



Psychological Ownership and Turnover Intention Among Nurses
in Tertiary Hospitals, Chengdu City, Sichuan Province,
the People's Republic of China*
การมีจิตใจเป็นเจ้าของและความตั้งใจลาออกของพยาบาลในโรงพยาบาลตติยภูมิ
เมืองเฉิงตู มณฑลเสฉวน สาธารณรัฐประชาชนจีน*

Ling	Chen**	หลิง	เฉิน**
Orn-Anong	Wichaikhum***	อรอนงค์	วิชัยคำ***
Kulwadee	Abhichartibutra****	กุลวดี	อภิชาติบุตร****

Abstract

Increasing psychological ownership among nurses may reduce turnover intention and ultimately increase their retention. The purposes of this descriptive correlational study were 1) to describe the levels of psychological ownership and turnover intention among nurses and 2) to examine the relationship between psychological ownership and turnover intention among nurses in tertiary hospitals in Chengdu City, Sichuan Province, the People's Republic of China. The participants consisted of 329 nurses working in Chengdu tertiary hospitals, and the nurses were recruited using stratified random sampling. Research instruments included the Chinese version of Psychological Ownership Questionnaire (POQ) and Turnover Intention Questionnaire (TIQ). The Cronbach's alpha coefficients of the POQ and TIQ were 0.84 and 0.87, respectively. Data were analyzed by using descriptive statistics and Spearman's rank-order correlation coefficient.

The results indicated that nurses perceived overall PO, preventive PO, and promotive PO at a moderate level ($M = 4.06$, $SD = 0.70$; $M = 3.41$, $SD = 1.15$; and $M = 4.28$, $SD = 0.81$, respectively). Nurses also perceived overall turnover intention at a moderate level ($M = 3.32$, $SD = 1.02$). It was found that there was a statistically significant moderate negative relationship between overall psychological ownership, preventive psychological ownership, promotive psychological ownership, and turnover intention ($r = -.41$, $p < .01$; $r = -.30$, $p < .01$; and $r = -.35$, $p < .01$, respectively).

The results of this study provide essential information for nursing managers and hospital administrators to formulate strategies, improve nurses' sense of psychological ownership in various regions, and consequently, reduce their likelihood of resigning.

Keywords: Psychological ownership; Turnover intention; Nurses; Tertiary hospitals; The People's Republic of China

* Master's thesis, Master of Nursing Science program (International Program), Faculty of Nursing, Chiang Mai University

** Graduate student of Nursing Science Program (International Program), Faculty of Nursing, Chiang Mai University

*** Corresponding author, Assistant Professor, Faculty of Nursing, Chiang Mai University;
e-mail: orn-anong.w@cmu.ac.th

**** Associate Professor, Faculty of Nursing, Chiang Mai University

Received 11 June 2024; Revised 5 September 2024; Accepted 19 September 2024



บทคัดย่อ

การเพิ่มขึ้นของการมีจิตใจเป็นเจ้าของในพยาบาล อาจช่วยลดความตั้งใจลาออกและเพิ่มอัตราการคงอยู่ของพยาบาล วัตถุประสงค์ของการวิจัยเชิงพรรณนาเพื่อหาความสัมพันธ์ครั้งนี้ คือ 1) ศึกษาการมีจิตใจเป็นเจ้าของและความตั้งใจลาออก และ 2) หาความสัมพันธ์ของการมีจิตใจเป็นเจ้าของและความตั้งใจลาออกของพยาบาล ในโรงพยาบาลระดับตติยภูมิ เมืองเฉิงตู มณฑลเสฉวน สาธารณรัฐประชาชนจีน กลุ่มตัวอย่าง คือ พยาบาลที่ปฏิบัติงานในโรงพยาบาลระดับตติยภูมิ เมืองเฉิงตู มณฑลเสฉวน สาธารณรัฐประชาชนจีน จำนวน 329 คน โดยวิธีการสุ่มแบบแบ่งชั้นภูมิ เครื่องมือวิจัยที่ใช้ในการวิจัย คือ แบบสอบถามการมีจิตใจเป็นเจ้าของ และแบบสอบถามความตั้งใจลาออกฉบับภาษาจีน ค่า Cronbach's alpha coefficient ของแบบสอบถามการมีจิตใจเป็นเจ้าของ และแบบสอบถามความตั้งใจลาออก เท่ากับ 0.84 และ 0.87 ตามลำดับ วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา และสถิติ Spearman's rank-order correlation coefficient

ผลการวิจัย พบว่า พยาบาลรับรู้การมีจิตใจเป็นเจ้าของโดยรวม การมีจิตใจเป็นเจ้าของเชิงป้องกัน และการมีจิตใจเป็นเจ้าของเชิงส่งเสริม อยู่ในระดับปานกลาง ($M = 4.06, SD = 0.70$; $M = 3.41, SD = 1.15$; $M = 4.28, SD = 0.81$ ตามลำดับ) ความตั้งใจลาออกตามการรับรู้ของพยาบาลอยู่ในระดับปานกลาง ($M = 3.32, SD = 1.02$) และพบว่า การมีจิตใจเป็นเจ้าของโดยรวม การมีจิตใจเป็นเจ้าของเชิงป้องกัน และการมีจิตใจเป็นเจ้าของเชิงส่งเสริม มีความสัมพันธ์เชิงลบระดับปานกลางกับความตั้งใจลาออกอย่างมีนัยสำคัญทางสถิติ ($r = -.41, p < .01$; $r = -.30, p < .01$; $r = -.35, p < .01$ ตามลำดับ)

