究的任何时候退出研究都不会影响他们的工作。如果参与者感到疲倦，他们可以休息直到他们感觉好些，然后继续完成调查问卷。</p>	<p>- 直接/间接利益：本研究结果可为医院管理人员提供信息和证据，帮助他们制定策略，提高护士的工作满意度，增强护士对大理三级医院更好的医疗保健水平的专业承诺。</p>

研究者总结实用性指南或者在研究中可能发生的情况见**表 7**。

表 7：在研究中可能发生的情况

情况	实用性指南
在研究中如果你同意退出。	参与者不能被要求完成问卷并且他/她的权利和利益将不被影响。
当有新的和有意义的可能影响你决定的信息	研究者将很快通知你，你能够决定是否继续或停止参与本次研究。

您有关本研究的信息将通过匿名和分开放置的问卷和志愿研究同意表被保密。参与者提供的信息仅仅用于本研究。研究结果可以通用。志愿研究同意表将被分发给参与者。在任何会议或者出版物陈述研究结果时都不会使用您的名字。研究伦理委员会有掌控本研究的权威，并且来自泰国食品及药物管理局全体人员将会为了审查信息和研究程序而评估您的信息。

该研究未向参与者提供任何礼物或补偿。

如果在参与本研究之前或者过程中您有任何问题，你可以联系**表 8** 中的人。

表 8: 研究联系人的更多信息

1. 陈河燕：大理大学第一附属医院，电话号码：13577298460
2. Assist. Prof. Dr. ApiradeeNantsupawat 清迈大学护理学院，电话号码：+66-53-949-9060（工作时间）

如果在参与本研究前或者过程中你有关于权利的任何问题，请联系清迈大学护理学院研究伦理委员会。电话号码：66-53-936080（工作时间）或者传真：66-53-894170

关于本研究没有利益冲突



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APPENDIX H

Volunteer Research Agreement Form (Chinese Version)

志愿研究协议表(Chinese)	
<p>我已仔细阅读以上信息，有机会咨询关于这个研究的任何问题，并对回答满意。我同意参与该项研究并以签名作为我决定的依据（本签名并不意味着我放弃法律提供的任何权利）。</p>	<p>我保证研究参与者已经得到机会咨询任何问题并且得到清楚的回答。研究参与者自愿同意参与本次研究。</p>
<hr/> <p>研究参与者的姓名</p>	<p>陈河燕</p>
<hr/> <p>研究参与者的签名</p>	<hr/> <p>研究者名字</p>
<hr/> <p>日/月/年</p>	<hr/> <p>研究者签名</p>
	<hr/> <p>日/月/年</p>

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APPENDIX I

Permission of Data Collection Letters

The First Affiliated Hospital of Dali University

Faculty of Nursing
Chiang Mai University

Ref.No.6593 (7)/007

Mr. Wu Xinhua,
Dean of the First Affiliated Hospital of Dali University
The People's Republic of China

คณะพยาบาลศาสตร์
มหาวิทยาลัยเชียงใหม่

March 1, 2019

Dear Mr. Wu Xinhua,

Mrs. Chen Heyan, Student Code 601235815, is a student in the Master program in Nursing Administration at the Faculty of Nursing, Chiang Mai University. Her thesis entitled "Factors Related to Job Satisfaction of Nurses in Tertiary Hospitals of Dali, the People's Republic of China" has been approved by the Faculty of Nursing Graduate Committee. She is conducting her thesis under the guidance of her advisors, Professor Dr. Apiradee Nantsupawat and Professor Dr. Petsunee Thungjaroenkul. She would like to collect data from 10-30 nurses at the First Affiliated Hospital of Dali University in March 2019. Data will be collected using Demographic Data Form, Professional Commitment Scale, and Job satisfaction questionnaire. The result from this process will be used to test the quality of the instruments.

The Faculty of Nursing, Chiang Mai University would like to request permission for student to collect data at your hospital in order to ensure the reliability of the instruments. All data will be collected by the student.

Thank you in advance for considering this request.

Yours sincerely,

Thanee Kaewthummanukul

Assistant Professor Thanee Kaewthummanukul, PhD, R.N.
Associate Dean for Graduate Studies and Research
Deputy Dean,
Faculty of Nursing, Chiang Mai University.

