



## Psychological Ownership of Nurses in Different Departments at Tertiary Hospitals in Kunming, the People's Republic of China\*

การมีจิตใจเป็นเจ้าของของพยาบาลในแผนกต่าง ๆ โรงพยาบาลตติยภูมิในคุนหมิง  
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### Abstract

Having high psychological ownership is important for an organization to reduce turnover rates for nurses. This descriptive comparative research aimed to examine the psychological ownership (preventative and promotive forms) of nurses and compare psychological ownership of nurses in different departments in Kunming tertiary hospitals, the People's Republic of China. The sample consisted of 389 nurses from 3 tertiary hospitals. The research instruments consisted of a demographic data form and the Psychological Ownership Questionnaire. The Cronbach's alpha coefficient of preventative psychological ownership was 0.87, and of promotive psychological ownership, was 0.87. Data were analyzed using descriptive statistics and One-way ANOVA.

The results revealed the following:

Preventative and promotive psychological ownership was at a moderate level ( $\bar{X} = 3.50$ ,  $SD = 1.05$ ;  $\bar{X} = 4.28$ ,  $SD = 0.81$ , respectively). Participants who worked in outpatient departments had a significantly higher preventative and promotive psychological ownership than those who worked in critical care departments ( $F = 11.059$ , mean difference = 1.26,  $p < .01$ ;  $F = 43.171$ , mean difference = 1.61,  $p < .01$ , respectively); those who worked in inpatient departments had a significantly higher preventative and promotive psychological ownership than those working in critical care departments ( $F = 11.059$ , mean difference = 0.67,  $p < .01$ ;  $F = 43.171$ , mean difference = 1.14,  $p < .01$ , respectively); and those working in outpatient departments had a significantly higher preventative and promotive psychological ownership than those working in inpatient departments ( $F = 11.059$ , mean difference = 0.59,  $p < .05$ ;  $F = 43.171$ , mean difference = 0.46,  $p < .05$ , respectively).

The results of this study can provide basic information for nursing managers and hospital administrators to develop strategies to enhance the psychological ownership of nurses in different departments in Kunming tertiary hospitals, the People's Republic of China.

**Keywords:** Psychological ownership; Nurses; Different departments; Tertiary Hospitals; China

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### บทคัดย่อ

การมีจิตใจเป็นเจ้าของในระดับสูงมีความสำคัญต่อองค์กรในการลดการลาออกโยกย้ายของพยาบาล การศึกษาพรรณนาเชิงเปรียบเทียบนี้มีวัตถุประสงค์เพื่อศึกษาการมีจิตใจเป็นเจ้าของ (แบบการป้องกันและแบบ การส่งเสริม) ของพยาบาล และเปรียบเทียบการมีจิตใจเป็นเจ้าของในพยาบาลแผนกต่าง ๆ โรงพยาบาลตติยภูมิใน คุนหมิง ประเทศสาธารณรัฐประชาชนจีน กลุ่มตัวอย่างคือพยาบาลจำนวน 389 คน เครื่องมือวิจัยประกอบด้วย แบบสอบถามข้อมูลส่วนบุคคล และแบบสอบถามการมีจิตใจเป็นเจ้าของ ค่า Cronbach's alpha coefficient ของแบบสอบถามการมีจิตใจเป็นเจ้าของแบบการป้องกันเท่ากับ 0.87 และแบบสอบถามการมีจิตใจเป็นเจ้าของ แบบการส่งเสริมเท่ากับ 0.87 วิเคราะห์ข้อมูลโดยสถิติเชิงพรรณนา และสถิติ One-way ANOVA