ผลการศึกษาครั้งนี้ ให้ข้อมูลที่จำเป็นแก่ผู้บริหารทางการพยาบาลและผู้บริหารโรงพยาบาล ในการกำหนดกลยุทธ์ในการส่งเสริมการมีจิตใจเป็นเจ้าของในพยาบาลภูมิภาคต่าง ๆ เพื่อลดความตั้งใจลาออกของพยาบาล

คำสำคัญ: การมีจิตใจเป็นเจ้าของ ความตั้งใจลาออก พยาบาล โรงพยาบาลระดับตติยภูมิ สาธารณรัฐประชาชนจีน

* วิทยานิพนธ์หลักสูตรพยาบาลศาสตรมหาบัณฑิต (หลักสูตรนานาชาติ) คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่

**นักศึกษา หลักสูตรพยาบาลศาสตรมหาบัณฑิต(หลักสูตรนานาชาติ) คณะพยาบาลศาสตร์มหาวิทยาลัยเชียงใหม่

*** ผู้เขียนหลัก ผู้ช่วยศาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่ e-mail: orn-anong.w@cmu.ac.th

**** รองศาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่



Background and significance

The WHO (2020) has claimed that nurses are the largest occupational group in the healthcare system. However, due to the aging population and the increasing demand for nursing services, as well as the worsening of COVID-19, there was expected to be a shortage of 13 million nurses by the end of 2021 (International Council of Nurses [ICN], 2021). The shortage of nurses inevitably accelerates their resignations. Multiple studies both domestically and internationally have confirmed that nurse turnover has become a global issue (Meler & Toygar, 2020; Yoon, 2020; Yu et al., 2021; Zhong et al., 2022). The high nursing turnover rate inevitably leads to financial losses, affecting employee morale and even quality of patient care (Back et al., 2020; Chan et al., 2022). Moreover, turnover intention has been shown to be the best indicator for predicting actual turnover (Lazzari et al., 2022).

Based on the withdrawal cognitions model (Mobley, 1977 as cited in Roodt, 2004), Roodt (2004) defined turnover intention (TI) as the voluntary intention of a registered nurse to leave his or her hospital shortly. To reduce TI among nurses, factors that affect TI should be considered. In recent years, more and more researchers paid more attention to psychological ownership as an important influencing factor on TI (Chang & Cho, 2023; Jing & Yan, 2022; Lu et al., 2017; Olckers & Enslin, 2016; Zeng et al., 2023). The "Turnover Intention Model" proposes that psychological ownership is an individual factor that directly affects TI (Jeswani, 2015). Psychological ownership has been shown to be intricately linked to attraction toward an organization, and it is expected that psychological ownership reduces TI (Beggan, 1992 as cited in Jeswani, 2015).

Avey et al. (2009) referred to psychological ownership (PO) as the state in which nurses feel a sense of ownership and reflect their awareness, thoughts, and beliefs regarding target ownership, which consists of preventive (territoriality) and promotive (such as self-efficacy, accountability, belongingness, and self-identity) dimensions.

According to the National Nursing Development Plan (2021-2025), China has actively addressed the imbalance and inadequacy of nursing service development, reasonably optimized the layout of nursing resources, strengthened the construction of nursing teams, continuously increased the number of nurses, reduced nursing turnover rates, strengthened nurse treatment and training, and protected the legitimate rights of nurses, all of which are the primary tasks of this plan (National Health Commission Bulletin, 2022). The average level of TI among nurses in multiple cities in China is relatively high, which has been confirmed in many studies (Li et al., 2021; Liu et al., 2018; Wang & Chen, 2021; Yu et al., 2021; Zhang et al., 2021). However, compared with other cities in China, Sichuan Province also faces a shortage of nurses in tertiary general hospitals, as reported by Gou et al. (2023). Chengdu is the capital city of Sichuan Province, with 13 municipal districts, and 55 tertiary (Level A) hospitals (Chengdu Municipal Health Commission, 2021).



Psychological Ownership and Turnover Intention Among Nurses in Tertiary Hospitals,
Chengdu City, Sichuan Province, the People's Republic of China
การมีจิตใจเป็นเจ้าของและความตั้งใจลาออกของพยาบาลในโรงพยาบาลตติยภูมิ
เมืองเฉิงตู มณฑลเสฉวน สาธารณรัฐประชาชนจีน

Tertiary (Level A) hospitals provide comprehensive medical, teaching, and research capabilities, representing the highest medical level in the region, and nurses face greater challenges and pressures in these hospitals. He and Sun (2012) researched 210 emergency nurses from 14 Level A hospitals in Chengdu, Sichuan Province. The study found that the TI level among nurses was moderate, and pointed out that emergency nurses have insufficient human resources, heavy workloads, insufficient social support, especially the support of hospital leaders and nursing managers, and work-family conflicts, which ultimately exacerbated nurses' TI. On the other hand, Zhou et al. (2020) conducted a study with 51 male nurses in the Department of Psychiatry at the Fourth People's Hospital of Chengdu, a Level A specialized hospital, and found that the nurses' TI was at a moderate level while pointing out that nurses' work fatigue and TI had increased due to heavy workloads and a lack of clear career planning.

