

Job Crafting and Organizational Commitment of Nurses in Chengdu University Hospitals, the People's Republic of China

การจัดแจงในงานและความผูกพันต่อองค์กรของพยาบาลในโรงพยาบาลมหาวิทยาลัยเฉิงตู สาธารณรัฐประชาชนจีน

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บทคัดย่อ

ความผูกพันต่อองค์การมีบทบาทสำคัญต่อองค์กรสุขภาพในการลดอัตราการลาออกและการพัฒนาคุณภาพของการพยาบาล การศึกษาครั้งนี้เป็นการวิจัยเชิงพรรณนาหาความสัมพันธ์โดยมีวัตถุประสงค์เพื่อศึกษาของการจัดแจงในงานและความผูกพันต่อองค์กร และศึกษาหาความสัมพันธ์ระหว่างการจัดแจงในงานและความผูกพันต่อองค์กรของพยาบาลลูกจ้างชั่วคราว ในโรงพยาบาลมหาวิทยาลัยเฉิงตู กลุ่มตัวอย่างเป็นพยาบาลลูกจ้างชั่วคราว จำนวน 348 คนที่ปฏิบัติงานในโรงพยาบาลมหาวิทยาลัย 3 แห่งในเมืองเฉิงตู สาธารณรัฐประชาชนจีน เครื่องมือในการวิจัยประกอบไปด้วย แบบวัดการแจกแจง ในงาน (Job Crafting Scale: JCS) ที่พัฒนาขึ้นโดย Tims and Bakker (2010) แปลเป็นภาษาจีนโดยผู้วิจัย และแบบสอบถามความผูกพันต่อองค์กร (Organizational Commitment Questionnaire: OCQ) ที่พัฒนาขึ้นโดย Mowday, Steers, and Porter (1979) แปลเป็นภาษาจีนโดย Lu (2007) มีค่าสัมประสิทธิ์ความเชื่อมั่นของเครื่องมือ JCS และ OCQ เท่ากับ .84 และ .82 ตามลำดับ วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนาและสัมประสิทธิ์สหสัมพันธ์ของเพียร์สัน

ผลการศึกษาพบว่า

1. คะแนนเฉลี่ยของการจัดแจงในงานโดยรวมอยู่ในระดับปานกลาง ($\bar{X}$ =3.43, SD=0.56) องค์ประกอบทั้ง 3 ด้าน ได้แก่ การเพิ่มทรัพยากรทางสังคม การเพิ่มความต้องการในงานที่ทำให้เกิดการท้าทาย และการลดความต้องการในงานที่เป็นอุปสรรคในการทำงานของพยาบาลลูกจ้างชั่วคราวอยู่ในระดับปานกลาง ($\bar{X}$ =3.44, SD=0.68; $\bar{X}$ =3.09, SD=0.73; $\bar{X}$ =3.43, SD=0.67) ในขณะที่องค์ประกอบด้านการเพิ่มทรัพยากรในงานด้านโครงสร้างการศึกษาพบว่าอยู่ในระดับสูง ($\bar{X}$ =3.77, SD=0.62).

2. คะแนนเฉลี่ยของความผูกพันต่อองค์กรโดยรวมของพยาบาลลูกจ้างชั่วคราวอยู่ในระดับปานกลาง ($\bar{X}$ =4.67, SD=1.06)

3. การแจกแจงในงานโดยรวมมีความสัมพันธ์ทางบวกต่อความผูกพันต่อองค์กรในระดับปานกลางอย่างมีนัยสำคัญทางสถิติ (r=.41, p<0.01)

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ผลการศึกษาครั้งนี้สามารถเป็นข้อมูลพื้นฐานสำหรับผู้บริหารทางการพยาบาลเพื่อใช้ในการพัฒนากลยุทธ์ในการส่งเสริมให้พยาบาลมีการแจกแจงในงานและเพิ่มความผูกพันต่อองค์กรในโรงพยาบาลมหาวิทยาลัยเชิงตู สาธารณรัฐประชาชนจีน

คำสำคัญ: *การจัดแจงในงาน ความผูกพันต่อองค์กร สาธารณรัฐประชาชนจีน พยาบาล*

Abstract

Organizational commitment plays a crucial role in healthcare organizations in order to decrease the turnover rate and improve quality of nursing care. This descriptive correlational study aimed to examine job crafting and organizational commitment and the relationship between job crafting and organizational commitment of temporary nurses in three university hospitals in Chengdu. The samples were 348 temporary nurses who worked in three university hospitals in Chengdu, the People's Republic of China. The research instruments included the Job Crafting Scale (JCS) developed by Tims and Bakker, (2012), translated into Chinese by researcher. The Organizational Commitment Questionnaire (OCQ) developed by Mowday, Steers, and Porter, (1979), translated into Chinese by Lu, (2007). The reliability coefficients of JCS and OCQ were .84 and .82, respectively. Data were analyzed using descriptive statistics and Pearson's Correlation.

