

## Psychological Contract of Nurses in the University Hospitals in Yunnan Province, the People's Republic of China

### พันธะด้านจิตใจของพยาบาลในโรงพยาบาลมหาวิทยาลัยในจังหวัดยูนนาน สาธารณรัฐประชาชนจีน

คุณลาน	ฮู *	Qiulan	Hu *
อภิรดี	นันท์ศุภวัฒน์ **	Apiradee	Nantsupawat **
เพชรสุนีย์	ทิ้งเจริญกุล ***	Petsunee	Thungjaroenkul ***

#### บทคัดย่อ

พันธะด้านจิตใจของพยาบาลมีความสำคัญต่อการรักษาความสัมพันธ์ระหว่างผู้ถูกจ้างและผู้จ้างที่จะทำให้ประสบความสำเร็จตามเป้าหมายขององค์กร วัตถุประสงค์ของการวิจัยการเปรียบเทียบเชิงแบบการบรรยาย เพื่อศึกษาและเปรียบเทียบพันธะด้านจิตใจของพยาบาลลูกจ้างชั่วคราวและพยาบาลประจำกลุ่มตัวอย่างคัดเลือกโดยการสุ่มตัวอย่างแบบหลายขั้นตอน ประกอบด้วยพยาบาลจำนวน 402 ราย จากโรงพยาบาลมหาวิทยาลัย 3 แห่งในจังหวัดยูนนาน สาธารณรัฐประชาชนจีนเครื่องมือที่ใช้ในการวิจัยครั้งนี้ประกอบด้วยแบบบันทึกข้อมูลส่วนบุคคลและแบบสอบถามการจัดการพันธะด้านจิตใจ (the Psychological Contract Inventory: PCI) ค่าความเชื่อมั่น Cronbach ของอัลฟาอยู่ในระดับที่ยอมรับได้ การวิเคราะห์ข้อมูลโดยใช้สถิติบรรยายและสถิติ t-test

#### ผลการศึกษาพบว่า

1. จากรูปแบบของพันธะด้านจิตใจพบว่าพันธะสัญญาเชิงความสัมพันธ์และพันธะสัญญาเชิงสมมูลของลูกจ้างมีค่าเฉลี่ยสูงกว่าพันธะสัญญาเชิงความสัมพันธ์และพันธะสัญญาเชิงสมมูลของนายจ้างแต่ว่าพันธะสัญญาเชิงผลประโยชน์ของลูกจ้างมีค่าเฉลี่ยต่ำกว่าพันธะสัญญาเชิงผลประโยชน์ของนายจ้างและพบว่ารูปแบบพันธะสัญญาเชิงการเปลี่ยนแปลงมีคะแนนต่ำที่สุดในทุกรูปแบบ สำหรับสถานภาพพันธะด้านจิตใจ การบรรลุเป้าหมายพันธะด้านจิตใจของลูกจ้างมีคะแนนสูงกว่านายจ้าง
2. มีความแตกต่างอย่างมีนัยสำคัญระหว่างพยาบาลลูกจ้างชั่วคราวและพยาบาลประจำในรูปแบบพันธะสัญญาเชิงความสัมพันธ์ อย่างไรก็ตามพบว่าไม่มีความแตกต่างระหว่างพยาบาลลูกจ้างชั่วคราวและพยาบาลประจำของรูปแบบอื่น ๆ
3. มีความแตกต่างกันอย่างมีนัยสำคัญระหว่างพยาบาลลูกจ้างชั่วคราวและพยาบาลประจำในการบรรลุเป้าหมายพันธะด้านจิตใจของนายจ้าง อย่างไรก็ตามไม่พบความแตกต่างกันระหว่างพยาบาลลูกจ้างชั่วคราวและพยาบาลประจำในการบรรลุเป้าหมายพันธะด้านจิตใจของลูกจ้าง

\* โรงพยาบาล โรงพยาบาลในเครือของมหาวิทยาลัยการแพทย์คุณหมิงที่หนึ่งสาธารณรัฐประชาชนจีน  
 \* Staff nurse, the First Affiliated Hospital of Kunming Medical University, the People's Republic of China, 283711640@qq.com  
 \*\* รองศาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่  
 \*\* Associate Professor, Faculty of Nursing, Chiang Mai University  
 \*\*\* ผู้ช่วยศาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่  
 \*\*\* Assistant Professor, Faculty of Nursing, Chiang Mai University  
 วันที่รับบทความ 1 กุมภาพันธ์ 2562 วันที่แก้ไขบทความ 20 พฤษภาคม 2562 วันตอบรับบทความ 2 สิงหาคม 2562

ผลการศึกษาครั้งนี้เสนอแนะให้ผู้บริหารทางการแพทย์ควรจะให้โอกาสในการเรียนรู้และโอกาสในการมีส่วนร่วมในโรงพยาบาล นอกจากนี้ผู้บริหารทางการแพทย์ควรจะให้ความสนใจทั้งความมั่นคงของค่าจ้าง และความเป็นอยู่ดีของพยาบาล