Although both studies were conducted in tertiary hospitals, their sample limitations mean that the results might not fully reflect nurses' true TI levels. Therefore, the actual TI of nurses in Chengdu's tertiary general hospitals is worth exploring further. Secondly, considering accessibility, the researchers will choose all Level A general hospitals in one district of Chengdu for preliminary exploration. Furthermore, through follow-up surveys, the number of nurses quitting one tertiary general hospital in Wenjiang District, Chengdu from 2021 to the end of 2022 was 0.26% and 0.31%, respectively, showing an increasing trend, year by year (Chengdu Fifth People's Hospital, 2022).

The research on nurse PO in China has just begun. Four studies on nurse PO were found on China's two major data platforms, Wanfang and China National Knowledge Infrastructure (CNKI). Three of the studies were conducted in Kunming, China (Zeng et al., 2022; Zhao et al., 2020; Zhao et al., 2022), and one was conducted in Guangzhou, China (Zeng et al., 2023). Among the limitations of these four studies, all of them suggested that the results might not reflect the true situation of PO among nurses in other cities in China. Therefore, there is still a gap in the research on nurse PO in tertiary hospitals in Chengdu. However, five studies conducted among nurses in Chengdu tertiary hospitals found that nurses' self-efficacy was not optimistic, especially during COVID-19. In addition, it was pointed out that nurses' self-efficacy affected their mental health and professional self-identity (Peng et al., 2020; Xiang et al., 2020; Yang et al., 2020; Yang et al., 2021; Zhao et al., 2020).

Self-efficacy is a subset of promotive PO (Avey et al., 2009), and exploring the PO of nurses in Chengdu not only concerned the mental health and professional self-identity of all nurses, but also helped to reduce TI among nurses in Chengdu. Secondly, previous TI studies have not fundamentally addressed the issue of nurse retention, and no TI study was found among nurses in tertiary hospitals in Chengdu. In addition, no nursing research in China has examined the direct relationship between PO and TI.

As frontline nurse managers in tertiary general hospitals, researchers should be interested in testing the levels of PO and TI among Chinese nurses and the relationship between these



two variables. The research results will benefit nursing managers via the development of strategies to improve nurse PO, thereby minimizing tertiary hospital nurses' TI, and providing basic information on PO and TI for further research.

Research objectives

This study aimed to describe psychological ownership (preventive and promotive forms), and turnover intention, and to examine the relationships between psychological ownership (preventive and promotive) and turnover intention among nurses at tertiary (Level A) general hospitals, in Chengdu City, Sichuan Province, the People's Republic of China.

Conceptual framework

The conceptual framework of this study was based on the "Turnover Intention Model" by Jeswani (2015), including individual factors, organizational factors, and environmental factors, which constitute the decisive three factors related to turnover intention, which refers to a staff nurse's voluntary intention to leave her or his job shortly (Roodt, 2004). In this study, psychological ownership is an individual factor, and it refers to a state where a nurse feels as though target ownership reflects their awareness, thoughts, and beliefs regarding target ownership and consists of preventive and promotive dimensions (Avey et al., 2009) which affect nurses' turnover intention.

Methodology

A descriptive correlational approach was applied in this study.

Population and sample

The target population was 1,851 staff nurses at two Level A general hospitals in Wenjiang District, Chengdu City.

The sample size was calculated using Yamane's formula (1973): $n = N / 1 + N(e)^2$ and was comprised of 329 staff nurses working in one of three departments (Surgical Department, Internal Medicine Department, and Non-inpatient Department) at the two hospitals. Considering the possible loss of participants, 20% of the sample size was added resulting in a total of 395 nurses (Krejcie & Morgan, 1970). A stratified random sampling method was employed. A total of 395 questionnaires were distributed, and 331 responses were received, with a response rate of 83.79 %. After excluding incomplete questionnaires, 329 (80.00%) were finally retained for analysis.

Research instruments

The instrument for this study consisted of three parts.

Part 1: A demographic data form included 11 items on age, gender, educational level, professional title, position, marital status, number of children, work years, night shifts per month, work hours per week, and average income.



Part 2: The Psychological Ownership Questionnaire (POQ) by Avey et al. (2009) was back-translated from the original English version to a Chinese version by this researcher using Brislin's (1986) translation model after receiving the original authors' permission. The final Chinese version of the POQ used in this research consisted of two dimensions (preventive and promotive forms) and 16 items: four items for the preventive dimension (territoriality), and three items for each of the four subsets of the promotive dimension (self-efficacy, accountability, belongingness, and self-identity). Each item was scored on a 6-point Likert scale of 1 (strongly disagree) to 6 (strongly agree). The mean score for overall PO ranged from 1 to 6 and the levels was classified based on Best and Kahn (2003): low level of PO = 1.00 to 2.66, moderate level of PO = 2.67 to 4.33, and high level of PO = 4.34 to 6.00.