#### ผลการศึกษาพบว่า

การมีจิตใจเป็นเจ้าของแบบการป้องกัน และการมีจิตใจเป็นเจ้าของแบบส่งเสริมอยู่ในระดับปานกลาง ( $\bar{X} = 3.50$ ,  $SD = 1.05$ ;  $\bar{X} = 4.28$ ,  $SD = 0.81$  ตามลำดับ) กลุ่มตัวอย่างที่อยู่ในแผนกผู้ป่วยนอกมีจิตใจเป็นเจ้าของ แบบป้องกันและแบบส่งเสริมสูงกว่าพยาบาลในแผนกการดูแลระยะวิกฤตอย่างมีนัยสำคัญ ( $F = 11.059$ , ความต่างของค่าเฉลี่ย = 1.26,  $p < .01$ ;  $F = 43.171$ , ความต่างของค่าเฉลี่ย = 1.61,  $p < .01$  ตามลำดับ) พยาบาลในแผนกผู้ป่วยในมีจิตใจเป็นเจ้าของแบบป้องกันและแบบส่งเสริมสูงกว่าพยาบาลในแผนกการดูแลระยะ วิกฤตอย่างมีนัยสำคัญ ( $F=11.059$ , ความต่างของค่าเฉลี่ย = 0.67,  $p < .01$ ;  $F = 43.171$ , ความต่างของค่าเฉลี่ย = 1.14,  $p < .01$  ตามลำดับ) พยาบาลในแผนกผู้ป่วยนอกมีจิตใจเป็นเจ้าของแบบป้องกันและแบบส่งเสริมสูงกว่า พยาบาลในแผนกผู้ป่วยในอย่างมีนัยสำคัญ ( $F = 11.059$ , ความต่างของค่าเฉลี่ย = 0.59,  $p < .05$ ;  $F = 43.171$ , ความต่างของค่าเฉลี่ย = 0.46,  $p < .05$  ตามลำดับ)

ผลการศึกษานี้เป็นข้อมูลพื้นฐานสำหรับผู้บริหารการพยาบาลและโรงพยาบาลในการพัฒนากลยุทธ์ที่จะ ส่งเสริมการมีจิตใจเป็นเจ้าของของพยาบาลในแผนกต่าง ๆ โรงพยาบาลตติยภูมิในคุนหมิง สาธารณรัฐประชาชน จีน

**คำสำคัญ:** การมีจิตใจเป็นเจ้าของ พยาบาล หน่วยงานที่แตกต่างกัน โรงพยาบาลตติยภูมิ ประเทศจีน

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## Background and Significance

In recent years, the psychological ownership of an organization has received increasing attention from scholars, consultants and practitioners, with an extensive amount of research in a wide variety of fields emphasizing its importance (Avey, Wernsing, & Palanski, 2012; Chen & Sun, 2010; Ma, Cheng, & Zhou, 2014; Yoo, Yoo, & Kim, 2012; Kaur, Sambasivan, & Kumar, 2013; Olckers & Enslin, 2016; Jafri, 2016; Rapti, 2016). Psychological ownership has a positive effect on the job satisfaction and performance of employees, resulting in lower turnover rates in organizations (Avey et al., 2009; Md-Sidin, Sambasivan, & Muniandy, 2009; Qiu, Hu, Xu, & Li, 2015; Van Dyne & Pierce, 2004).

Building on the three recognized dimensions of psychological ownership (i.e., self-efficacy, belongingness, and self-identity) (Pierce, Kostova, & Dirk, 2001), Avey and others (2009) extended Pierce et al.'s theory of psychological ownership; the concepts of territoriality and accountability were posited as additional dimensions of psychological ownership. Psychological ownership refers to the state in which nurses "feel as though target of ownership and reflect their awareness, thoughts, and beliefs regarding the target ownership" (Pierce, Kostova, & Dirk, 2003 as cited in Avey et al., 2009), and it consists of preventative and promotive forms.

Preventative psychological ownership is represented by the concept of territoriality, whereas promotive psychological ownership includes self-efficacy, accountability, belongingness, and self-identity. Territoriality is a nurse's behavioral expression of his or her feelings of ownership towards a physical or social object; self-efficacy is the nurse's belief that they have the personal ability to finish tasks with confidence; accountability is defined as the implicit or explicit expectation of the perceived right to hold others and oneself accountable for influences on one's target of ownership; belongingness means that a nurse needs a certain personal space or living space (residential) to meet urgent psychological needs; self-identity refers to a nurse's cognitive connection between an individual and an object or target (for example, the organization) and reflects the perception of oneness with the target.