The result of this study showed that:

1. The mean score of overall job crafting was at a moderate level ($\bar{X}$=3.43, SD=0.56). Three dimensions including increasing social job resources, increasing challenging job demands, and decreasing hindering job demands were at a moderate level ($\bar{X}$=3.44, SD=0.68; $\bar{X}$=3.09, SD=0.73; $\bar{X}$=3.43, SD=0.67, respectively), whereas increasing structural job resources was reported at a high level of temporary nurses ($\bar{X}$=3.77, SD=0.62).

2. The mean score of overall organizational commitment was at a moderate level of temporary nurses ($\bar{X}$=4.67, SD=1.06).

3. There was a significant moderate positive relationship between overall job crafting and organizational commitment (r=.41, p<.01).

The findings of this study would provide baseline information for nursing administrators to develop strategies to increase nurses' job crafting and enhance the organizational commitment in Chengdu university hospitals, the People's Republic of China.

Keywords: *Job Crafting, Organizational Commitment, China, Nurse*

Background and Significance

Nursing shortages and high turnover rates have become acute issues around the world nowadays (Jenna & Ferguson, 2017). Persistent vacancy in current nursing teams increases workload and negatively influences the quality

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of nursing care (Liu, Liu, Wang, Zhang, & Wang, 2013). The report on the Development of Chinese Medical and Health Service shows that the turnover rate of Chinese nurses is approximately 10.2-11.2%, and the number of nurses with turnover intention is up to 56.94% (Green Book of Health Reform and Development, 2015). A previous study found that organizational commitment was an important predictor of turnover in nursing (Wagner, 2007). The degree of commitment determines if a nurse will stay with the organization, and individuals with a high degree of commitment are less likely to quit their jobs (Mowday, Steers, & Porter, 1979).

The earliest era of organizational commitment was Becker's (1960) Side-Bet Theory. Soon afterwards, Porter, Steers, Mowday, & Boulian (1974) shifted the theme from the side-bet to the psychological attachment one had to the organization in their Affective-dependence model. According to this model, organizational commitment consisted of 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. This commitment can be altered by affective instead of economic factors and represents something beyond mere passive loyalty to an organization. Porter et al. (1974) defined organizational commitment "as the relative strength of an individual's identification with and involvement in a particular organization." A high level of organizational commitment produces a positive effect on work outcomes, such as increased job satisfaction, job performance (Carmeli & Freund, 2004), and quality of patient care (Top & Gide, 2013), and reduced absenteeism and turnover rates (Lu, While, & Barriball, 2005). Extensive studies over the past two decades of organizational commitment in the nursing profession have shown different levels of organizational commitment among nurses. Importantly, the mean score of overall organizational commitment showed low or moderate levels among nurses in different areas of China (Zheng, Xu, & Wang, 2014; Cai & Wu, 2014; Xiong, Zhang, & Xiao, 2016).

One concept strongly positively related to organizational commitment is job crafting (Iqbal, 2016; Kim & Lee, 2015). Tims and Bakker (2010) have framed job crafting in the Job-Resources Model (Bakker & Demerouti, 2007). They defined job crafting as self-initiated changes that employees may make to balance their job demands and job resources with their personal abilities and needs to attain and optimize their personal work goals. Job crafting (JC) includes four dimensions: increasing structural job resources; increasing social job resources; increasing challenging job demands; and decreasing hindering job demands. The first dimension, increasing structural job resources refers to resource variety, opportunity for development, and autonomy. Second, increasing social job resources refers to the development of employee relations with colleagues and leaders. These relations include inspiration, supervisory coaching, social support, and feedback or guidance from leaders and colleagues. Next, increasing challenging job demands refers to seeking more

challenges in their work. When staff members feel that their job lacks opportunities to use all their abilities, they may increase job demands by adding work tasks, taking over tasks from their supervisor, or voluntarily taking on new projects. Finally, decreasing hindering job demands means that employees may proactively lower their job demands when they perceive that demands go beyond their capacity. They may decrease hindering job demands by asking for help from their colleagues, or by reducing the frequency of interactions they have with demanding customers or colleagues. Four studies are available specifically related to nurses, making it an interesting topic to further investigate and to add to both the Job Crafting literature (Bacaksiz et al., 2017; Bakker, 2017; Esteves & Lopes, 2017a; Esteves & Lopes, 2017b). The overall mean score of job crafting ranged from 3.31 to 3.93 among nurses which indicated moderate or high level (Bacaksiz et al., 2017; Bakker, 2017). In terms of research in China, there is no study related to job crafting in healthcare.