**คำสำคัญ:** พันธะด้านจิตใจ , พยาบาล, โรงพยาบาลมหาวิทยาลัยในจังหวัดยูนนาน, สาธารณรัฐประชาชนจีน

## Abstract

Psychological contract of nurses are important constructs for keeping a long-term relationship between employee and employer to achieve organizational goals. The purposes of this descriptive comparative research were to examine psychological contract of temporary nurses and permanent nurses and compare the psychological contract between them. Samples were selected by using multistage random sampling, including 402 nurses from three university hospitals in Yunnan Province, the People's Republic of China. Research instruments included Demographic Data Form and the Psychological Contract Inventory (PCI). The Cronbach's alpha coefficient was acceptable. Descriptive statistics and independent t-test were used for data analysis.

### The results revealed that:

1. For the forms of psychological contract, employee relational contract and employee balanced contract had a higher mean score than employer relational contract and employer balanced contract. But employee transactional contract had a lower mean score than employer transactional contract. Transitional contract had a very low score among all forms of psychological contract. Regarding the status of psychological contract, employee psychological contract fulfillment was higher than employer psychological contract fulfillment.

2. There was a significant difference between temporary nurses and permanent nurses in relational contract of employer obligations. However, there was no significant differences between temporary nurses and permanent nurses in forms of employee obligations.

3. There was a significant difference between temporary nurses and permanent nurses in employer psychological contract fulfillment. However, no significant difference was found between temporary nurses and permanent nurses in employee psychological contract fulfillment.

Results suggested that nursing administrators should provide nurses more learning opportunities and chances to be involved in the hospital. In addition, nurse administrators should not only be concerned about nurses earning stable wages, but also good environment for further develop.

**Keywords:** *Psychological Contract, Nurse, University Hospital, China, Yunnan Province*

## Background and Significance

Nowadays, nursing shortage is an unsolved global problem (Shortell & Casalino, 2008). The ratio of nurses to physicians in China was 1.0:1 less than the average ratio (2.8:1) reported by the WHO (2014). Besides the shortage of workforce, healthcare organizations in China also face the challenges of insufficient resources, and poor quality of service. China has unveiled a new healthcare reform plan, which aim to improve the quality of care and encourage the delivery of more cost-effective care (GOSCC, 2015). Healthcare organizations were forced to operate with fewer nurses but still provide the necessary high quality of services (Liou, 2008). Under these challenging circumstances, it is necessary for nurses to have a belief that the obligations they have made to their hospital, will be in exchanged for obligations that their hospital will offer to them. This belief of reciprocal obligation called psychological contract.

Psychological contract (PC) is defined as individual beliefs, shaped by the organization, regarding the terms of an exchange agreement between the individual and their organization (Rousseau, 1995). PC consists of two elements: forms (i.e. balanced, transactional, relational, transitional), and status (i.e. PC fulfillment) (Rousseau, 2000). Regarding PC forms, a balanced contract refers to dynamic and open-ended employment arrangements conditioned on employment opportunities to develop career advantages. A transactional contract refers to employment arrangements with short-term employment, primarily focused on economic exchange with specific, narrow duties and

limited worker involvement in the organization. A relational contract refers to long-term or open-ended employment arrangements based upon mutual trust and loyalty. A transitional contract refers to “a cognitive stated reflecting the consequences of organizational change and transitions that are at odds with a previously established employment arrangement” (Rousseau, 2000). Regarding PC status, it refers to PC fulfillment which occurs when an employee perceived that both the organization and themselves fulfill obligations in composing their PC (Hamilton & von Treuer, 2012). Study both PC forms and status was a way to comprehensively understand PC, so that lead nurse administrators to develop positive PC form and increase PC fulfillment.

Good management of PC develops positive PC forms (i.e. balanced and relational contract), and increases PC fulfillment. Thereby, bringing about positive outcomes, such as reducing turnover (Purvis & Cropley, 2003), and increasing the following work-related factors: satisfaction (Rodwell & Ellershaw, 2016), organizational commitment (McCabe & Sambrook, 2013), job performance, organizational citizen behavior (OCB) (Conway & Briner, 2005), engagement (Bal, Kooij & De Jong, 2013), as well as career development (Hamilton & von Treuer, 2012). Consequently, this benefits the hospital, patients, and nurses.

In China, general government health expenditure accounts for 10.43% of the total government expenditure, which is less than the average percentage of 11.69% of 112 among 192 countries (WHO, 2012). To reduce the bud-

get of healthcare organization, the main transition to nursing employment is decreasing permanent work contracts and the increasing temporary work contracts (Shang et al., 2014). Temporary nurses were significantly younger, less likely to be married and had children, had fewer years of working experience, and worked for their current hospital for a shorter period of time (Shang et al., 2014). Although, both types of nurses have the same responsibilities, normally temporary nurses with a lower salary and have fewer chances to get improvements. The transition of employment can decrease costs in hospitals (Zhang, Zhang & Zhao, et al., 2011), meanwhile, it may influence the PC of Chinese nurse. One study in Hangzhou City, China indicates that 52.45% of nurses have perceived their hospital fail to fulfill what they promised (Pan & Ge, 2015).