The concept of psychological ownership in the nursing literature is fairly new. Many studies have demonstrated that promotive psychological ownership is related to many factors including working hours, self-investment, perceived control, perceived familiarity, social influence, job satisfaction, a participative organizational climate, emotional intelligence, leadership styles, perceptions of justice, affective commitment, and workplace deviance (Chen, Zhao, & Wang, 2016; Ozler, Yilmaz, & Ozler, 2008; Kaur et al., 2013; Avey et al., 2009; Adil & Kamal, 2018; Sieger, Bernhard, & Frey, 2011).

According to the literature review, some studies with different results were found to examine psychological ownership by using the same concept based on Avey et al.'s theory in a non-nursing field (Avey et al., 2012; Jafri, 2016; Ma et al., 2014; Rapti, 2016). It is important to note that there have been no studies of psychological ownership in nursing done in Chinese hospitals. China has a different situation from other countries; therefore, the level of psychological



ownership as perceived by nurses may be different from that of other countries.

In China, the healthcare system has undergone considerable changes over the past couple of decades and continues to face mounting challenges due to an aging population, growing urbanization, proliferating lifestyle diseases, rapidly increasing consumer wealth, and the advancement of universal health care insurance (Ministry of Health of China, 2016). As the largest human resource group in the healthcare system, nurses should be of great concern for guaranteeing delivery of quality care. However, in China, nurses are facing problems which influence the efficiency and effectiveness of any health-care delivery system, such as low job satisfaction (Dong, Huang, Chen, Li, Sun, & Zhao, 2017; Wang, Sun, Wu, & Li, 2017; Xu, Shao, & Huang, 2017; Yang & Gao, 2017), unsatisfactory performance (Huang, Yang, & Chen, 2017; Sun, Sun, Xiu, Guo, Xue, & Zhao, 2017; Song, Li, Chen, Wang, Zhang, & Lu, 2017), and a high turnover rate (Shi, Liu, & Zhang, 2016). According to the Ministry of Health of China (2015), the nursing turnover rate is 10.2% to 11.2%, and the percentage of nurses with turnover intention increased to 56.94% in 2014.

In Kunming tertiary hospitals, there are three main departments: outpatient, inpatient, and critical care. Different departments have different turnover rates. According to data from the Ministry of Health in Yunnan Province (2018) in 2017, nursing turnover rates in one tertiary hospital were the following: 0% in the outpatient department, 3.23% in the inpatient department, and 7.51% in the critical care department, while turnover rates in another tertiary hospital were 1.02% in the outpatient department, 4.25% in the inpatient department, and 8.43% in the critical care department. At a third tertiary hospital, turnover rates were 2.02% in the outpatient department, 6.23% in the inpatient department, and 7.78% in the critical care department. It is obvious that the critical care department has a higher turnover rate than other departments. High turnover rates influence the efficiency and effectiveness of health-care delivery systems. In order to meet patients' needs and guarantee the delivery of quality services, nurse administrators are trying to solve these problems.

Psychological ownership can promote staff retention (Olckers & Du Plessis, 2012) resulting in lower turnover rates in organizations (Van Dyne & Pierce, 2004). However, in China, there are some situations which influence nurses' sense of psychological ownership. The Confucian Doctrine of the Mean emphasizes that harmony is the most precious among people and with the external world (Chan, 1963). Most Chinese nurses do not refuse others directly when people come to their workspace to join their projects. This may hinder them from showing their preventative psychological ownership behavior. Less participation in policy-making and organizational decisions hinders a participative organizational climate which may influence nurses' feelings of promotive psychological ownership because, as Ozler et al. (2008) suggested, a participative organizational climate strengthens the sense of promotive psychological ownership held by employees towards their organization.