The Chinese nursing employment structure is a "dual system" of temporary nurses and permanent nurses, also named "BianZhi" nurses (Huang, Fu, Xu, & Chen, 2011). "Bianzhi" refers to the Chinese government decides the number of personnel. Temporary nurse refers to nurses who sign a short- term labor contract (three to five years) with hospital. The employment relationship is between the hospital and individual (Shang et al., 2014). With the reform of the Chinese hospital employment system, there was an increase of the use of temporary nurses to replace "BianZhi" nurses in order to reduce financial costs (Shang et al., 2014). As a result, the proportion of temporary nurses increased dramatically. According to statistics, 63%-85% of all nurses are temporary nurses in Chinese hospitals (Chen et al., 2014). This employment transition has caused potential inequities. Both types of nurses have the same patient care role and responsibilities. However, temporary nurses have lower benefits such as less salary, less welfare, and fewer opportunities than "BianZhi" nurses (Qu, Zhang, Song, & Fang, 2016). Furthermore, nursing managers must consider that the temporary nurse could depart at any time, and organizations must face investment losses such as tuition or training expense. Therefore, temporary nurses feel that their present job cannot provide adequate opportunities to develop their abilities and knowledge. An investigation showed temporary nurses have higher turnover intention in China (Jing, Jing, Li, Li, & Mei, 2015). The study reported that 245 nurses quit their job, of which 229 nurses are temporary nurses in Chengdu (Zhou, Wang, Xia, & Xie, 2017). Thus, healthcare administrators must promote and develop strategies for building organizational commitment (OC) and decreasing the turnover rate among temporary nurses.

Based on literature review, the study related to JC in China is just beginning. Besides, previous studies of OC focus on both temporary nurses and permanent nurses in China (Lu, 2007). However, with the changing of employment system, the retention for temporary nurses should be paid more attention by nursing administrators. Sparse literature has been

found to examine the relationship between JC and OC. Furthermore, it was lack of quantitative exploration in the healthcare organization. Therefore, a correlational study between JC and OC in nursing profession is valuable to explore among temporary nurses in Chengdu university hospitals in China.

Objectives

1. To explore job crafting by temporary nurses in Chengdu University hospitals, the People's Republic of China.

2. To explore organizational commitment of temporary nurses in Chengdu University hospitals, the People's Republic of China.

3. To explore the relationship between job crafting and organizational commitment of temporary nurses in Chengdu University hospitals, the People's Republic of China.

Conceptual Framework

The concept of job crafting was based on the Job Crafting Model by Tims and Bakker, (2010). Job crafting was stated as self-initiated changes that employees may make to balance their job demands and job resources with their personal abilities and needs to attain and/or optimize their personal (work) goals (Tims & Bakker, 2010). It encompasses four dimensions: 1) Increasing structural job resources are developing the capabilities of the employees, making them trying to learn new things and using their autonomy in the work process. 2) Increasing social job resources refer to employees intend to seek feedback and guidance from their colleagues and supervisors. 3) Increasing challenging job demands refer to seek more challenges in their work when staff feels that job is not providing them enough opportunities to use all their abilities. 4) Decreasing hindering job demands refer to employees may proactively lower their job demands when they perceive that demands go beyond their capacity. They may decrease hindering job demands by asking for help from their colleagues, or by reducing the frequency of interactions they have with demanding customers or colleagues. The concept of organizational commitment was based on the Affective-Dependence Model by Porter, Steers, Mowday, and Boulian (1974). Organizational commitment refers to the relative strength of an individual's identification with and involvement in a particular organization. It was characterized by 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. The relationship between job crafting and organizational commitment among temporary nurses was tested in this study.

Methodology

A descriptive correlation study was conducted at three different university hospitals in Chengdu, the People's Republic of China.

Population and sampling

Based on the Yamane (1973) formula, the sample size included 290 temporary nurses working in these hospitals for at least one year. Considering the possible loss of samples, 348

questionnaires were distributed to three different university hospitals in Chengdu. The proportional stratified random sampling method was adopted to determine the number of each hospital and unit, while samples were selected by simple random sampling from the name list in the nursing department. Exclusion criteria were: temporary nurses who were nurse administrators and temporary nurses who were on vacation and maternity leave.

Research Instruments

The instrument included three parts: 1) The demographic data form was developed by the principal investigator to collect the personal information of each sample including gender, age, marital status, professional title, educational level, working department, working duration, income and work shift. The demographic data was a closed-ended questionnaire. 2) Job Crafting Scale (JSC) was developed by Tims et al. (2012) and was translated into the Chinese version by the principal investigator. Meanwhile, the Chinese version was back-translated into English by another bilingual nursing expert who blinded the original JSC. Two English version showed a same meaning by comparing the equivalence by an English expert. It consisted of 21 items in four dimensions. A 5-point Likert scale was adopted from 1 (never) to 5 (very often) to assess the frequency of engaging in job crafting. According to Best and Kahn (2003), the mean score of job crafting ranged from 1.00 to 2.33 indicated a low level; 2.34 to 3.66 was regarded as a moderate level; 3.67 to 5.00 was considered a high level. 3) The Organizational Commitment Questionnaire (OCQ) was developed by Mowday et al. (1979). The Chinese version of Mowday et al.'s OCQ was translated by Lu et al. (2007). It included 15 items and each item was rated by a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The level of organizational commitment was indicated as follows: Mean score 1.00–3.00 indicated a low level; 3.01–5.00 indicated a moderate level; 5.01–7.00 indicated a high level (Pien, 2011).