Yunnan Province has a more serious shortage compared to other provinces in China. There are only 1.97 nurses for per 1000 population number, which is less than the national level of 2.05 (GOSCC, 2015). For most university hospitals, they take responsibility for clinical teaching and teaching practice, to support the primary hospitals, emergency rescue, medical scientific research tasks. Thus, university hospitals facing more challenges than other hospitals. Most studies on PC only focus on either PC form or PC status but rarely does a study look at both PC forms and status. Also, there have been limited studies conducted comparing the PC of both temporary and permanent nurses in China. A study on the PC of nurses in university hospitals may help nursing administrators have

a better understanding of how nurses perceived their PC and what obligations or promises between hospital and nurses should be fulfilled, so that nurses want to remain and motivate nurses to work harder for the hospital.

## Objectives

This study aims to examine the psychological contract of nurses, then to compare psychological contract between temporary nurses and permanent nurses in university hospitals in Yunnan Province, the People's Republic of China.

## Conceptual Framework

This study was based on the Cognitive Perceptual Model of Psychological Contract developed by Rousseau (2000). The PC includes PC forms and PC status. There are four dimensions to PC form: transactional, relational, balanced and transitional contract. PC status refers to PC fulfillment. The comparison of the PC forms and status between temporary nurse and permanent nurse was conducted in this study.

## Hypothesis

Temporary nurses had a higher mean scores in transactional contract and transitional contract than permanent nurses. Permanent nurses had higher mean scores in relational contract, balanced contract and PC fulfillment than temporary nurses.

## Methodology

This study was a descriptive comparative study which examined the PC of between

permanent nurses and temporary nurses in university hospitals in Yunnan Province, the People's Republic of China.

### Population and sampling

The samples included registered nurses currently practicing in university hospitals in Yunnan Province with at least one year of nursing experience. The sample size of 378 was calculated based on the Yamane (1967) formula. Taking into consideration the possible loss of nurses, 10% of the sample was added (Burns & Grove, 2005). Therefore, the total sample size was 445 nurses who were selected using multistage random sampling. 1) simple random sampling was used to determine three hospitals from total five university hospitals, 2) stratified random sampling was used to determine permanent nurses and temporary nurses from each hospital and each department, and 3) simple random sampling was used to select permanent nurses and temporary nurses from the list of nurses in each department of university hospital.

### Data collection

Data collection was carried out over two months from February to April 2018. The assigned coordinator distributed the data collection package that contained an information sheet, consent form and the questionnaire, with an envelope to the sampled nurses in each hospital. The participants sealed the questionnaires in the given envelope and returned them to the box allocated in each hospital within two weeks. A total of 415 nurses returned the questionnaires with a return rate of 93.05%. After screening, 13 incomplete questionnaires were excluded so there were 402 valid questionnaires

with a valid return rate of 90.34%.

### Research Instruments

The research instrument was a questionnaire consisting of two parts: 1) Demographic data form, which was developed by the researcher and comprised age, gender, marital status, education level, employment status, years of work experience, work department, the purpose of employment, and salary, and 2) the PCI developed by Rousseau (2000), which consists of four subscales. Subscale I: organization obligations to the employee, it contains three dimensions (i.e. balanced, relational, transactional contract). Subscale II: employee obligation to the organization, it contains three dimensions (i.e. balanced, relational, transactional contract). Subscale III: PC transition. Subscale IV: PC fulfillment, it contains two dimensions (i.e. employee PC fulfillment and employer PC fulfillment). All 72 items used a 5-point Likert-type scale response format ranging from 1 (not at all) to 5 (to a great extent). The author received the PCI permission letter of Rousseau by email. Since the English is not the mother tongue of Chinese, PCI was translated from English to Chinese without modification by the researcher by using the Back-Translation method. The questionnaire was previously used with a reported acceptable validity value (Rousseau, 2000). So, the validity of the instrument was not tested in this study. The internal consistency was tested with ten nurses in one of the university hospitals. Cronbach's alpha coefficient of subscale I, II, III, and IV was .94, .92, .96 and .83, respectively.

## Ethical Considerations

The study was approved by the Research Ethics Committee, Faculty of Nursing, and Chiang Mai University, Thailand (2018-EXP017). The study was harm to the participants. The researcher met the director of the nursing department of each of the three university hospitals to explain the purpose and the benefits of the study then received permission to collect data. Voluntary participation was assured through a consent form, and participants were required to return the sealed questionnaires in the designated box. Anonymity and confidentiality of all the information was maintained by using numerical codes in the questionnaires instead of using the real names of the participants.