Address
110 Inthavaroros Road, Sripthum, Muang, Chiang Mai, 50200, Thailand
110 ถนนอินทวารโรส ตำบลศรีภูมิ อำเภอเมือง จังหวัดเชียงใหม่ 50200

Telephone
+66 53 945 012

Fax
+66 53 217 145

Website
www.nurse.cmu.ac.th

Faculty of Nursing

Chiang Mai University



คณะพยาบาลศาสตร์
มหาวิทยาลัยเชียงใหม่

Ref.No.6593 (7)/009

Mrs. Chen Qixian,
Director of Nursing Department
The First Affiliated Hospital of Dali University
The People's Republic of China

March 1, 2019

Dear Mrs. Chen Qixian,

Mrs. Chen Heyan, Student Code 601235815, is a master degree student in Nursing Administration at the Faculty of Nursing, Chiang Mai University, Thailand. She is ready to begin data collection for her master thesis on "Factors Related to Job Satisfaction of Nurses in Tertiary Hospitals of Dali, the People's Republic of China" under the guidance of her advisors, Assistant Professor Dr. Apiradee Nantsupawat and Assistant Professor Dr. Petsunee Thungjaroenkul. Her study has been approved by our Research Ethics Committee.

Mrs. Chen Heyan will collect data from nurses from several hospitals in Dali from March – April 2019. The data collection instruments include: 1. Demographic Data Form; 2. Professional Commitment Scale; and 3. Job satisfaction questionnaire. Data collected from all hospitals will be analyzed and reported in aggregate. All data will be reported across settings and findings for individual hospitals will not be provided.

The Faculty of Nursing, Chiang Mai University would like to request permission for Mrs. Chen Heyan to engage in data collection at your hospital. The number of participants from your hospital will be 176. We believe that her topic is of great interest and the data gained from her study will be valuable to hospitals in Dali and throughout China. Your assistance with this project would be greatly appreciated. Thank you for your consideration of this request.

Yours sincerely,

Thanee Kaewthummanukul

Assistant Professor Thanee Kaewthummanukul, PhD, R.N.
Associate Dean for Graduate Studies and Research
Deputy Dean,
Faculty of Nursing, Chiang Mai University.



陈其华

2019.3.8.

Address

110 Inthavaroros Road, Sriphum, Muang, Chiang Mai, 50200, Thailand
110 ถนนอินทวารวโรส ตำบลศรีภูมิ อำเภอเมือง จังหวัดเชียงใหม่ 50200

Telephone

+66 53 945 012

Fax

+66 53 217 145

Website

www.nurse.cmu.ac.th

Faculty of Nursing

Chiang Mai University



Ref.No.6593 (7)/004

Mrs. Chen Qixian,
Director of Nursing Department
The First Affiliated Hospital of Dali University
The People's Republic of China

คณะพยาบาลศาสตร์

มหาวิทยาลัยเชียงใหม่

March 1, 2019

Dear Mrs. Chen Qixian,

Mrs. Chen Heyan, Student Code 601235815, is a student in the Master program in Nursing Administration at the Faculty of Nursing, Chiang Mai University. Her thesis entitled "Factors Related to Job Satisfaction of Nurses in Tertiary Hospitals of Dali, the People's Republic of China" has been approved by the Faculty of Nursing Graduate Committee. She is conducting her thesis under the guidance of her advisors, Professor Dr. Apiradee Nantsupawat and Professor Dr. PetsuneeThungjaroenkul. She would like to collect data from 10-30 nurses at the First Affiliated Hospital of Dali University in March 2019. Data will be collected using Demographic Data Form, Professional Commitment Scale, and Job satisfaction questionnaire. The result from this process will be used to test the quality of the instruments.

The Faculty of Nursing, Chiang Mai University would like to request permission for student to collect data at your hospital in order to ensure the reliability of the instruments. All data will be collected by the student.

Thank you in advance for considering this request.

Yours sincerely,

Thanee Kaewthummanukul

Assistant Professor Thanee Kaewthummanukul, PhD, R.N.
Associate Dean for Graduate Studies and Research
Deputy Dean,
Faculty of Nursing, Chiang Mai University.