For validity of JCS, confirmatory factor analysis indicated a good fit with c2/ df = 2.17, CFI = .90, TLI = .88, IFI =.90, RMSEA = 0.04 (Tim et al., 2012). The validity of OCQ was assessed by using many methods. A factor analysis confirmed only one factor accounted for 83.2% to 92.6% of the variance of OC. Convergent validities across six diverse samples ranged from .63 to .74, with a median of .70. all these instruments were proven in previous studies with report of acceptable levels. (Mowday et al., 1979; Tims et al., 2012). The Chinese version of JSC and OCQ was tested reliability by using the Cronbach's alpha coefficient. A sample of 10 nurses from the affiliated hospital of Chengdu University who had same characteristics was randomly selected. The Cronbach's α coefficient of overall JCS was .84 and OCQ was .82.

Ethical Consideration

The study was approved by the Research Ethic Committee of Faculty of Nursing, Chiang Mai University, Thailand. Permission was also obtained from three university hospitals in Chengdu, China. All information from samples was kept confidential and only a code number was used for questionnaire follow up.

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Data Collection

The researcher assigned coordinators to distribute data collection package. The package includes an information sheet for study participants, informed consent form, and the set of questionnaires with an envelope. In total, 327 (93.9%) questionnaires were returned. After checking for completeness and any missing data, 292 (83.9%) questionnaires were used for data analysis.

Data Analysis

The data was analyzed using statistical software. Descriptive statistics were used to analyze demographic characteristics and level of job crafting and organizational commitment. The Kolmogorov-Sminorv test for normal distribution as an assumption of correlation analysis was computed for two variables. As the result, both job crafting and organizational commitment showed normal distribution. Therefore, Pearson's Product-Moment correlation was used to examine the relationship between job crafting and organizational commitment.

Results

1. Demographic characteristics

In this study, most of the samples (94.86%) were female and age ranged from 21 to 52 years ($\bar{X}$=28.36, SD=4.41). More than half (54.79%) were married. The largest group (51.37 %) held the professional title of Senior Nurse and more than half of the nurses held a bachelor degree (60.61%). The average length of work as a nurse was 6.40 years (SD=4.99). Many of them (41.44%) reported that they had income around 603.00-904.00 USD per month. Finally, more than half (77.74%) had a rotating shift.

2. Job crafting and organizational commitment

As shown in Table 1, the samples reported an overall job crafting at a moderate level ($\bar{X}$=3.43, SD=0.56). In terms of each dimension of job crafting, the mean scores of each dimension-increasing structural job resources, increasing social job resources, increasing challenging job demands and decreasing hindering job demands were 3.77 (SD=0.62), 3.44 (SD=0.68), 3.09 (SD=0.73), 3.43 (SD=0.67), respectively. The samples had a moderate level of organizational commitment ($\bar{X}$=4.67, SD=1.06).

Table 1 Mean, Standard Deviation and Level of Overall and Each Dimension of Job Crafting and Organizational Commitment of the Samples (n=292)

Variables	Min	Max	Mean	SD	Level
Overall JC	1.95	5.00	3.43	0.56	Moderate
Increasing structural job resources	2.20	5.00	3.77	0.62	High
Increasing social job resources	1.40	5.00	3.44	0.68	Moderate
Increasing challenging job demands	1.20	5.00	3.09	0.73	Moderate
Decreasing hindering job demands	1.83	5.00	3.43	0.67	Moderate
Overall OC	1.47	7.00	4.67	1.06	Moderate

3. Relationships between overall and each dimension of job crafting and organizational commitment

In Table 2, the results of Pearson's correlation test indicated that there was a moderately positive relationship between job crafting and organizational commitment (r=.41, p<.01). Moreover, there was also a moderately positive relationship between increasing structural job resources and organizational commitment (r=.33, p<.01); increasing social job resources and organizational commitment (r=.45, p<.01); decreasing hindering job demands and organizational commitment (r=.34, p<.01). Additionally, there was a weakly positive relationship between increasing challenging job demands and organizational commitment (r=.25, p<.01).

Table 2 Relationships between Overall and Each Dimension of Job Crafting and Organizational Commitment of the Samples (n=292)

Job Crafting	Organizational Commitment
Overall	.41**
Increasing structural job resources	.33**
Increasing social job resources	.45**
Increasing challenging job demands	.25**
Decreasing hindering job demands	.34**

*** p<.01*

Discussions

The results of this study were discussed in three parts according to the research objectives as bellows.