## Data Analysis

Statistical Package for the Social Sciences (SPSS 13.0) was used for data analysis. Both descriptive and inferential statistics were used, alpha significance was set at a level of 0.05. Demographic data were analyzed by using frequency, percentage, the mean, and standard deviation. Scores of each dimension of PC of nurses were analyzed by using the mean and standard deviation. The Kolmogorov Smirnov test was used for normality distribution. PC forms were in normal distribution, the independent t-test was used to compare the differences between temporary nurses and permanent nurses in PC forms. The PC status were in non-normal distribution, the Mann Whitney U-test was used to compare difference between temporary nurses and permanent nurses in PC status.

## Results

1. Demographic characteristics of the samples

Among the 402 samples, the average age was 31.75 years old ( $SD = 6.91$ ), the majority of them (95.00%) were female and hold a bachelor degree (86.30%). Most of the samples (62.4%) were married, and with temporary employment contract (63.2%). The average length of experience was 9.97 years ( $SD = 8.21$ ) with more than half of them (61.44%) having worked less than ten years. Most of the nurses have been working in the medical and surgical department (37.10% and 33.83%). The main purpose of employment was to cover living needs (71.6%). The main range of monthly income was 4001-6000 yuan/ month (40.8%). Compared with permanent nurses, the temporary nurses are younger with fewer years of work experience and earn less salary, and are most like to be not married. But two types of nurses with very similar demographic characteristics in other aspects (Table 1).

**Table 1** Frequency, and Percentage of Demographic Characteristics of the Samples (n=402)

Characteristics	Permanent nurses ( n = 148 )		Temporary nurses ( n = 254 )		Total ( n = 402 )	
	n	%	n	%	n	%
Age (years old) ( $\bar{X}$ = 31.75, SD = 6.91, Range = 22-55)						
22-30	23	15.54	188	74.02	211	52.49
31-40	75	50.68	64	25.20	139	34.58
41-50	47	31.76	2	.78	49	12.18
51-55	3	2.02	0	.00	3	.75
Gender						
Female	142	95.95	240	94.49	382	95.02
Male	6	4.05	14	5.51	20	4.98
Marital status						
Single	18	12.16	124	48.82	142	35.32
Married	123	83.11	128	50.39	251	62.44
Divorced	7	4.73	2	.79	9	2.24
Education						
Diploma	1	.68	1	.39	2	.50
Associate degree	20	13.51	32	12.60	52	12.93
Bachelor degree	127	85.81	220	86.62	347	86.32
Master degree	0	.00	1	.39	1	.25
Years of experience ( $\bar{X}$ = 9.97, SD = 8.21, Range = 2-35)						
2-10 years	34	22.97	213	83.86	247	61.44
11-20 years	60	40.54	39	15.35	99	24.62
21-30 years	48	32.43	2	.79	50	13.93
>30 years	6	4.06	0	.00	6	.01
Department						
Medical	51	34.46	98	38.58	149	37.06
Surgical	52	35.14	84	33.08	136	33.83
Pediatric	8	5.41	16	6.30	24	5.97
OB & GYN	3	2.03	4	1.57	7	1.75
OR	7	4.73	9	3.54	16	3.98
ER	4	2.70	12	4.72	16	3.98

Characteristics	Permanent nurses ( n = 148 )		Temporary nurses ( n = 254 )		Total ( n = 402 )	
	n	%	n	%	n	%
	ICU	10	6.75	13	5.12	23
OPD	3	2.03	5	1.97	8	1.99
Others	10	6.75	13	5.12	23	5.72
Purpose of employment*						
Passion for nursing	52	35.13	86	33.86	138	34.33
Satisfy desire of parents	9	6.08	20	7.87	29	7.21
Living needs	105	70.95	187	73.62	288	71.64
Others	8	5.41	3	1.18	7	1.74
Monthly income (yuan)						
≤2,000	0	.00	6	2.36	6	1.49
2,001-4,000	6	4.05	56	22.05	62	15.42
4,001-6,000	55	37.16	109	42.91	164	40.79
6,001-8,000	63	42.57	67	26.38	130	32.35
> 8,001	24	16.22	16	6.30	40	9.95

Note: \*Samples can answer more than one choice for the purpose of employment.

## 2. PC of nurses in the university hospitals

For the PC forms, employee relational contract ( $\bar{X}$  = 3.59, SD = .91) and balanced contract ( $\bar{X}$  = 3.36, SD = .76) had a higher mean score than employer relational contract ( $\bar{X}$  = 2.83, SD = .93) and balanced contract ( $\bar{X}$  = 2.96, SD = .86). But employee transactional contract

( $\bar{X}$  = 2.41, SD = .95) had a lower mean score than employer transactional contract ( $\bar{X}$  = 2.86, SD = .72). Transitional contract had a very low score ( $\bar{X}$  = 2.58, SD = .94). For the PC status, employee PC fulfillment ( $\bar{X}$  = 3.71, SD = .80) higher than employer PC fulfillment ( $\bar{X}$  = 3.35, SD = .81) (Table 1).