The reliability of the POQ was tested with 20 nurses who worked in the Chengdu Fifth People's Hospital and who met the same inclusion criteria as the sample, using Cronbach's alpha, with a value of 0.84 for overall PO, 0.93 for preventive PO, and 0.85 for promotive PO.

Part 3: The Turnover Intention Questionnaire (TIQ) by Roodt (2004) was also back-translated from the original English version to a Chinese version by the researcher using Brislin's (1986) translation model after receiving the original authors' permission. The final Chinese version of the TIQ used for this study consisted of 14 items. Each item was measured on a 7-point intensity response scale anchored at extreme poles (e.g., "never" 1 low intensity to "always" 7 high intensity). The mean score for TI ranged from 1 to 7 and only one item (item 8) was reverse scored. The levels were categorized based on Best and Kahn (2003): a low level of TI = 1.00 to 3.00, a moderate level of TI = 3.01 to 5.00, and a high level of TI = 5.01 to 7.00. In the pilot study, Cronbach's alpha coefficients were 0.87 for overall TI.

Ethical considerations

The Chiang Mai University Faculty of Nursing's Research Ethics Review Committee gave its approval to the study (No.089/2023). The target hospitals permitted the data collection. All participants received information about the goals and procedures of the study as well as the freedom to decline or withdraw participation at any moment without facing consequences or losing any advantages. The researcher used code instead of the participants' names and the study's publications and research reports did not reveal their names or any indirect information that might be recognized. After finishing the study, the duration of keeping questionnaires in a secure place will be five years, and they will be destroyed after the time duration has expired.

Data collection

To collect data, a research coordinator in each hospital was appointed by the directors of nursing. The coordinators' roles and the study's data collection methods were explained to all participants through the Nurses' Video Meeting. Participants received a questionnaire from the coordinator and filled it out during their free time. The questionnaire consisted of two parts: an electronic informed consent and an online questionnaire. Participants received the link to the online questionnaire after signing the electronic informed consent form. All final consent forms



and questionnaires were saved on the Question Star data platform.

Data analysis

Version 16.0 of the statistical package for the social sciences (SPSS) was employed. Psychological ownership and turnover intention among nurses were analyzed using mean, standard deviation, range, and level. Correlation testing was used to test the relationship between these two variables, and data distribution was checked using Kolmogorov-Smirnov. The results showed that all P-values were less than .05. Spearman's rank order correlation was used, with $r < +/- 0.3$ considered weak, $r = +/- 0.3-0.5$ regarded as moderate, and $r > +/- 0.5$ considered a strong relationship (Burns & Grove, 2009).

Results

Demographic data: Most participants were female (96.35%). Nurses' ages ranged from 20 to 53 years, with a mean of 31.31 (SD = 6.07). Most nurses were married (66.87%). The largest proportion of professional titles was Nurse in Charge (39.82%). Most nurses graduated with an associate degree (47.42%), 37.99% with a bachelor's degree, and 1.52% with a master's degree. Most participants had one child in one family (43.16%). In terms of working years, they ranged from 1 to 28 years, with a mean of 7.02 years (SD = 4.99), and 53.19% of nurses had 1-5 working years while 30.09% had 6-10 years. Regarding night shifts, 36.47% of participants had 4-6 per month, and 30.09% had more than 7 per month. Slightly less than half (48.63%) of nurses had to work 41-48 hours per week. Finally, most participants had an income of between 5,000 to 10,000 RMB per month (72.64%).

Psychological Ownership (PO)

The mean scores of overall, preventive, and promotive PO were all at a moderate level ($M = 4.06$, $SD = 0.70$; $M = 3.41$, $SD = 1.15$; and $M = 4.28$, $SD = 0.81$, respectively) (Table 1).

Turnover Intention (TI)

Overall TI was at a moderate level ($M = 3.32$, $SD = 1.02$) (Table 1).

Table 1 Mean, Standard Deviation, Range, and Level of Psychological Ownership (PO) and Turnover Intention (TI) of the Participants (n = 329)

	M	SD	Range	Level
Overall PO	4.06	0.70	1.81-6.00	Moderate
Preventive PO	3.41	1.15	1.00-6.00	Moderate
Promotive PO	4.28	0.81	1.83-6.00	Moderate
Overall TI	3.23	1.02	1.00-6.00	Moderate



Relationship between PO and TI

There was a statistically significant moderate correlation between preventive PO and TI ($r = -.30, p < .01$) as well as a statistically significant moderate correlation between promotive PO and TI ($r = -.35, p < .01$) (Table 2).

Table 2 Relationship Between PO, Preventive PO, Promotive PO, and TI of the Participants (n = 329)

Variable	Correlational coefficient of TI	Level
Overall PO	-.41**	Moderate
Preventive PO	-.30**	Moderate
Promotive PO	-.35**	Moderate

** $p < .01$

Discussion

Nurses' Psychological Ownership

The results of this study showed that nurses were at a moderate level for overall PO, with both preventive PO and promotive PO also at moderate levels.

Preventive PO: The results illustrated that nurses took a certain degree of protection towards their ideas, workplace, property, and their projects. One possible reason was that nurses had a certain degree of defensive mentality which individuals may form when they feel that their goals may be violated by external entities (Brown et al., 2005 as cited in Avey et al., 2009). Another possible reason is that when a nurse takes care of a patient or completes a task, he/she must carefully adhere to nursing standards to avoid making mistakes and being punished, as nursing standards assessment directly affects nurses' income. Avey et al. (2009) suggested that individuals with preventive PO strictly adhered to rules and procedures and focused on what they needed to avoid in order to minimize punishment for their organization or employer.