1. Job Crafting

The results of this study showed that the overall job crafting was at a moderate level ($\bar{X}$=3.43, SD=0.56) (Table 1). The result was similar to the previous studies using same instrument such as a previous study conducted by Bakker, (2017) ($\bar{X}$=3.13, SD=0.53) among nurses in Netherland. The detail results of each sub-dimension of job crafting in this study were discussed as follows:

Increasing structural job resources. The result of this study showed that temporary nurses reported increasing structural job resources was at a high level ($\bar{X}$=3.77, SD=0.62). It was consistent with study findings of Esteves and Lopes, (2017b) in Portugal ($\bar{X}$=4.65, SD=0.41) and Han (2013) in China ($\bar{X}$=4.50, SD=0.59). Increasing structural job resources referred to the resources variety, opportunities for development. University hospitals provide more platforms for nurses to develop their competency than other types of the hospital because they play dual roles of treatment and teaching (Chen, Yan, Sun, & Xu, 2006). In the Chengdu university hospitals, 94.86% of temporary nurses are female. Culture orientation promotes sexual equality so that women transfer more power and proactively pursue perfect

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in the work (Yan, 2014). As the item of "I try to learn new things at work" and "I try to develop my capabilities" rated a high score ($\bar{X}$=3.88, SD=0.81; $\bar{X}$=3.76, SD=0.84).

Increasing social job resources. The result of this study showed that temporary nurses in Chengdu university hospitals reported a moderate level ($\bar{X}$=3.44, SD=0.68). The finding was consistent with previous studies conducted by Esteves and Lopes, (2017b) in Portugal ($\bar{X}$=3.00, SD=0.72). Based on Job Crafting Model by Tims and Bakker (2010), increasing social resources may have more impact on the social facets of job included asking feedback, supervisory coaching and social support. Coaching may develop temporary nurses' clinical competence, promote teamwork and improve care processes. It showed that 57.4% nurses were satisfied with supervisory coaching in the hospital in China (Shen, Chen & Zhu, 2015). However, there was a low level of social support in Chengdu according to report (Ma et al., 2006). temporary nurses got fewer social support than other profession in entire healthcare systems. The meaning of nursing work was not acknowledged by society. So, there were many reasons why the nurses perceived Increasing social job resources at a moderate level.

Increasing challenging job demands. The result of this study showed that increasing challenging job demands were at a moderate level ($\bar{X}$=3.09, SD=0.73). This finding was consistent with a previous study conducted by Harju et al. (2016) ($\bar{X}$=3.30, SD=0.67) in Finland. A reasoned explanation in this study may be because of age. Li, Chen, and You, (2010) reported younger nurses have more confidence in their career development and prefer to track challenges. In this study, most of the temporary nurses (68.84%) ranged from 21-29 years old. The temporary nursing team was young. It may cause that temporary nurse is willing to seek more challenges at their work without payment. This is supported by the finding of this study where 55.82% of the samples chose often or very often "I regularly take on extra tasks even though I do not receive extra salary for them" ($\bar{X}$= 3.59, SD=1.60). Another possible explanation might be due to heavy burden and workload encountered in their profession. Rudolph et al. (2017) confirmed that workload has a positive relationship with increasing challenging of job demands, which can be explained that nurses who spend additional time at work are more likely to obtain challenging job demands such as a new project.

Decreasing hindering job demands. The result of this study showed that the dimension was at a moderate level ($\bar{X}$=3.43, SD=0.67). This finding was consistent with the previous study conducted by Xin (2016) ($\bar{X}$=3.39, SD=0.51) in China. It means that employees may decrease the level of job demands by asking colleagues to help them with their tasks or by reducing the number of interactions they have with demanding customers or colleagues. In this way, a possible reason for this finding might be due to collaboration among temporary nurses. Harmony is the priority in Chinese culture that advocates cooperation (Wang, 2018). In a collective culture, people would like to work together and help each other (Chen & Francesco, 2003). In-

dividuals cannot accomplish all the work alone. Temporary nurses may ask colleagues to help with their tasks. The policy of hospital required nurses to work together, share information and solve problem together. Therefore, team cooperation may reduce workload in a way. In fact, the nurse is pleased to help others but due to high workload, they do not have extra time to do so. These reasons may lead to temporary nurses reporting a moderate level towards this dimension.

2. Organizational Commitment

The temporary nurses working in Chengdu University hospitals revealed a moderate level of organizational commitment ($\bar{X}$=4.67, SD=1.06). This result was consistent with previous studies using the same instrument among nurses, such as the studies of Pien (2011) in Malaysia; Abayi et al. (2014) in Iran; Li et al. (2014) in the USA. This means that temporary nurses who worked in Chengdu University hospitals had a moderate identification and attachment to the organization to some extent. The possible reason may be that a positive image of the organization leads to employee psychological attachment to the organization (Ahearne, Bhattacharya, & Gruen, 2005). In this study, three hospitals in Chengdu were accredited as tertiary-A level by the Ministry of Health (MOH, 1989). Temporary nurses who work in those hospitals may proud to be a part of the organizations as the investigation showed that "they were proud to tell others that they are part of the organization" The results ($\bar{X}$= 5.15, SD = 1.59) showed a high score. Furthermore, Islam et al., (2012) discovered that pay satisfaction had a positive association with organizational commitment. Yet, in this study, most of samples (41.44%) reported that their salary ranged from 603.00-904.00 USD per month. The average salary is 1033.00 USD in Chengdu (Sohu News, 2017). There was probably another explanation that might be related to organizational support. Asian culture pays more attention to the sense of collective belonging, support, and identity from organization (Gao & Tu, 2017). However, organizational administrators pay more attention to physicians because nurses were regarded as a helper and follower of physicians in Chengdu University hospitals (Gao, Bi, Hong, Fei, & Wei, 2016). Liu et al. (2011) reported most of the nurses' perception of organizational support was at a moderate level in Chengdu. It indicated that there were still some facets of organizational support which do not get nurses' ratification. Therefore, these reasons may contribute to their moderate level of organizational commitment.