**Table 1** Mean, Standard Deviation of PC of the samples (n = 402)

Psychological contract	Employer		Employee	
	$\bar{X}$	SD	$\bar{X}$	SD
PC forms				
Relational contract	2.83	.93	3.59	.91
Balanced contract	2.98	.86	3.36	.76
Transactional contract	2.86	.72	2.41	.95

Psychological contract	Employer		Employee	
	$\bar{X}$	SD	$\bar{X}$	SD
Transitional contract	2.58	.94	2.58	.94
PC status				
PC Fulfilment	3.35	.81	3.71	.80

Note: The Transitional contract is a cognitive state that reflects the consequences of organization change and transitions, it can't be categorized clearly as employee and employer obligation.

3. Comparison of PC between temporary nurses and permanent nurses

There was a significant difference between temporary nurses and permanent nurses in employer relational contract ( $t = -2.41, p = .02$ )

and employer PC fulfillment ( $z = -2.56, p = .01$ ). However, there were no significant differences between temporary nurses and permanent nurses in other dimensions (Table 2).

**Table 2** Comparison of Psychological Contract Between Temporary Nurses and Permanent Nurses

PC (range = 1-5)	Temporary nurses (n = 254)		Permanent nurses (n = 148)		t/u	p
	M/Mdn	SD/QD	M/Mdn	SD/QD		
	Employer obligation					
Balanced*	2.94	.86	3.05	.87	-1.19	.24
Transactional *	2.90	.73	2.78	.70	1.65	.10
Relational *	2.74	.94	3.00	.89	-2.41	.02
Employee obligation						
Balanced*	3.34	.75	3.40	.79	-.75	.45
Transactional *	2.40	.94	2.45	.98	-.60	.55
Relational *	3.55	.90	3.66	.91	-1.17	.24
Transitional contract*	2.63	.92	2.51	.97	1.27	.21
Employee PC fulfillment**	4.00	.50	4.00	.50	-1.27	.21
Employer PC fulfillment**	3.00	.50	3.50	.50	-2.56	.01

Note: \*independent t-test, \*\*Mann Whitney U-text

## Discussion

1. Comparison of Mean Score of PC Forms and PC Status Between Employee and Employer  
Regarding PC forms, the results showed

that a higher employee mean score than employer mean score in the positive contract (i.e. balanced contract and relational contract), but a lower mean score than employer mean score

in the negative contract (i.e. transactional contract). Transitional contract had a very low score among PC forms. This finding was consistent with previous studies, like studies by Rousseau (2000) in the US and Singapore, by Scheepers and Shuping (2011) in South Africa, as well as by Corcoran (2012) in Ireland.

The higher score of employee balanced contract than employer balanced contract may be due to the nurses had high expectations and high contributions to the hospital but had limited opportunities provided by the hospital. The samples of this study are young with more than half of them (52.49%) less than 30 years old. Bal (2017) indicated that young nurses may have a high expectation of learning or training opportunities to develop their career. With the improvement of high-quality health care desire of patients, nurses were pushed to improve themselves to meet the improved needs of patients, the demands of the hospital and. But, the hospital provides nurses with limited continuous learning chance and limited promote opportunities (Zhang, et al., 2011), only 2.6% of nurses were promoted to a high professional title in 2015 (MOHC, 2016).

Employee relational contract mean score higher than employer relational contract may be because of nurses being very supportive, and loyal to the hospital but are rewarded with low stable wages and low well-being. Chinese culture has broadly been influenced by Confucianism, loyalty is regarded as a virtue. Thus, nurses believe loyalty to their hospital is one of their virtues. Most of the permanent nurses and temporary nurses (86.0%, 86.3%) ranked

moderate to high scores (3 = somewhat, 4 = moderately, 5 = to a great extent) on the items “Commit myself personally to this hospital”, “Remain with this hospital indefinitely”. However, the wage distribution favors to the physician, while nurses have a much less salary compared with the physician (MOHC, 2010). Also, the hospital focuses on the patients’ needs, and sometimes may ignore nurses’ needs. The decisions the hospital made was determined by the need of the hospital, rather than the interests of the nurses. In this study around half of permanent nurses and temporary nurses (53.3%, 49.8%) ranked low scores (1 = not at all, 2 = slightly) on the following items “Make decisions with my interests in mind”, “Concern for my long-term well-being”.