Different departments have different work environments and spaces. Compared with other departments, there are more families and patients in the outpatient department, which



makes the nurse station, the corridors, and the wards noisy, which influences the nurses' workspace. Organizational members can and do become territorial over physical spaces, ideas, roles, relationships, and other potential possessions in organizations (Brown, Lawrence, & Robinson, 2005 as cited in Avey et al., 2009). When they are afraid that extraneous factors may influence their entities of ownership, the feelings of territoriality are amplified. Thus, nurses may have different preventative psychological ownership (territoriality) due to working in different departments.

Therefore, the situation mentioned previously influences nurses' sense of psychological ownership in China. Different departments have different work environment structures. Low levels of work environment structure afford the organizational members with the opportunity to exercise and experience control over a variety of work and work environment matters. Through the exercise of personal control over these important organizational affairs, organizational members will come to feel ownership for their job and for the employing organization (Pierce, O'Driscoll, & Coghlan, 2004). Therefore, nurses who work in different departments may have different psychological ownership. However, there has been no study found comparing the psychological ownership of nurses in different departments. Therefore, it is meaningful to conduct this study in tertiary hospitals in Kunming. The results of this study could provide basic information for nursing managers and hospital administrators to develop strategies to enhance the psychological ownership of nurses in different departments which would influence nurses' turnover rates, ultimately meeting patients' needs and guaranteeing the delivery of quality services.

### Objectives

1. To examine psychological ownership (preventative and promotive forms) of nurses at tertiary hospitals in Kunming, the People's Republic of China.
2. To compare psychological ownership (preventative and promotive forms) of nurses in different departments (outpatient department, inpatient department, and critical care department) at tertiary hospitals in Kunming, the People's Republic of China.

### Conceptual Framework

Based on Avey et al.'s theory (2009), psychological ownership refers to the state in which nurses "feel as though target of ownership and reflect their awareness, thoughts, and beliefs regarding the target ownership" (Pierce et al., 2003 as cited in Avey et al., 2009). It consists of preventative and promotive forms. The preventative form is concerned with sticking to rules and regulations and avoiding punishment, whereas the promotive form is concerned with accomplishments and aspirations (Higgins, 1998 as cited in Avey et al., 2009).

Preventative psychological ownership is represented by the concept of territoriality which is the behavioral expression of a nurse's feelings of ownership towards a physical or social object. Promotive psychological ownership includes four dimensions: self-efficacy, accountability, belongingness, and self-identity. Self-efficacy is a nurse's belief that they have the personal ability



to finish tasks with confidence. Accountability is defined as the implicit or explicit expectation of the perceived right to hold others and oneself accountable for influences on one's target of ownership. Belongingness means that a nurse needs personal space or living space (residential) to meet urgent psychological needs. Lastly, self-identity refers to a nurses' cognitive connection between an individual and an object or target (for example the organization) and reflects the perception of oneness with the target.

Different departments have different work environment structures. Low levels of work environment structure afford the organizational member with the opportunity to exercise and experience control over a variety of work and work environment matters, and through the exercise of personal control over these important organizational affairs, organizational members will come to feel ownership for their job and for the employing organization (Pierce et al., 2004). Therefore, nurses who work in different departments may have different levels of psychological ownership. Thus, this research is about the comparison of nurses' psychological ownership in different departments based on Avey et al.'s psychological ownership theory (2009).

## Methodology

A descriptive comparative study was used.

### Population and Sample

The target population was 3,629 nurses at three tertiary hospitals in Kunming.