Promotive PO: The results showed that sample nurses reported a moderate level of promotive PO. In the subset, self-identity, of the promotive dimension, three items (14, 15, 16) were all at a high level (4.68 ± 1.23 ; 4.61 ± 1.18 ; 4.40 ± 1.24). This contributed to the promotive psychological ownership of nurses being demonstrated at a moderate level. A possible reason was that the two tertiary hospitals studied were at the highest level and the largest hospitals in the region. Nurses had a good sense of self-identity and belonging related to their work. Moreover, nurses working in such hospitals have more opportunities for promotion and advancement, which promotes better self-efficacy among them.

According to social identity theory, individuals were more inclined to become members of reputable organizations, which increased their self-identity (Li et al., 2018). On the other hand, Avey et al. (2009) has pointed out that promotive PO is related to development, confidence, improvement, focus on success, desire, and demonstrating a need for adventurous challenges. Young et al. (2022) have suggested that promotive PO increases with the accumulation of



experience including professional skills, years of work experience, and educational level. This study found that 31.61% of all subjects already held the title of Senior Nurse while 39.82% were Nurse in Charge. Regarding experience, 53.19% of participants had one to five years of working experience, and 46.81% had worked for over six years. Finally, 37.99% of all participants held a bachelor's degree, while 1.52% held a master's degree. In this study, the professional skills improved with the increase in work experience.

Moreover, although the largest group in the study held associate degrees, nearly half of the participants still held a bachelor's degree or even a master's degree. This would increase promotive PO, which might be another basis for obtaining a moderate level of promotional PO in this study. Finally, Zhao et al. (2022) found that work stress and workload were negatively correlated with self-efficacy, which was a subset of promotive PO (Avey et al., 2009). In this study, 36.47% of participants worked 4-6 night shifts per month, and 30.09% worked over 7 night shifts per month. In terms of work duration, 48.63% of subjects worked 41-48 hours per week, while 20.06% of subjects worked more than 48 hours per week. The findings of this study were consistent with Zhao et al. (2022). This was also another piece of evidence for obtaining a moderate level of promotive PO in this study.

Nurses' Turnover Intention

The results revealed that TI was at a moderate level. One possible explanation was that the average income of Chengdu nurses was at a moderate level. Evidence indicated that the main factor influencing nurses' TI was salary (Widodo et al., 2021; Zeng et al., 2023); 72.64% of staff nurses in this study earned 5000-10000 RMB per month. Moreover, according to follow-up confirmation, the income of nurses in this study, including all subsidies and benefits, was almost 10000 RMB. The Chengdu Municipal Statistic Bureau (2023) reported that the average income of urban employees was 8034 RMB per month. Therefore, the income of nurses in this study was considered to be at a moderate to upper level.

Another possible reason was that when participants answered all items, nine out of 14 items (Item 3 and Items 7-14) showed a moderate level, which may be strong evidence that overall TI was at a moderate level. These nine items included: Nurses work to meet personal needs; The probability of quitting when finding another suitable job; Frequency of looking forward to another day or work; Frequency of starting their own business; Family responsibility to prevent resignation; Resignation affected by personal interests; Passion index after finishing work; Work affects health; and The troubles associated with relocating, all of which affect quitting and all of which were rated at a moderate level by the nurses in this study.

The analysis of the demographic data shows that nursing work is arduous, while many participants worked night shifts. In this study, 33.43% of participants worked 1-3 night shifts per month, while the remaining 66.56% worked four or more per month. High-intensity work including night shifts affects nurses' health. Li et al. (2021) indicated that overwork affected the



physical and mental health of nurses, leading to emotional exhaustion and increased occupational burnout, thereby increasing TI. Moreover, 53.19% of nurses in this study have worked for 1-5 years. Chen and Li (2017) found that low-seniority nurses had high TI due to lack of clinical experience, high workload, low social status, low treatment, and low sense of achievement.

Finally, family responsibilities and the troubles caused by relocation were both reasons for the moderate level TI of nurses, as in China, parental care and child education are issues that every family must consider. In this study, 43.16% of nurses had one child, making up the largest proportion of participants. Additionally, 96.35% were female. Women are the main bearers of family responsibilities, and they need to take on the roles of wives, daughters, and mothers in the family (He & Sun, 2012). In China, relocation was not easy for most people because they not only needed to consider their work but also their children's education while parental care issues would also need to be taken into account.

The Relationship between Nurses' Preventive PO and TI

The results showed a moderate negative relationship between preventive PO and TI ($r = -.30, p < 0.01$) (Table 2) which indicated that the higher the preventive PO of nurses, the lower their TI. Preventive psychological ownership is concerned with adhering to rules and regulations and avoiding punishment (Avey et al., 2009). In China, nursing departments establish nursing performance evaluation standards for nursing work, and these performance evaluation results are closely related to nurses' salaries. Therefore, nurses consider these standards as an important aspect of their work. When nurses provide patient care, they must strictly follow standard procedures to avoid making mistakes and being punished, which ultimately affects their income. Thus, preventative psychological ownership among nurses in this study was at a moderate level.