Employer transactional contract was higher than employee transactional contract may be because nurses did more than what they were paid to do but nurses were only allowed limited involvement in their hospital. The number of the patients who visited healthcare services increased by 1.85 billion from 2010 to 2015 (MOHC, 2016), but the number of nurses increased slowly. Over-work commonly happens to nurses in Chinese hospital. Duan (2016) reported that most of the nurses (67.70%) worked 40-50 hours per week which was more than the national standard of 40 hours per week. The salary does not increase as fast as the workload increases so nurses were not satisfied with their income and they complained that their salary didn’t match what they did (Zhang, et al. 2011). The item “Do only what I am paid to do” had a very low mean score ( $\bar{X} = 2.34$ ,  $SD = 1.19$ ).

Furthermore, nurses had less chance of involvement in hospital decision. Almost all the leaders of the hospital are physicians, who want nurses to do nursing duties rather than to make hospital development decisions. The majority of nurses (81.3%) responded “somewhat” to “to a great extent” on hospital obligation item of “A job limited to specific, well-defined responsibilities”.

The mean score of transitional contract ( $\bar{X}$  = 2.58, SD = .91) of nurses in this research was very low among forms of PC. It indicated that there were no obvious changes and transitions with the nurses of the hospital. Meanwhile, if the changes and transitions happen, nurses trust their hospital would share information with them. The possible explanation for this finding may due to the small possibility of a bad transition, and the greater possibility of sharing information. The university hospitals in this study are the top hospital in Yunnan province. Only those employees with good qualifications can be recruited into university hospitals because of this there is a small possibility of a negative transition. What's more with the stable development of technique and information in the healthcare profession, the changes to the healthcare organizations have a positive trend. Therefore, the leaders of the hospital would like to share the information with the employees. The results showed that only a small number of nurses (9.4%, 9.5%) ranked high scores (4 = moderately, 5 = to a great extent) on the items “Introduces changes without involving employees” and “Doesn't share important information with its workers”.

Regarding PC status, the results showed that employee PC fulfillment ( $\bar{X}$  = 3.71, MD = .80) was higher than employer PC fulfillment ( $\bar{X}$  = 3.35, MD = .81). It means nurses perceived that generally and overall, they fulfill their obligations to the hospital more so than the hospital fulfilled obligations to them. This finding was consistent with previous studies (Rousseau, 2000; Hamilton & von Treuer, 2012; Corcoran, 2012). The possible reason for this finding may be explained by several reasons.

Firstly, the nature of nursing may lead to high employee PC fulfillment. Nursing regards saving lives as its principal mission. It is difficult for nurses to go against obligations or refuse taking care of patients. Secondly, a high level of education may lead to high employee PC fulfillment. In 2015, 16.9% of nurses hold a bachelor's degree or above was reported (MOHC, 2016). But in this study, totally 86.57% of the nurses hold a bachelor's degree or above. The higher the educational level, the more knowledge nurses master, the more obligations they may fulfill leading to higher employee PC fulfillment they may perceive (Guo, 2012). Thirdly, nurses self-evaluation may bring bias to this result. People may respond in a manner that is congruent with the self-image they want to publically convey (Hamilton & von Treuer, 2012). For example, nurses may regard employee fulfillment as positive.

## 2. Comparison of PC Forms and Status Between Temporary Nurses and Permanent Nurses

The permanent nurse had a significantly higher mean score than temporary nurse in

employer relational contract ( $P=0.02$ ). It indicated that permanent nurses perceived that the hospital provides long-term and stable employment more so than temporary nurses. This result was consistent with the study of Chambel, Castanheira and Sobral (2016) which indicated permanent employees are more likely to have a strong relational PC. This finding can be explained by the different contracts they sign. Temporary nurses sign a 3 to 5-year contract with the hospital, but permanent nurses sign a life long-term contract with the government, thus it is easy for permanent nurses to perceive long-term employment. Moreover, permanent nurse positions are usually reserved for those with better qualifications, therefore permanent nurses usually have higher performance and higher income than temporary nurses, consequently this may bring the perception of stability to permanent nurses. Another explanation may be that age may influence the perception of obligation. The mean age of permanent nurses is 39 years old, the mean age of temporary nurses is 31 years old. Vantilborgh and colleagues (2013) found that older workers more easily find stability, and they may fulfill their emotional goals through work-life balance, and a social atmosphere.

Permanent nurses with a significantly higher median than temporary nurses in employer PC fulfillment ( $P=0.01$ ). It illustrated that generally overall the feeling of PC, more permanent nurses than temporary nurses perceived their hospital has fulfilled their promise to them. This finding may be explained by permanent nurses have more experiences and a higher income

than temporary nurses. Permanent nurses usually have longer years of working experience in China, thus they may have higher performance, and receive more attention than temporary nurses. Meanwhile, the permanent nurse may have a higher income due to their long years of work experience. In this study, the average years of work experience of permanent nurses was 17.39 ( $SD=8.25$ ), and most of them had an income of around 6,001-8,000 yuan per month. However, the average years of working experience of temporary nurses was only 5.64 years ( $SD=4.03$ ), and the most of the temporary nurses only had an income of around 4,001-6,000 yuan per month. The previous studies indicated that salary and work experience were positively related to employer PC fulfillment (Guo, 2012).