The sample size in this study was calculated by using Yamane's formula (1973):  $n = N/1 + N(e)^2$  and was comprised of 389 nurses working in three departments at three tertiary hospitals in Kunming. The loss of participants was considered, and 10% (Israel, 2003) of the sample size was added resulting in a total of 402 nurses. The samples were chosen using the proportional stratified random sampling method. The number of nurses in each department of each hospital was calculated as follows:

**Table 1** Population and sample in each department of each hospital

Hospitals & Departments	Population	Sample
Hospital 1	1,707	189
Outpatient Department	81	9
Inpatient Department	1,500	166
Critical Care Department	126	14
Hospital 2	1,365	151
Outpatient Department	72	8
Inpatient Department	1,185	131
Critical Care Department	108	12
Hospital 3	557	62
Outpatient Department	81	9
Inpatient Department	413	46



**Table 1** Population and sample in each department of each hospital (continue)

Hospitals & Departments	Population	Sample
Critical Care Department	63	7
Total	3,629	402

### Research Instruments

The research instruments were made up of a questionnaire consisting of two parts:

1. Demographic data form
2. Psychological Ownership Questionnaire (POQ) by Avey et al. (2009).

The POQ consisted of 16 items: four items for the one prevention-orientated dimension (territoriality), three items for each of the four promotion-orientated dimensions (self-efficacy, accountability, belongingness, and self-identity). It was scored on a six-point Likert scale (1 = strongly disagree; 6 = strongly agree) with a higher score indicating higher psychological ownership (preventative and promotive forms). The mean score was classified into three levels based on Best and Kahn (2003): low level of psychological ownership = 1.00-2.66, moderate level of psychological ownership = 2.67-4.33, and high level of psychological ownership = 4.34-6.00. The POQ was translated from English to Chinese by Chen et al. (2012) who also indicated that this version had good validity, with a Kaiser-Meyer-Olkin value of 0.858 (Chen et al., 2012). The reliability of the POQ was tested with ten nurses who worked in one of the Yunnan province tertiary hospitals and who met the same inclusion criteria as the sample, using Cronbach's alpha, with a value of 0.87 for preventative psychological ownership and 0.87 for promotive psychological ownership.

### Ethical Considerations

The research proposal was approved by the Research Ethics Review Committee, Faculty of Nursing, Chiang Mai University. All participants were notified about the study's purpose and methods. They were informed that they had the right to refuse to participate, to stop, or to withdraw from the study at any time. A research consent form was given to the participants to assure protection of their human rights. Information provided by the participants was used only for study and remained confidential. The results of the study were presented as a group.

### Data Collection

Data collection was conducted at three tertiary hospitals in Kunming city, the PRC. Data collection steps were as follows:

1. After receiving the approval letter from the Research Ethics Review Committee, a research proposal, an application letter for permission to collect data, and a copy of the data collection tools were submitted to the directors of nursing departments of the three selected hospitals.
2. Permission from the directors of the nursing departments of the three tertiary hospitals in Kunming was obtained.
3. Packages were prepared by the researcher for all selected participants. A package



included a cover letter, a consent form, the questionnaires, and an envelope. The objectives and benefits of this study were explained to the participants via a cover letter.

4. Research participants were selected from the name lists of nurses using the random sampling method. Staff nurses who were in the reliability test were excluded from the sampling.

5. The researcher distributed the questionnaires. All participants were requested to complete the questionnaires in their free time, then seal the envelope and put in the researcher's box in the nursing department of each hospital within two weeks.

6. The researcher checked the questionnaires, of which a total of 395 (98.25%) were gathered from the box. Six incomplete questionnaires were excluded; therefore, 389 (96.76%) questionnaires were used for data analysis.

### Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) 13.0. Assumptions were met. The data analysis procedure was divided into three parts as follows:

1. Demographic data were analyzed using frequency, percentage, range, mean, and standard deviation.

2. Scores for staff nurses' psychological ownership were analyzed using mean and standard deviation.

3. One-way ANOVA was used to compare the psychological ownership of nurses in three different departments. Since the data for each department showed normal distribution using Kolmogorov-Smirnov, the data showed homogeneity using Levene statistics.