3. Job Crafting and Organizational Commitment

The result of this study illustrated that there was a significantly positive correlation between overall job crafting and organizational commitment (r=.41, p<.01) (Table 2). It implied that temporary nurses have a strong identification with and attachment to the organization when they have a higher job crafting in their work in Chengdu university hospitals. It may be that those who engage in more frequent job crafting are shaping the environment to better fit their needs, thereby increasing organizational commitment. The following discussions be-

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tween each dimension of job crafting and organizational commitment were reached in detail.

The relationship between increasing structural job resources and organizational commitment. This study found there was a moderately positive relationship between increasing structural job resources and organizational commitment (r=.33, p<.01). The dimension increasing structural job resources refers to the resource variety, opportunities for development and autonomy. In short, temporary nurse perceived more resources, opportunities for developing themselves and autonomy in Chengdu university hospitals. They may have more attachment and belonging to the hospital. Tims et al. (2012) mentioned that increasing the level of job resources will lead to valued individual outcomes such as work engagement, job satisfaction, and organizational commitment.

The relationship between increasing social job resources and organizational commitment. This study showed there was a moderately positive relationship between increasing social job resources and organizational commitment (r=.45, p<.01). This dimension of job crafting items was related to information-seeking behavior such as asking a colleague for advice or asking a supervisor for feedback. It can be explained the temporary nurses got more social support, supervisory coaching and feedback from supervision. They would gain recognition and appreciation in their organizations that could lead to high level of organizational commitment. The previous studies showed that social support such as colleague support and supervisory coaching resulted in an increase in employee work engagement, job satisfaction and organizational commitment (Bakker & Demerouti, 2008). Missing words suggested that workers who engaged in more extensive relational crafting were likely to be more committed.

The relationship between decreasing hindering job demands and organizational commitment. The finding presented a moderately positive relationship between decreasing hindering job demands and organizational commitment (r=.34, p<.01). This reflected that temporary nurses who decrease their level of job demands because they are feeling overstretched by these demands. Based on Tims et al.'s job crafting model (2010), employees may decrease the level of job demands by asking colleagues to help them with their tasks or by reducing the number of interactions they have with demanding customers or colleagues. Thus, they may be more likely to enjoy their work again and to perform their job tasks well and to be satisfied with their jobs (Tims & Bakker, 2010; Tims et al., 2012).

The relationship between increasing challenging job demands and organizational commitment. There was a weakly positive relationship between increasing challenging job demands and organizational commitment (r=.25, p<.01). Fried, Grant, Levi, Hadani & Slowik (2007) reported that employees might be more likely to craft more challenging job demands because they probably sensed that it will push on them in their careers. In other words, by crafting more difficult tasks, employ-

ees show that they are ready for promotion. Temporary nurses seeking new projects on their own initiative, one may also increase opportunities for growth and development (De Beer et al., 2016). Therefore, the temporary nurses who may be likely to engage in more challenging job crafting might feel more self-worth in the hospital which can encourage a sense of identification and attachment to work environment.

Conclusions and Implications

The level of job crafting and organizational commitment as perceived by temporary nurses in this study was at a moderate level. The study revealed a significantly positive relationship between job crafting and organizational commitment.

The findings of this study provide basic information for the nursing administration to develop strategies to increase nurses' job crafting and enhance the organizational commitment in Chengdu University hospitals, China. The nursing administrators should increase the level of social job resources such as social support, supervisory coaching, and feedback from leaders. Also, nursing administrators should motivate temporary nurses to seek more challenging job demands in their work. This can encourage temporary nurses to change their work boundaries by their own initiative with the aim to enhance work value and work identity. Furthermore, the result implied that nursing administrators should continue to contribute to the identification and attachment of temporary nurses to the organization. This can be improved through providing more opportunities for career development to temporary nurses, achieving equal pay for equal work between temporary nurses and "BianZhi" nurses, and making policies to retain temporary nurses.

Recommendations

Further study should be explored in different groups within a hospital (e.g. head nurses, new nurses) and be replicated in different types of hospitals in China. The predictive study of organizational commitment can be implemented in China and other factors related to organizational commitment can be explored in further research.

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References

Abayi, H. N., Abayi, E. H., & Afsharipour, G. (2014). A study on correlation of emotional intelligence to leadership styles of Nursing Managers and nurses' organizational commitment in hospitals of Kerman, Iran. *International Journal of Scientific Management and Development, 2*(12), 676-680.

Ahearne, M., Bhattacharya, B. C., & Gruen, T. (2005). Antecedents and consequences of customer-company identification: Expanding the role of relationship. *Journal of Applied Psychology, 90*(3), 574-585.