2019.3.7

Address

110 Inthavaroros Road, Sriphum, Muang, Chiang Mai, 50200, Thailand
110 ถนนอินทวารโรรส ตำบลศรีภูมิ อำเภอเมือง จังหวัดเชียงใหม่ 50200

Telephone

+66 53 945 012

Fax

+66 53 217 145

Website

www.nurse.cmu.ac.th

Faculty of Nursing
Chiang Mai University



Ref.No.6593 (7)/011

Mr. Hu Daijun,
Dean of the People's Hospital in Dali Bai Nationality Autonomous Prefecture
The People's Republic of China

คณะพยาบาลศาสตร์
มหาวิทยาลัยเชียงใหม่

March 1, 2019

Dear Mr. Hu Daijun,

Mrs. Chen Heyan, Student Code 601235815, is a master degree student in Nursing Administration at the Faculty of Nursing, Chiang Mai University, Thailand. She is ready to begin data collection for her master thesis on "Factors Related to Job Satisfaction of Nurses in Tertiary Hospitals of Dali, the People's Republic of China" under the guidance of her advisors, Assistant Professor Dr. Apiradee Nantsupawat and Assistant Professor Dr. Petsunee Thungjaroenkul. Her study has been approved by our Research Ethics Committee.

Mrs. Chen Heyan will collect data from nurses from several hospitals in Dali from March – April 2019. The data collection instruments include: 1. Demographic Data Form; 2. Professional Commitment Scale; and 3. Job satisfaction questionnaire. Data collected from all hospitals will be analyzed and reported in aggregate. All data will be reported across settings and findings for individual hospitals will not be provided.

The Faculty of Nursing, Chiang Mai University would like to request permission for Mrs. Chen Heyan to engage in data collection at your hospital. The number of participants from your hospital will be 200. We believe that her topic is of great interest and the data gained from her study will be valuable to hospitals in Dali and throughout China. Your assistance with this project would be greatly appreciated. Thank you for your consideration of this request.

Yours sincerely,

Thanee Kaewthummanukul

Assistant Professor Thanee Kaewthummanukul, PhD, R.N.
Associate Dean for Graduate Studies and Research
Deputy Dean,
Faculty of Nursing, Chiang Mai University.

Address

110 Inthavaroros Road, Sriphum, Muang, Chiang Mai, 50200, Thailand
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Telephone

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www.nurse.cmu.ac.th



Faculty of Nursing

Chiang Mai University



คณะพยาบาลศาสตร์
มหาวิทยาลัยเชียงใหม่

Ref.No.6593 (7)/col

Mrs. Yang Kaiqing,
Director of Nursing Department
The People's Hospital in Dali Bai Nationality Autonomous Prefecture
The People's Republic of China

March 1, 2019

Dear Mrs. Yang Kaiqing,

Mrs. Chen Heyan, Student Code 601235815, is a master degree student in Nursing Administration at the Faculty of Nursing, Chiang Mai University, Thailand. She is ready to begin data collection for her master thesis on "Factors Related to Job Satisfaction of Nurses in Tertiary Hospitals of Dali, the People's Republic of China" under the guidance of her advisors, Assistant Professor Dr. Apiradee Nantsupawat and Assistant Professor Dr. Petsunee Thungjaroenkul. Her study has been approved by our Research Ethics Committee.

Mrs. Chen Heyan will collect data from nurses from several hospitals in Dali from March – April 2019. The data collection instruments include: 1. Demographic Data Form; 2. Professional Commitment Scale; and 3. Job satisfaction questionnaire. Data collected from all hospitals will be analyzed and reported in aggregate. All data will be reported across settings and findings for individual hospitals will not be provided.

The Faculty of Nursing, Chiang Mai University would like to request permission for Mrs. Chen Heyan to engage in data collection at your hospital. The number of participants from your hospital will be 200. We believe that her topic is of great interest and the data gained from her study will be valuable to hospitals in Dali and throughout China. Your assistance with this project would be greatly appreciated. Thank you for your consideration of this request.