There were no significant differences found in other dimensions which may be due to several reasons. Firstly, there are similar characteristics between permanent nurses and temporary nurses. In this study, the two types of nurses had a similar educational background, 85.82% of permanent nurses held a bachelor's degree, and 86.61% of temporary nurses held a bachelor's degree. Thus, they may have the similar ability to deal with routine nursing duties. Therefore, there were no clear boundaries between permanent nurses and temporary nurses in terms of job responsibilities (Shang et al., 2014). In addition, the two types of nurses have similar purpose of employment, the most of permanent nurses (70.95%) and temporary nurses (73.62%) mentioned that the main purpose of employment was living needs, thus

they may wish to have a long-term employment relationship with their hospital.

Secondly, the new policy has been published to narrow the differences between temporary nurses and permanent nurses, such as “same position, same salary, work more, benefit more”. The policy of “performance evaluation based on fair, justice and open principle” requires both temporary nurses and permanent nurses with equal chance to participate in a training program, to make improvements and to be promoted (NHFPC, 2012). In China there will be more and more temporary nurses in the future, and the limited permanent position would belong to very excellent nurses. To take the most advantage of healthcare organization function, and to motivate healthcare workers, the Personnel Department of China (2017) would change the personnel mechanism so that the fixed permanent work contract may be abolished in a few years. Only the workers who perform well deserve better treatment. The Ministry of Human Resources and Social Security of the People's Republic of China declared that the hospital may be transformed into an enterprise (Ou, 2012). Thus, there would be fierce competition inside and outside of the hospital, every nurse has to take every advantage to develop their career, and put in effort for the hospital development.

Thirdly, both permanent nurses and temporary nurses face same circumstances. Because of the nursing shortage, Chinese hospitals try to keep a long-term employment relationship with both permanent nurses and temporary nurses. The government increased the salary of

healthcare providers, including both temporary employee and permanent employee (PDC, 2017). This may encourage both types of nurses to be loyal to the hospital and keep a long-term employment relationship with the hospital. Temporary nurse and permanent nurse have the same channel of information about the hospital change and transitions. Thus, the nurses may have similar cognition when the hospital change or transitions. Meanwhile, both temporary nurses and permanent nurses still have been allowed a limited involvement in hospital, since nurses were regarded as followers of physicians, so no need to be involved in the decision making process. Nurse administrators should concern PC of nurses and develop positive PC form and increase PC fulfillment.

## Conclusions

The results provide basic information for nurse administrators that since the new policy related to employment status was published, the differences between permanent nurses and temporary nurses have narrowed dramatically. It worth noting that nurses perceived they were over obligation, however, the hospital was under obligation. It is suggested that nursing administrators provide more learning opportunities and chances to be involved in the hospital. In addition, nurse administrators should not only be concerned about nurses earning stable wages, but also good environment for further develop. Further study on factors related to PC is suggested to provide evidence to increase balanced contract, relational contract, and PC fulfillment.

## Recommendations

This study should be replicated in other types of hospitals or in other regions of China

and factors related to PC are suggested to provide evidence to increase balanced contract, relational contract, and PC fulfillment.

## References

- Bal, P. M. (2017). Age and the psychological contract. *Encyclopedia of geropsychology*, 57-65.
- Bal, P. M., Kooij, D. T. A. M., & De Jong, S. B. (2013). How Do Developmental and Accommodative HRM Enhance Employee Engagement and Commitment? The Role of Psychological Contract and SOC Strategies: HRM, SOC, and Psychological Contract. *Journal of Management Studies*, 50(4), 545-572.
- Burns, N., Grove, S. K., & Gray, J. (2007). *Understanding nursing research: Building an evidence-based practice*. St. Louis, MO: Saunders.
- Chambel, M. J., Castanheira, F., & Sobral, F. (2016). Temporary agency versus permanent workers: A multigroup analysis of human resource management, work engagement and organizational commitment. *Economic and Industrial Democracy*, 37(4), 665-689.
- Conway, N., & Briner, R. B. (2005). *Understanding psychological contracts at work: a critical evaluation of theory and research*. Oxford; New York: Oxford University Press Inc.
- Corcoran, A. (2012.). *Psychological Contract in the Voluntary Sector in Ireland*, (Dissertation) National College of Ireland.
- Duan, J. M. (2016). *Job satisfaction, leader empowering behaviors and work engagement among nurses in the tertiary hospital, Kunming, the People's Republic of China* (Unpublished master's thesis). Chiang Mai University, Thailand.
- General Office of the State Council of China (GOSCC). (2015). *The National Planning Guideline for the Healthcare Service System (2015–2020)*. General Office of the State Council of China.
- Guo, X. (2012). *Influence of psychological contract breach and contract nurse turnover intention in the 3A-level general hospital* (master's degree) [in Chinese]. Ji Lin University.
- Hamilton, S. M., & von Treuer, K. (2012). An examination of psychological contracts, careerism and ITL. *Career Development International*, 17(5), 475–494.
- Liou, S. R. (2008). An analysis of the concept of organizational commitment. *Nursing Forum*, 43(3), 116-125.
- McCabe, T. J., & Sambrook, S. (2013). Psychological contracts and commitment amongst nurses and nurse managers: A discourse analysis. *International journal of nursing studies*, 50(7), 954-967.
- Ministry of Health of China (MOHC) (2010). *Chinese health statistical digest 2010* [in Chinese]. Retrieved June 16, 2018, from <http://www.moh.gov.cn/publicfiles/business/htmlfiles/zwqkzt/ptjty/digest2010/index.html>