The Relationship between Nurses' Promotive PO and TI

The results showed a moderate negative relationship between promotive PO and TI ($r = -.35, p < 0.01$) (Table 2). This discovery was consistent with a study by Chang et al. (2022) and partially consistent with a study by Jing and Yan (2022).

The first reason was that nearly half of all participants had worked for at least six years (46.81%), with 73.56% having a professional title of Senior Nurse or above. This indicated that they had relatively strong professional knowledge and skills, which increased their self-efficacy. They were the core strength of the hospital. If given appropriate treatment and respect, they might be less willing to leave their organization to a certain extent. Chen and Li (2017) found that, as nurses increase their work experience and income, they gradually understand, recognize, and accept their nursing job, leading to a decrease in TI.

Secondly, if nurses have a certain degree of accountability, they may be more concerned about the hospital, hoping that their department/hospital will develop in the right direction and therefore, be less inclined to solve problems by leaving the organization Thirdly, nurses felt at



home in their hospitals, providing high evaluations for their organizations. In China, home represents making people comfortable and relaxed. If an organization makes employees feel at home, it means they are comfortable working there, which will also reduce their TI. Over half (55.32%) of participants in this study agreed or strongly agreed when answering questions about hospitals being like their homes, which explained the relationship between the two very well.

Finally, 64.44% of participants in this study agreed or strongly agreed that the success of the organization was their success, and 61.09% of subjects agreed that he/she was a member of the organization. Moreover, 54.41% of participants were willing to defend their organization when it is criticized. A high level of self-identity represented their love for their organization, which would reduce their TI.

Implications of research findings

The results of this study have significant implications for nursing and hospital administrators which include strengthening channels for nurses to participate in important decision-making and in the direction of their hospitals or departments; encouraging nurses to challenge authority and play an active role; and increasing training to guide nurses in mastering more knowledge and skills to prevent infringement and/or personal projects being stolen, all of which will enhance nurses' PO. Moreover, the nurse shortage must be acknowledged as a serious problem. Managers should develop more reasonable career plans for nurses, encourage them to strive for higher education and professional titles, and enable them to obtain positions that better match their abilities. Secondly, managers should pay more attention to nurses with less work experience, as they may be influenced by various factors and may not be as hesitant to quit. Finally, reducing nurses' workload will effectively lower their TI.

Recommendations for further study

Based on the moderate negative relationship between PO and TI, further study should focus on factors influencing TI. In addition, based on the findings of this study, examination of the relevant factors of psychological ownership and turnover intention among other groups of nurses throughout Sichuan Province and even across China should be conducted. Furthermore, referring to this study, effective strategies for dealing with issues of psychological ownership and turnover intention among nurses should be explored in other regions or at different hospital levels in China. Finally, nursing researchers should study the effect of psychological ownership on organizational outcomes, such as nursing quality.

References

- Avey, J. B., Avolio, B. J., Crossley, C. D., & Luthans, F. (2009). Psychological ownership: Theoretical extensions, measurement and relation to work outcomes. *Journal of Organizational Behavior*, 30(2), 173-191. <https://doi.org/10.1002/job.583>



Psychological Ownership and Turnover Intention Among Nurses in Tertiary Hospitals,
Chengdu City, Sichuan Province, the People's Republic of China
การมีจิตใจเป็นเจ้าของและความตั้งใจลาออกของพยาบาลในโรงพยาบาลตติยภูมิ
เมืองเฉิงตู มณฑลเสฉวน สาธารณรัฐประชาชนจีน