Yours sincerely,

Assistant Professor Thane Kaewthummanukul, PhD, R.N.
Associate Dean for Graduate Studies and Research
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Telephone

+66 53 945 012

Fax

+66 53 217 145

Website

www.nurse.cmu.ac.th

APPENDIX J

The Cronbach's Alpha Coefficient of Instrument

Instrument	Item numbers	Cronbach's α
Job Satisfaction	20	.917
Intrinsic satisfaction	12	.887
Extrinsic satisfaction	8	.851
Professional commitment	26	.912
Willingness to make effort	13	.801
Maintaining as a membership	8	.875
Belief in goals and values	5	.880

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APPENDIX K

Mean, Standard Deviation, Frequency and Percentage of Each Item of Job Satisfaction

Table K1

Mean, Standard Deviation, Frequency and Percentage of Each Item of Job Satisfaction (n=368)

Items	Mean	SD	1	2	3	4	5
			1 n (%)	2 n (%)	3 n (%)	4 n (%)	5 n (%)
Inner satisfaction							
1. The chance to do things for other people.	3.70	0.86	7 (1.9)	32 (8.7)	69 (18.8)	1218(59.2)	42 (11.4)
2. Being able to do things that don't go against my conscience	3.83	0.91	10 (2.7)	23 (6.3)	60 (16.3)	201 (54.6)	74 (20.1)
3. The chance to try my own methods of doing the job	3.69	0.82	5 (1.4)	27 (7.3)	87(23.6)	207(56.3)	42(11.4)
4. Colleague's affirmation of my work	3.75	0.79	4(1.1)	23(6.3)	79(21.5)	218(59.2)	44(12.0)
5. The freedom to use my own judgment	3.74	0.80	4(1.1)	25(6.8)	78(21.2)	217(59.0)	44(12.0)
6. The chances for advancement on this job	3.60	0.84	5(1.4)	36(9.8)	96(26.1)	196(53.3)	35(9.5)
7. The chance to tell people what to do	3.71	0.83	6(1.6)	28(7.6)	77 (20.9)	214 (58.2)	43 (11.7)

Table K1 (continued)

Items	Mean	SD	1	2	3	4	5
			1 n (%)	2 n (%)	3 n (%)	4 n (%)	5 n (%)
8. The chance to work alone on the job	3.55	0.80	4(1.1)	30(8.2)	121 (32.9)	184 (50.0)	29 (7.9)
9. Stability for this job	3.64	0.92	11 (3.0)	30(8.2)	91 (24.7)	185 (50.3)	51 (13.9)
10. The feeling of accomplishment I get from the job	3.63	0.90	9 (2.4)	28 (7.6)	106 (28.8)	172 (46.7)	53 (14.4)
11. The chance to do different things from time to time	3.56	0.93	6(1.6)	28 (7.6)	120 (32.6)	183 (49.7)	31(8.4)
12. Being able to keep busy all the time	3.12	0.82	50 (13.6)	63 (11.7)	84 (22.8)	135 (36.7)	36 (9.8)
External satisfaction							
13. The way my co-workers get along with each other (excluding manager)	3.83	1.2	6 (1.6)	19 (5.2)	70 (19.0)	208 (56.5)	65 (17.7)
14. The competence of my supervisor in making decisions	3.70	0.83	6 (1.6)	18 (4.9)	93 (25.3)	215 (58.4)	36 (9.8)
15. The way my boss manages me	3.77	0.78	7 (1.9)	19 (5.2)	75 (20.4)	219 (59.5)	48 (13.0)
16. The way my boss handles his/her workers	3.78	0.81	7 (1.9)	22 (6.0)	67 (18.2)	220 (59.8)	52 (14.1)

Table K1 (continued)

Items	Mean	SD	1	2	3	4	5
			1 n (%)	2 n (%)	3 n (%)	4 n (%)	5 n (%)
17. My work environment	3.54	0.83	19 (5.2)	26 (7.1)	99 (26.9)	186 (50.5)	38 (10.3)
18. The way hospital policies are put into practice	3.47	0.95	19 (5.2)	34 (9.2)	98 (26.6)	188 (51.5)	29 (7.9)
19. Promotion opportunities given by work	3.40	0.95	22 (6.0)	32 (8.7)	117 (31.8)	171 (46.5)	26 (7.1)
20. My pay and the amount of work I do	3.09	1.11	36 (9.8)	76 (20.7)	100 (27.2)	130 (35.3)	26 (7.1)

1= Very Dissatisfaction 2= Dissatisfaction 3= No Satisfaction 4= Satisfaction 5= Very Satisfaction