Bakker, B. A. (2017). Job crafting among health care professionals: The role of work engagement. *Journal of Nursing Management, 26*(3), 321-331.

Bakker, B. A., & Demerouti, E. (2007). The Job demands-resources model: state of the art. *Journal of Managerial Psychology, 22*(3), 309-328.

Bakker, B. A., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International, 13*(3), 209-223.

Bacaksiz, F. E., Tuna, R., & Seren, A. K. H. (2017). The relationships between organizational identification, job performance, and job crafting: A study among nurses. *International Journal of Caring Sciences, 10*(1), 251-259.

Becker, S. H. (1960). Notes on the concept of commitment. *American Journal of Sociology, 1,* 32-40.

Best, W. J., & Kahn, V. J. (2003). *Research in education* (9th ed.). Boston: Pearson Education.

Cai, Y. H., & Wu, L. W. (2014). The effect of organizational commitment on occupation burnout among nurses [In Chinese]. *Chinese Nursing Management, 14*(4), 387-380.

Carmeli, A., & Freund, A. (2004). Work commitment, job satisfaction and job performance: An Empirical Investigation. *International Journal of Organization Theory and Behavior, 7*(3), 289–303.

Chen, N., Yan, W., Zhang, X., Cui, W. X., Kong, Q. M., & Zhou, Y. (2014). Study on correlation between job satisfaction and staying intention of employed nurses. *Nursing Research, 28*(9), 3247-3249.

Chen, Q. Z., Yan, W., Sun, Y. D., & Xu, X. D. (2006). Present situation and countermeasures of clinical practice teaching in university hospitals [in Chinese]. *Chinese Journal of Medical Education, 4,* 65-68.

Chen, X. Z., & Francesco, M. A. (2003). The relationship between the three components of commitment and employee performance in China. *Journal of Vocational Behavior, 62*(3), 490-510.

De Beer, T. L., Tims, M., & Bakker, B. A. (2016). Job crafting and its impact on work engagement and job satisfaction in mining and manufacturing. *South African Journal of Economic and Management Sciences, 19*(3), 400-412.

Esteves, T., & Lopes, M. P. (2017a). Crafting a calling: The mediating role of calling between challenging job demands and turnover intention. *Journal of Career Development, 44*(1), 34-48.

Esteves, T., & Lopes, M. P. (2017b). Leading to crafting: The relation between leadership perception and nurse's job crafting. *Research Report, 39*(6), 763–783.

Fried, Y., Grant, M. A., Levi, S. A., Hadani, M., & Slowik, H. L. (2007). Job design in temporal context: A career dynamics perspective. *Journal of Organizational Behavior, 28,* 911–927.

Gao, N., & Tu, H. G. (2017). Influence of organizational support and social support on nurses' job satisfaction [In Chinese]. *Journal of Central South Medical Sciences, 45*(5), 537-540.

Gao, X., Bi, Q. Q., Hong, F. J., Fei, X. Y., & Wei, Q. (2016). Research on the relationship between professional autonomy and job satisfaction among nurses specialists [In Chinese]. *Medicine and philosophy, 37*(2A), 27-30.

Green Book of Health Reform and Development. (2015). *Report on the development of medical and health services in China* [In Chinese]. China: People's Publishing House.

Han, Y. S. (2013). *The study on the relationship among job crafting, work engagement and job performance* [In Chinese] (Master's thesis, Dongbei University).

Harju, K. L., Hakanen, J. J., & Schaufeli, B. W. (2016). Can job crafting reduce job boredom and increase work engagement? A three-year cross-lagged panel study. *Journal of Vocational Behavior, 95,* 11-20.

Huang, G. H., Fu, X., Xu, J. J., & Chen, X. S. (2011). Study on quality of life of regular nurses and contract nurses in tertiary hospitals in Guangdong [In Chinese]. *Journal of Chinese Nursing, 11A,* 15-18.

Iqbal, Q. (2016). Job-Crafting and Organizational Commitment: Person-Job Fit as Moderator in Banking Sector of Pakistan. *International Journal of Management, Accounting and Economics, 3*(12), 837-851.

Islam, T., Ahmad, Z., Ahmed, I., Ahmad, A., Saeed, M., & Muhammad, K. S. (2012). Does compensation and demographic variable influence on teachers commitment and job satisfaction: A study of university of the Punjab, Pakistan. *International Journal of Business and Management, 7*(4), 35-43.

Jenna, L., & Ferguson, L. S. (2017). Innovative information technology solutions: Addressing current and emerging nurse shortages and staffing challenges worldwide. *Nursing Economics, 35*(4), 211-212.

Jing, M. X., Jing, J. Y., Li, L., Li, Y., & Mei, P. X. (2015). Correlation analysis of job satisfaction and turnover intention of different level of nurses in tertiary hospitals [In Chinese]. *Chinese General Practice Nursing, 13*(35), 35-38.