### Results

This study included 389 nurses who worked in three departments (outpatient department, inpatient department, and critical care department) at three tertiary hospitals in Kunming. Most (95.12%) were female with ages ranging between 21-55 years old ( $\bar{X} = 31.50$ ,  $SD = 6.82$ ). More than half (57.84%) were between 21-30 years old, and the majority were married (69.92%). More than half also (68.89%) held a bachelor's degree, but only 2.57% held a master's degree. Nearly half of the sample (48.07%) were senior nurses while over 70% (70.18%) had 1-10 years of working experience with a range from 2 to 36 years ( $\bar{X} = 9.75$ ,  $SD = 7.67$ ). Finally, more than half (73.01%) were temporary nurses.

Overall, preventative and promotive psychological ownership were both at a moderate level ( $\bar{X} = 3.50$ ,  $SD = 1.05$ ;  $\bar{X} = 4.28$ ,  $SD = 0.81$ , respectively).

**Table 2** Comparison of Psychological Ownership of the Participants in Different Departments

(I) working departments	(J) working departments	Mean Difference (I-J)
Preventative psychological ownership		
Outpatient department	Critical care department	1.26**
Inpatient department	Critical care department	0.67**
Outpatient department	Inpatient department	0.59*



**Table 2** Comparison of Psychological Ownership of the Participants in Different Departments  
(continue)

(I) working departments	(J) working departments	Mean Difference (I-J)
Promotive psychological ownership		
Outpatient department	Critical care department	1.61**
Inpatient department	Critical care department	1.14**
Outpatient department	Inpatient department	0.46*

\* $p < .05$ , \*\* $p < .01$ 

Table 2 showed that nurses who worked in the outpatient department had significantly higher preventative and promotive psychological ownership than nurses in the critical care department ( $F = 11.059$ , mean difference = 1.26,  $p < .01$ ;  $F = 43.171$ , mean difference = 1.61,  $p < .01$ , respectively). Nurses who worked in the inpatient department had significantly higher preventative and promotive psychological ownership than those in the critical care department ( $F = 11.059$ , mean difference = 0.67,  $p < .01$ ;  $F = 43.171$ , mean difference = 1.14,  $p < .01$ , respectively). Nurses who worked in the outpatient department had a significantly higher preventative and promotive psychological ownership than nurses who worked in the inpatient department ( $F = 11.059$ , mean difference = 0.59,  $p < .05$ ;  $F = 43.171$ , mean difference = 0.46,  $p < .05$ , respectively).

## Discussion

### 1. Psychological Ownership of the Sample

The results of this study showed preventative psychological ownership of nurses was at a moderate level ( $\bar{X} = 3.50$ ,  $SD = 1.05$ ). The explanation of this result is as follows:

In China, the nursing department sets the performance and evaluation standards for nursing work, as well as for hospital policies. The outcome of performance evaluations according to nursing standards could influence the next year's salary; thus, nurses consider nursing standards as an important aspect. When a nurse takes care of patients or completes tasks, he/she must carefully follow standard procedures to avoid making mistakes and punishment. Avey et al. (2009) indicated that individuals with preventative psychological ownership strictly follow rules and procedures and focus on what they need to avoid so as to minimize punishment from their organization or employer. Thus, nurses preventative psychological ownership was at a moderate level.

The results of this study showed that the promotive psychological ownership of nurses was at a moderate level ( $\bar{X} = 4.28$ ,  $SD = 0.81$ ). In Kunming, head nurses in tertiary hospitals face huge pressure to guarantee the delivery of quality services. They must think more about internally inspiring their staff to make sure that they can go beyond what is expected. Therefore, they show transformational leadership, such as creating trust with staff nurses by open and honest communication, using verbal commands and other small gestures (such as smiling and cheering)



to encourage their staff. This contributes to the result that the promotive psychological ownership of nurses was demonstrated at a moderate level.