APPENDIX L

Mean, Standard Deviation, Frequency and Percentage of Each Item of Professional Commitment

Table L1

Mean, Standard Deviation, Frequency and Percentage of Each Item of Professional Commitment (n=368)

Items	Mean	SD	1	2	3	4
			1 n (%)	2 n (%)	3 n (%)	4 n (%)
Willingness to make effort						
1. Working as a member of the nursing profession; I think I can fulfill my life goals.	2.50	0.79	28 (7.6)	169 (45.9)	130 (35.3)	41(11.1)
2. Working as a member of the nursing profession; I think I can do it by myself.	3.01	0.72	5 (1.4)	79 (21.5)	192 (52.2)	92 (25.0)
3. I like to discuss with my friends what I learned in nursing.	2.82	0.69	9 (2.4)	99 (26.9)	209(56.8)	51(13.9)
4. I think nursing is the best profession for me.	2.33	0.78	44(12.0)	184(50.5)	113(30.7)	27(7.3)
5. I tell my relatives that nursing is a perfect job.	2.30	0.82	63(17.1)	153(41.6)	130(35.3)	22(6.0)
6. I think I'm a member of the nursing profession.	3.15	0.70	3(0.8)	57(15.5)	190(51.6)	118(32.1)
7. I will actively participate in the future development of nursing.	3.02	0.70	6(1.6)	68(18.8)	205 (55.7)	88 (23.9)
8. I will spend most of my time in my nursing career.	2.78	0.79	17 (4.6)	113 (30.7)	173 (17.0)	65(17.7)

Table L1 (continued)

Items	Mean	SD	1	2	3	4
			1 n (%)	2 n (%)	3 n (%)	4 n (%)
9. I will be a nurse all my life.	2.59	0.89	33 (9.0)	152 (41.3)	116 (31.5)	67 (18.2)
10. I think that nursing is a valuable profession.	2.87	0.76	12(3.3)	97 (26.4)	186(50.5)	73(19.8)
11. I like to discuss nursing with other professionals.	2.67	0.70	12(3.3)	134(36.4)	186(50.5)	36(9.8)
12. I will try to get higher education in the future.	2.91	0.77	8(2.2)	103(28.0)	172(46.7)	85(23.1)
13. I will work as a nurse in the future or go abroad.	2.06	0.88	99(26.9)	176(47.8)	64(17.4)	29(7.9)
Maintaining as a membership						
14. If I decide to go to another country or to receive further education, I will choose another profession.	2.53	0.83	54(14.7)	91(24.7)	196(53.3)	27(7.3)
15. I don't like nursing.	2.98	0.71	17(4.6)	46(12.5)	232(63.0)	73(19.8)
16. I am embarrassed when I tell people that my profession is nursing.	3.21	0.81	12(3.3)	53(14.4)	149(40.5)	154(41.8)
17. If I have an opportunity, I will change profession.	2.54	0.88	52(14.1)	107(29.1)	166(45.1)	43(11.7)
18. I think that my decision in choosing nursing as a profession is wrong.	3.00	0.79	20 (5.4)	54 (14.7)	200(54.3)	94(25.5)
19. I think that my nursing work is meaningless.	3.36	0.75	10 (2.7)	30 (8.2)	145 (39.4)	183 (49.7)
20. I think that nursing profession members have low social status.	2.80	1.0	48 (13.0)	86 (23.4)	126(34.2)	108(29.3)
21. I think nursing development is limited.	2.96	0.81	19(5.2)	73(19.8)	181(49.2)	95(25.8)

Table L1 (continued)

Items	Mean	SD	1	2	3	4
			1 n (%)	2 n (%)	3 n (%)	4 n (%)
Belief in goals and values						
22. I fully agree with the expression nursing is a holistic science.	3.27	0.73	5(1.4)	47(12.8)	161 (13.8)	155(42.1)
23. I think that the development of nursing as a professional profession will affect my future.	2.77	0.82	17(4.6)	125(34.0)	153(41.6)	72(19.6)
24. I feel important as I can help people by practicing the nursing profession.	3.07	0.70	2(0.5)	71(19.3)	195(53.0)	100(27.2)
25. I am concerned about developments in nursing professionalization.	2.73	0.84	34(9.2)	91(24.7)	184(50.0)	59(16.0)
26. I think that nursing has important contributions to the public.	3.20	0.73	5 (1.4)	54 (14.7)	174 (47.0)	136(37.0)