Kim, N. G., & Lee, M. Y. (2015). Towards high performance organization: The impacts of job characteristics and job crafting. *International Journal of u-and e-Service, Science and Technology, 9*(2), 85-100.

Li, H., Dong, S., & Liu, T. (2014). Relationship efficiency and productivity: A preliminary exploration of public hospital in Beijing, China. *Biomed Central Health Services Research, 14*(158), 1-11.

Li, K. Z., Chen, C. H., & You, M. N. (2010). Research progress of nurses' career in foreign countries and its enlightenment [in Chinese]. *Chinese Journal of Nursing, 45*(2), 184-186.

Liu, K., You, M. N., Chen, X. S., Liu, P. H., Li, M. X., ... Li, H. X. (2011). Investigation on the status quo and related factors of Organization support among nurses in China [In Chinese]. *Chinese Journal of Nursing, 46*(10), 1009-1011.

Liu, C., Liu, W., Wang, Y., Zhang, Z., & Wang, P. (2013). Patient safety culture in China: A case study in an outpatient setting in Beijing. *British Medical Journal Quality & Safety, 23,* 556-564.

Lu, H., While, E. A., & Barriball, L. K. (2005). Job satisfaction among nurses: A literature review", International Journal of Nursing Studies. *International journal of nursing studies, 42*(2), 211-227.

Ma, F. G., Zhao, F. X., & Qiu, L. S. (2006). Correlation analysis between social support and anxiety state of nurses [in Chinese]. *Journal of Nursing Science, 21*(9), 48-49.

Ministry of Health. (1989). *The measures for the administration of the hospital grade* [In Chinese]. Retrieved from www.nhfpc.gov.cn

Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior, 14,* 224-247.

Pien, S. L. (2011). *Factors predicting organizational commitment among nurses in state hospitals, Malaysia* (Unpublished master's thesis). Chiang Mai University, Thailand.

Porter, W. L., Steers, M. R., Mowday, T. R., & Boulian, V. P. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology, 59*(5), 603-609.

Qu, L. J., Zhang, T., Song, J., & Fang, Y. H. (2016). Investigation analysis of turnover intention among temporary nurses and permanent nurses in tertiary hospitals [In Chinese]. *Journal of Qilu Nursing, 22*(3), 72-74.

Rudolph, C. W., Katz, I. M., Lavigne, K. N., & Zacher, H. (2017). Job crafting: A meta-analysis of relationships with individual differences, job characteristics, and work outcomes. *Journal of Vocational Behavior, 102,* 112–138.

Shang, J., You, L., Ma, C., Altares, D., Sloane, M. D., & Aiken, H. L. (2014). Nurse employment contracts in Chinese hospitals: impact of inequitable benefit structures on nurse and patient satisfaction. *Human Resources for Health, 12*(1), 1-10.

Shen, Y. X., Chen, T. W., & Zhu, P. X. (2015). Survey of status quo and demands of nurses' on the job training [in Chinese]. *Nursing Research, 29*(2), 631-633.

Sohu News. (2017). *The average salary in Chengdu is released* [In Chinese]. Retrieved from http://www.sohu.com/a/202864962_100023500

Tims, M., & Bakker, B. A. (2010). Job crafting: Towards a new model of individual job redesign. *SA Journal of Industrial Psychology, 36*(2), 1-9.

Tims, M., Bakker, B. A., & Derks, D. (2012). Development and validation of the job crafting scale. *Journal of Vocational Behavior, 80*(1), 137-186.

Top, M., & Gide, O. (2013). Interaction of organizational commitment and job satisfaction of nurses and medical secretaries in Turkey. *The International Journal of Human Resource Management, 24*(3), 667–683.

Wagner, M. C. (2007). Organizational commitment as a predictor variable in nursing turnover research: Literature review. *Journal of Advanced Nursing, 3,* 235–247.

Wang, Y. R. (2018). The value of Confucian culture to cultivate and practice socialist core values. *Journal of Nanchang Institute of Technology, 37*(2), 1-5.

Xin, S. Z. (2016). *Research on relationship among job crafting, work-family enrichment and job well-being* [in Chinese] (Unpublished master's thesis). Dongbei University of Finance and Economics, China.

Xiong, P. L., Zhang, H. D., & Xiao, L. X. (2016). The correlation research of professional benefit and organizational commitment among clinical nurses [In Chinese]. *Journal of Nursing Administration, 16*(5), 317-319.

Yamane, T. (1973). *Statistic: An introductory analysis.* Tokyo: Harper International.

Yan, M. (2014). *Research on the development and work and family relationship [in Chinese]. Chinese Social Science Press.*

Zheng, P. F., Xu, D. D., & Wang, J. L. (2014). The effect of organizational commitment on organizational identification [In Chinese]. *Chinese Nursing Management, 14*(5), 469-471.

Zhou, X. Z., Wang, Y. H., Xia, P. L., & Xie, Q. Q. (2017). Investigation of the reasons for dismissal and re-employment status among nurses [In Chinese]. *Journal of Nursing Administration, 17*(3), 204-205.