## 2. The Comparison of Psychological Ownership of Participants in Different Departments

Nurses in the outpatient department and the inpatient department had a significantly higher preventative psychological ownership than nurses in the critical care department (mean difference = 1.26,  $p < .01$ , mean difference = 0.67,  $p < .01$ , respectively). The explanation for this result may be that territoriality can occur when individuals feel defensive towards their property, or their job or organization (Avey et al., 2009). In this study, 88.00% of outpatient department nurses and 70.10% of inpatient department nurses feel that they need to protect their property from being used by others in this organization. However, just 36.36% of critical care department nurses felt this need. This may contribute to the explanation of why nurses who worked in the critical care department had a significantly lower preventative psychological ownership than nurses who worked in other departments.

Nurses in the outpatient department had significantly higher preventative psychological ownership than nurses in the inpatient department (mean difference = 0.59,  $p < .05$ ). This may be related to the different work environments. Only patients who need to be under supervision come to the inpatient department. On the other hand, the outpatient department refers to a hospital department where healthcare professionals see outpatients, and thousands of people will come here, which influences the nurses' workspace. When people are afraid that extraneous factors may influence their entities of ownership, feelings of territoriality are amplified (Avey et al., 2009). Thus, such a situation may be related to the results that nurses who worked in the outpatient department had significantly higher preventative psychological ownership than nurses who worked in the inpatient department.

Nurses in the outpatient department and the inpatient department had a significantly higher promotive psychological ownership than nurses in the critical care department (mean difference = 1.61,  $p < .01$ , mean difference = 1.14,  $p < .01$ , respectively). Workload and job stress may be related to this result. In Kunming tertiary hospitals, outpatient department nurses only need to work the day shift, but nurses in both inpatient departments as well as critical care departments work day and night shifts. However, patients' situations in critical care departments are more serious than in other departments.

Furthermore, nurses who work in the critical care department must learn and master a wide variety of high-level nursing skills to fulfill patients' needs while completing various tasks. Therefore, nurses who work in the critical care department often face a higher workload and more job stress than nurses who work in other departments. Previous studies have shown that job stress and a high workload can negatively influence the self-efficacy of nurses (Wang, Liu, Hong, & Zhou, 2009; Lee & Ko, 2009). Self-efficacy is one of the dimensions of promotive



psychological ownership. White (1959, as cited in Avey et al., 2009) argued that one's feelings of ownership are inextricably linked to an individual's need for self-efficacy. According to the data, in this study, the mean score of self-efficacy of outpatient department nurses was 4.84 (SD = 0.87), the mean score of self-efficacy of inpatient department nurses was 4.23 (SD = 0.89), and the mean score of self-efficacy of critical care department nurses was 3.35 (SD = 1.01). Thus, maybe due to high workload and job stress, critical care department nurses had a lower self-efficacy. Such a situation may contribute to the result that nurses who worked in the critical care department had significantly lower promotive psychological ownership than nurses who worked in other departments.

Nurses in the outpatient department had significantly higher promotive psychological ownership than nurses in the inpatient department (mean difference = 0.46,  $p < .05$ ). Data from hospitals has shown that nurses in outpatient departments had better job satisfaction (Document of the First People's Hospital of Yunnan Province, 2017). Avey et al. (2009) showed job satisfaction was positively related to promotive psychological ownership ( $r = .49$ ,  $p < .01$ ). Thus, nurses who worked in the outpatient department had significantly higher promotive psychological ownership than nurses in the inpatient department.

### Implications of Research Findings

The results of the study have significant implications for nursing administrators. The results revealed that nurses' promotive psychological ownership was moderate, so administrators should develop strategies to improve nurses' promotive psychological ownership. The results showed critical care department nurses had a significantly lower preventative and promotive psychological ownership than other departments' nurses; thus, administrators should pay more attention to improving preventative and promotive psychological ownership of critical care department nurses.

### Recommendations for Further Research

Based on the results of this study, recommendations for future study should focus on conducting this study in primary, secondary, and other tertiary hospitals in other regions of China. Other studies may focus on head nurses or other nursing administrators. Correlation studies may also be done in the future.

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