- Ministry of Health of China (MOHC) (2016). *Chinese health statistics yearbook* [in Chinese].
- National Health and Family Planning Commission of the People's Republic of China (NHFPC) (2012), *The guidance of hospital nurse management implementation from the ministry of health*. Retrieved from <http://www.nhfpc.gov.cn/zwgkzt/wsbysj/201205/54600.shtml>
- Ou H. W. (2012.10.30): *The situation and strategy for national public service financial security mechanism*. Retrieved May 13, 2018, from [http://zhs.mof.gov.cn/zhengwuxinxi/gongzuodongtai/201210/t20121030\\_690689.html](http://zhs.mof.gov.cn/zhengwuxinxi/gongzuodongtai/201210/t20121030_690689.html)
- Pan, Y., & Ge, X. (2015). Impact of psychological contract breach on exit, voice, loyalty, and neglect in nurses [in Chinese]. *Journal of Nursing Science*, 30(22), 78–80.
- Personnel Department of China (PDC) (2017). "Thirteenth Five" the national talent of health and family planning development planning. Retrieved May 12, 2018, from <http://www.nhfpc.gov.cn/renshi/s3573/201701/0f72e6ee8af444d5b42a431e9fe03ecb.shtml?from=timeline&isappinstalled=0>
- Rodwell, J., & Ellershaw, J. (2016). Fulfill Promises and Avoid Breaches to Retain Satisfied, Committed Nurses: Retain Satisfied, Committed Nurses. *Journal of Nursing Scholarship*, 48(4), 406-413.
- Rousseau, D. M. (1995). *Psychological Contracts in Organizations: Understanding Written and Unwritten Agreements*. SAGE Publications.
- Rousseau, D. M. (2000). *Psychological contract inventory technical report*. Pittsburgh, USA: Carnegie Mellon University. Retrieved from [https://www.researchgate.net/profile/Denise\\_Rousseau/publication/228910231\\_Psychological\\_Contract\\_Inventory\\_Technical\\_Report/links/5424ba980cf26120b7ac43c6.pdf](https://www.researchgate.net/profile/Denise_Rousseau/publication/228910231_Psychological_Contract_Inventory_Technical_Report/links/5424ba980cf26120b7ac43c6.pdf).
- Purvis, L. J., & Cropley, M. (2003). The psychological an resource practices on psychological contracts at an iron ore mining company in South Afrcontracts of National Health Service nurses. *Journal of Nursing Management*, 11(2), 107–120.
- Scheepers, C. B., & Shuping, J. G. (2011). The effect of humica. *SA Journal of Human Resource Management*, 9(1), 1-19.
- Shang, J., You, L., Ma, C., Altares, D., Sloane, D. M., & Aiken, L. H. (2014). Nurse employment contracts in Chinese hospitals: impact of inequitable benefit structures on nurse and patient satisfaction. *Human resources for health*, 12(1), 1.
- Shortell, S. M., & Casalino, L. P. (2008). Health care reform requires accountable care systems. *Jama*, 300(1), 95–97.
- World Health Organization. (2012). *General government expenditure on health as a percentage of total government expenditure (measured in US \$)*. Retrieved May 5, 2018, from [http://apps.who.int/gho/data/node.imr.WHS7\\_113?lang=en](http://apps.who.int/gho/data/node.imr.WHS7_113?lang=en)

- World Health Organization. (2014). A universal truth: No health without a workforce. Geneva: WHO.
- Vantilborgh, T., Bidee, J., Pepermans, R., Willems, J., Huybrechts, G., & Jegers, M. (2013). From “getting” to “giving”: Exploring age-related differences in perceptions of and reactions to psychological contract balance. *European Journal of Work and Organizational Psychology*, 22(3), 293-305.
- Yamane, T., & Yamane, T. (1973). *Statistics; an introductory analysis* (No. 04; HA29, Y3 1973).
- Zhang, J. W., Zhang, J. H., Zhao, X. Q., & Chen, L. M. (2011). *A study of satisfaction about hospital management among nurses* [in Chinese]. Retrieved March 20, 2012, from <http://www.biyelunwen.cn/2011/19559.html>.