

# Analysis of the Relationship between Burnout and Career Retention of Medical-surgical Nurses in a Selected Hospital in Jingzhou, China

Xinyue Zhang \*, Jeffrey V. Esteron

Graduate School, Angeles University Foundation, Angeles City, Philippines

\* Corresponding author: Xinyue Zhang (Email: zhangxinyue0227@gmail.com)

---

**Abstract:** The nursing profession is known for its demanding nature, with medical-surgical nurses often facing high-stress workloads, long shifts, and challenging patient interactions. Burnout has been shown to significantly impact the individual nurse and the healthcare system, including decreased job satisfaction, increased turnover, and reduced quality of patient care. By understanding nurses' burnout and career retention levels, the study analyzes the relevant factors influencing their performance and discusses and takes adequate measures. This study investigates sociodemographic characteristics, knowledge and skills, job burnout, and career retention among medical-surgical nurses in a selected hospital in Jingzhou, Hubei, China. This cross-sectional study clarifies the relationship between nurse burnout and career retention. The study employs a purposive, non-probability sampling technique, selecting participants based on specific characteristics or qualities. The study utilized an electronic questionnaire survey to efficiently gather data from the selected medical and surgical registered nurses in Jingzhou. The collected data were analyzed using SPSS version 29. A total of 337 participated in the study. The study reveals a significant negative relationship between Chinese Burnout scores and Nursing Career Retention, with a correlation coefficient of  $-0.649$  ( $p < 0.001$ ). It suggests that nurses are less likely to remain in their positions as burnout increases. When burnout is more severe, the level of career retention is lower. Addressing nurse burnout is crucial to mitigate its negative impact on retention and improve the overall quality of nursing care. This includes advocating for improved staffing ratios, increased funding for nursing education, and implementing evidence-based burnout prevention strategies.

**Keywords:** Medical-Surgical Nurses; Burnout; Career Retention; Influencing Factors.

---

## 1. Introduction

The nursing profession is known for its demanding nature, with medical-surgical nurses often facing high-stress workloads, long shifts, and challenging patient interactions [1]. Burnout has been shown to significantly impact the individual nurse and the healthcare system, including decreased job satisfaction, increased turnover, and reduced quality of patient care [2]. Understanding the factors contributing to burnout among medical and surgical nurses and identifying the predictors of career retention is essential in promoting nurses' physical and mental well-being, enhancing work efficiency and motivation, mitigating talent drain, and fostering the growth of nursing professionals in medical institutions [3]. Retaining experienced medical-surgical nurses is a critical issue for healthcare organizations, as these nurses play a vital role in providing high-quality patient care [4].

For medical-surgical nurses, burnout is a complex psychological problem accompanied by long-term occupational pressure and psychological burdens. Most nurses ignore mental health status, such as no good working environment and atmosphere, lack of responsibility at the tie level, poor self-emotional regulation ability, increased workload under the normalization of the epidemic, etc., which have become unspeakable for nurses [5]. Surgical nursing staff have heavy work tasks and stress in a highly stressful environment, and hidden burnout can affect the patient experience and treatment [6].

Furthermore, having a high-quality team improves the efficiency of the nursing team and reduces burnout and

turnover rates. It is also conducive to establishing the cohesion of medical-surgical nurses and promoting the development of high-quality nursing [7]. Burnout studies abroad have been conducted for 30 years and are prevalent in 8 countries, with 33%-60% of Korean and Japanese nurses having high levels of burnout. The burnout rate among Spanish nurses is very high, exceeding 30% [8]. In addition, 78% of Swedish and 34% of American nurses suffer from burnout [9]. Nurses are considered to be one of the most stressed occupational groups in the healthcare industry, and Chinese nurses have more severe burnout, with about 59.1%-69.1% of nurses having burnout [10]. The study results showed that the turnover rates in the United States, New Zealand, Australia, and Canada were 26.8%, 44.3%, 15.1%, and 19.9%, respectively. In China, the incidence of nurses' willingness to leave their jobs ranged from 20% to 56.1% [11].

Burnout, driven by high job demands and poor work-life balance, significantly increases turnover intentions [12]. Based on the principles of social exchange theory, this framework proposes that the workplace is a social exchange environment where employees invest their resources (time, effort, skills) and expect specific outcomes in return [13]. High job demands, such as excessive workload, lack of support, and limited growth opportunities, can create resource depletion, leading to burnout [14]. The imbalance caused by burnout can influence career retention; for example, when medical-surgical nurses experience high levels of burnout, they may feel that the costs of staying in their current job outweigh the benefits [15].