1= strongly do not support 2= not support 3= support 4= strongly support

APPENDIX M

Enter Regression Output

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	employee status, PC, educational level	.	Enter

a. All requested variables entered.

b. Dependent Variable: JS

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.331 ^a	.110	.102	.52685	1.871

a. Predictors: (Constant), employee status, PC, educational level

b. Dependent Variable: JS

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.437	3	4.146	14.936	.000 ^a
	Residual	101.035	364	.278		
	Total	113.472	367			

a. Predictors: (Constant), employee status, PC, educational level

b. Dependent Variable: JS

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.315	.310		7.472	.000		
	PC	.018	.003	.316	6.342	.000	.982	1.018
	educational level	-.053	.057	-.048	-.932	.352	.939	1.065
	employee status	.065	.065	.050	.997	.319	.954	1.048

a. Dependent Variable: JS

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	PC	education level	employees status
1	1	3.911	1.000	.00	.00	.00	.00
	2	.057	8.277	.00	.00	.20	.61
	3	.026	12.166	.01	.34	.43	.21
	4	.006	26.401	.99	.65	.37	.18

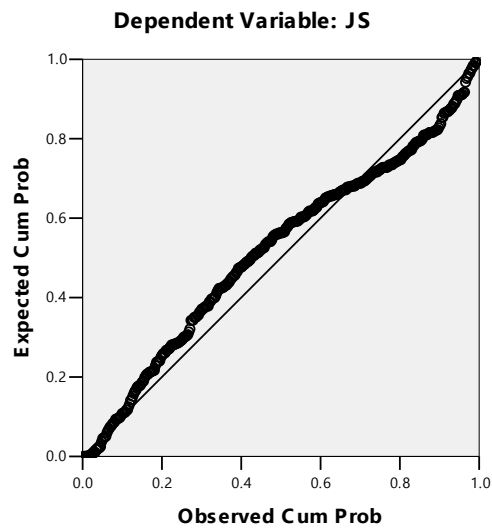
a. Dependent Variable: JS

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.0009	4.1464	3.6046	.18409	368
Residual	-2.34569	1.64099	.00000	.52469	368
Std. Predicted Value	-3.279	2.943	.000	1.000	368
Std. Residual	-4.452	3.115	.000	.996	368

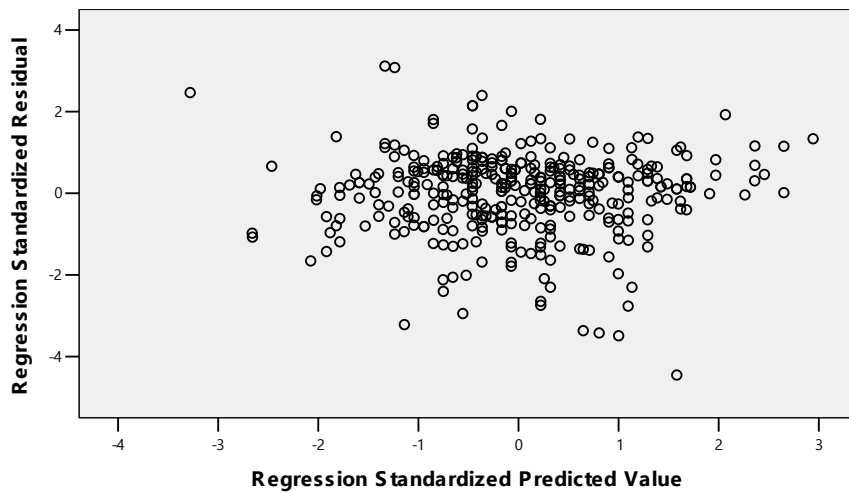
a. Dependent Variable: JS

Normal P-P Plot of Regression Standardized Residual



Scatterplot

Dependent Variable: JS



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CURRICULUM VITAE

Name Mrs. Chen heyang

Date of Birth July 20, 1990

Educational Background

2010- 2014 Bachelor Degree of Nursing Science (B.N.Sc),
Dali University, the People's Republic of China

Professional Experiences

2015-present Dermatology Department
The First Affiliated Hospital of Dali University



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