- Back, C. Y., Hyun, D. S., Jeung, D. Y., & Chang, S. J. (2020). Mediating effects of burnout in the association between emotional labor and turnover intention in Korean clinical nurses. *Safety and Health at Work*, 11(1), 88-96. <https://doi.org/10.1016/j.shaw.2020.01.002>
- Beggs, J. K. (1992). On the social nature of nonsocial perception: The mere ownership effect. *Journal of Personality and Social Psychology*, 62(2), 229-237. <https://doi.org/10.1037/0022-3514.62.2.229>
- Best, J., & Kahn, J. (2003). *Education research* (9th ed.). Allyn & Bacon.
- Brislin, R. W. (1986). The wording and translation of research instruments. In W. L. Lonner & J. W. Berry (Eds.), *Cross-cultural research and methodology series, Vol. 8. field methods in cross-cultural research* (pp. 137-164). Sage Publications.
- Brown, G., Lawrence, T. B., & Robinson, S. L. (2005). Territoriality in organizations. *Academy of Management Review*, 30(3), 577-594. <https://doi.org/10.2307/20159145>
- Burns, N., & Grove, S. K. (2009). *The practice of nursing research: Appraisal, synthesis, and generation of evidence* (6th ed.). Saunders Elsevier.
- Chan, M. F., Al Balushi, A. A., Al-Adawi, S., Alameddine, M., Al Saadoon, M., & Bou-Karroum, K. (2022). Workplace bullying, occupational burnout, work-life imbalance and perceived medical errors among nurses in Oman: A cluster analysis. *Journal of Nursing Management*, 30(6), 1530-1539. <https://doi.org/10.1111/jonm.13432>
- Chang, H. E., & Cho, S. H. (2023). Turnover intention and retention of newly licensed nurses in their first job: A longitudinal study. *International Nursing Review*, 70(3), 338-344. <https://doi.org/10.1111/inr.12799>
- Chang, H. Y., Huang, T. L., Wong, M. K., Shyu, Y. I. L., Ho, L. H., Chen, L. C., Cheng, T. C. E., & Teng, C. I. (2022). Relationship between psychological ownership of the nursing profession and turnover intention: A correlational survey among Taiwanese nurses. *Journal of Nursing Management*, 30(7), 2927-2936. <https://doi.org/10.1111/jonm.13670>
- Chen, H. Y., & Li, G. H. (2017). A review of factors influencing nurses' intention to leave and interventions. *Journal of Nursing Science*, 32(12), 106-108.
- Chengdu Fifth People's Hospital. (2022). *Human resources statistics bulletin* [Unpublished document]. Chengdu Fifth People's Hospital.
- Chengdu Municipal Health Commission. (2021). *Statistical communique on the development of health care in Chengdu in 2021*. Municipal Health Commission.
- Chengdu Municipal Statistic Bureau. (2023). *The wages of urban employees of Chengdu*. Municipal Statistic Bureau.
- Gou, L., Chen, X., He, X. L., Wen, X. X., & Chang, J. Z. (2023). Investigation and analysis of the allocation and allocation of nursing human resources in the tertiary general hospitals in Sichuan Province during the COVID-19 infection epidemic. *Chinese Journal of Modern Nurses (Midterm Journal)*, 30(12), 148-152. <https://doi.org/10.19792/j.cnki.1006-6411.2023.35.039>



- He, M., & Sun, Y. (2012). Study on the correlation between work-family conflict, turnover intention, and social support among emergency nurses. *Chinese Nursing Research*, (32), 2986-2989. <https://caod.oriprobe.com/order.htm?id=31015408&ftext=base>
- International Council of Nurses. (2021). *The global nursing shortage and nurse retention*. https://www.icn.ch/sites/default/files/inline-files/ICN%20Policy%20Brief_Nurse%20Shortage%20and%20Retention.pdf
- Jeswani, S. (2015). *Individual and organizational psychology: A perspective on turnover intention of faculty members*. LAP LAMBERT Academic.
- Jing, J., & Yan, J. (2022). Study on the effect of employees' perceived organizational support, psychological ownership, and turnover intention: A case of China's employee. *International Journal of Environmental Research and Public Health*, 19(10), 6016. <https://doi.org/10.3390/ijerph19106016>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- Lazzari, M., Alvarez, J. M., & Ruggieri, S. (2022). Predicting and explaining employee turnover intention. *International Journal of Data Science and Analytics*, 14(3), 279-292. <https://doi.org/10.1007/s41060-022-00329-w>
- Li, J. L., Zhu, M. R., Xu, P. Y., Bai, Q. S., Liang, Y. K., Li, X. Y., & Ma, A. J. (2018). A study on the relationship between perceived organizational support, organizational identification, and job engagement of non-establishment staff in public hospitals. *Chinese Journal of Health Policy*, 11(4), 64-68.
- Li, Y., Liu, L., Wu, X., & Mao, H. (2021). Investigation on post-traumatic stress disorder, job burnout, and turnover intention of nurses in a third-class hospital in Wuhan after COVID-19. *Occupational Health and Emergency Rescue*, 39(1), 34-39. <https://doi.org/10.16369/j.oher.issn.1007-1326.2021.01.008>
- Liu, W., Zhao, S., Shi, L., Zhang, Z., Liu, X., Li, L., Duan, X., Li, G., Lou, F., Jia, X., Fan, L., Sun, T., & Ni, X. (2018). Workplace violence, job satisfaction, burnout, perceived organizational support and their effects on turnover intention among Chinese nurses in tertiary hospitals: A cross-sectional study. *BMJ Open*, 8(6), e019525. <https://doi.org/10.1136/bmjopen-2017-019525>
- Lu, Y., Hu, X. M., Huang, X. L., Zhuang, X. D., Guo, P., Feng, L. F., Hu, W., Chen, L., Zou, H., & Hao, Y. T. (2017). The relationship between job satisfaction, work stress, work-family conflict, and turnover intention among physicians in Guangdong, China: A cross-sectional study. *BMJ Open*, 7(5), e014894. <https://doi.org/10.1136/bmjopen-2016-014894>
- Meler, S., & Toygar, Ş. A. (2020). Nurse turnover and its costs. *Perspectives on Modern Economy*, 487-504. https://www.researchgate.net/publication/345665971_NURSE_TURNOVER_AND_ITS_COSTS
- Mobley, W. H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology*, 62(2), 237-240. <https://doi.org/10.1037/0021-9010.62.2.237>



- National Health Commission Bulletin. (2022). Notice of the national health commission on issuing the national development plan for nursing (2021-2025). *Chinese Journal of Bulletin of the National Health Commission*, (4), 4-10. <http://www.gov.cn>
- Olckers, C., & Enslin, C. (2016). Psychological ownership about workplace trust and turnover intent. *Journal of Psychology in Africa*, 26(2), 119-126. <https://doi.org/10.1080/14330237.2016.1163893>
- Peng, Y., Xiao, J., Qin, H., & Ren, Y. (2020). Correlation of nurse's professional identity with their work stress and self-efficacy. *Journal of Chengdu Medical College*, (6), 784-787+792. https://caod.oriprobe.com/articles/60385255/Correlation_of_Nurses__Professional_Identity_with_.htm
- Roodt, G. (2004). *Turnover intentions* [Unpublished document]. University of Johannesburg.
- Wang, J., & Chen, S. Y. (2021). Study on the current situation of nurses' turnover intention in public hospitals in Harbin in the late stage of the COVID-19 and its influencing factors. *Journal of Harbin Medical University*, 55(6), 671-675. https://mqikan.cqvip.com/Article/ArticleDetail?id=7107130108&from=Article_ArticleDetail
- Widodo, D. S., Hidayah, N., & Handayani, S. D. (2021). Effect of organizational culture, pay satisfaction, job satisfaction on nurse intention to leave at private hospital type D in Bantul. *JMMR (Jurnal Medicoeticolegal dan Manajemen Rumah Sakit)*, 10(2), 207-216.
- World Health Organization. (2020). *State of the world's nursing 2020: Investing in education, jobs and leadership*. <https://www.who.int/publications/i/item/9789240003279>
- Xiang, J., Yang, C. H., & Zhou, B. (2020). Self- efficacy and mental health early changing trend of nurses in fever pre-examination and triage department during COVID-19 and coping strategies. *Journal of Southeast University (Medical Edition)*, 39(5), 575-581.
- Yamane, T. (1973). *Statistics: An introductory analysis* (3rd ed.). Harper & Row.
- Yang, C. H., Zhou, B., & Pan, S. Y. (2020). Effect of self-efficacy on the mental health of triage nurses with fever during the COVID-19. *Journal of Southeast University (Medical Edition)*, 39(4), 463-469.
- Yang, L., Luo, L., Wang, G. R., Zheng, Y. Y., & Zhang, X. L. (2021). The mediating effect of self-efficacy on the research ability and professional identity of oncology nurses. *Industry & Science Tribune*, 20(2), 81-83.
- Yoon, S. J. (2020). The factors affecting on turnover intention of nurses. *Medico Legal Update*, 20(1), 1827-1832. <https://doi.org/10.37506/v20/i1/2020/mlu/194569>
- Young, J. P., Games, K. E., Rivera, M. J., & Eberman, L. E. (2022). Psychological ownership in athletic training. *Journal of Athletic Training*, 57(3), 291-298. <https://doi.org/10.4085/1062-6050-0638.20>
- Yu, H. J., Tang, Q. K., Zhang, D. P., & Zhang, Q. (2021). Analysis of nurse turnover in a tertiary hospital in Tianjin. *Continuing Medical Education*, 35(4), 44-46.



- Zeng, C. N., Zhang, J. H., Ma, F., Zhao, X. F., Bai, Y. J., & Hu, Q. L. (2022). Relationship between authentic leadership of head nurses and psychological ownership and voice behavior of nurses. *Journal of Nursing Science*, 37(1), 66–68. <https://doi.org/10.3969/j.issn.1001-4152.2022.01.014>
- Zeng, D., Wang, B., & Chen, W. (2023). Inclusive leadership can improve nurses' psychological ownership and reduce their turnover intention under the normalization of COVID-19 prevention. *Frontiers in Psychology*, 13, 1100172. <https://doi.org/10.3389/fpsyg.2022.1100172>
- Zhang, Y. A., Zhang, X. N., Xu, N., & Yun, E. (2021). Nurses' turnover intention in secondary hospitals in China: A structural equation modeling approach. *Journal of Nursing Management*, 29(7), 2216–2224. <https://doi.org/10.1111/jonm.13379>
- Zhao, H. L., Yu, R., Gu, D. Y., Zhang, X. Y., Zhang, X. Y., & Ji, X. Q. (2020). Relationship between nurse's self-efficacy and job stressors in period of COVID-19. *Medical Education Research and Practice*, 28(2), 211–214. <https://doi.org/10.13555/j.cnki.c.m.e.2020.02.008>
- Zhao, X. F., Yanf, M. F., Hu, Q. L., Chen, S. S., & Yang, L. Z. (2022). Research on the current status and influencing factors of nurses' psychological ownership. *Journal of Baojianwenhui*, 22(2), 229–230.
- Zhao, X., Wichaikhum, O. A., & Abhicharttibutra, K. (2022). Psychological ownership of nurses in different departments at tertiary hospitals in Kunming, the People's Republic of China. *Nursing Journal CMU*, 49(4), 56–69.
- Zhong, Y., Huang, Y. Y., & Wu, Z. Q. (2022). Exploration of efficient and dynamic allocation of nursing frontline human resources model. *Journal of Chengdu Medical College*, 17(6), 751–754. <https://doi.org/10.3969/j.issn.1674-2257.2022.06.016>
- Zhou, J., Ma, Q., He, C. J., & Xiao, Y. Q. (2020). The current status of career planning for male psychiatric nurses and its correlation with turnover intention and job burnout. *Family Medicine: Medical Selection* (5), 398. (in Chinese)