With the advancement of healthcare reform in China, the increasing social demand for nurses' jobs, and the shortage of

nursing staff, the issue of nurse retention has become a hot topic. Career retention refers to an employee's willingness to stay in their current position rather than leaving the job or looking for other options. Literature shows that burnout is a significant risk factor for career retention and a critical factor that can influence it [16]. Nurses' rugged and tedious work exacerbates burnout and raises several career retention issues [3]. A decline in retention and nursing brain drain will significantly impact hospital nursing and is an essential issue for healthcare organizations nationwide [17].

An unfavorable working environment, significant gaps in the nursing workforce, understaffing in various departments, and a concerning trend of nursing burnout [18] have become pressing matters that require urgent attention. The study hypothesizes a connection between burnout and career retention, suggesting that demographic factors may influence this relationship. By examining the impact of various demographic profiles on burnout and career retention, the research aims to enhance understanding of how these variables interact and influence one another among medical and surgical nurses at a selected hospital in Jingzhou. This study seeks to provide valuable insights that can inform strategies and interventions to improve nurses' overall job satisfaction, well-being, and commitment to the profession.

## **2. Objects and Methods**

### **2.1. Subjects**

The study utilized a cross-sectional design to explore the relationship between nurse burnout and career retention, focusing on medical-surgical registered nurses in a selected hospital in Jingzhou, Hubei, China. The research examined various factors, including sociodemographic characteristics, knowledge and skills, job burnout, and career retention among medical-surgical registered nurses.

### **2.2. Methods**

#### **2.2.1. Study Design**

A purposive sampling method was used to select medical and surgical registered nurses from a hospital chosen in Jingzhou as the Respondents. The study established specific inclusion and exclusion criteria for participants. Eligible participants included registered nurses aged 22 to 55 years who had no physical or mental problems, possessed normal judgment and had at least one year of clinical experience in medicine and surgery while working in a hospital during the study period. Conversely, the exclusion criteria ruled out retirees over 55, individuals involved in administrative work, those unwilling to participate, nurses on leave during data collection, and vulnerable groups with physical and mental problems. These criteria were designed to ensure that the study focused on active clinical nurses who could provide relevant insights into the relationship between burnout and career retention.

#### **2.2.2. Research Instruments**

The study utilized three scales to gather comprehensive data on participants. A general information questionnaire collected demographic and employment details, including department, age, gender, marital status, nature of the job, average monthly salary, number of night shifts, years of experience, position, educational attainment, and relevant training. The Chinese version of the Burnout Scale, developed by Professor Li Chaoping in 2003, assessed burnout through 15 questions divided into three dimensions: Emotional

Exhaustion (5 items), Cynicism (4 items), and Reduced Personal Accomplishment (6 items), employing a 7-point Likert scale for scoring. The scale demonstrated good reliability, with internal consistency coefficients of 0.88, 0.83, and 0.82, and a standard score of 50 or higher indicating burnout severity. Additionally, the career retention scale by Tao Hong et al. included six questions rated on a 5-point Likert scale, with higher scores indicating stronger retention intentions; a score above 24 reflected a high retention intention. This scale also showed good reliability with a Cronbach's  $\alpha$  coefficient 0.766.

#### **2.2.3. Data Collection**

The data collection for the research took place from August 16 to September 20. The WeChat platform was used to gather data, facilitating easy access and engagement with participants. This choice of platform aligns with the need for a reliable and accessible data collection method, as highlighted in research methodologies emphasizing the importance of valid and reliable data collection methods. After the data collection phase, the subsequent steps involved cleaning and organizing the data to ensure its accuracy and reliability, which is a crucial part of the data analysis process to maintain the integrity of the research findings.

#### **2.2.4. Data Analysis**

The study analyzed the data using Statistical Package for the Social Sciences (SPSS) software. Frequency and percentage will be used to describe the demographic characteristics. Also, percentage, mean, and standard deviation will be used to describe job burnout and career retention. To determine if there are significant differences in job burnout and willingness to stay according to different demographic characteristics, the Kruskal-Wallis test will be used, the nonparametric alternative of one-way ANOVA. Moreover, correlation analysis between nurse burnout and career retention will be to determine the relationship between the two variables. Spearman's correlation will be used, which is the nonparametric version of the Pearson correlation. Spearman's correlation coefficient is appropriate for measuring the strength and direction of association between two ranked variables.

#### **2.2.5. Ethical Considerations**

The Ethics Review Committee conducted a rigorous review in the areas of Study Purpose and Design, Study Investigation and Methods, Subject Informed Consent Process, Duration of Participation, and Withdrawal Criteria, Risks and Inconveniences, Benefits of the Study, Privacy, Confidentiality, and Data Management, and Conflict of Interest were critically reviewed. Ethics Review Committee approved ERC code for this study: 2024-MAN-Student-160. This ensured the impartiality and ethicality of this research.

## **3. Results**

### **3.1. Demographic Characteristics of Respondents**

The demographic profile of the 337 respondents reveals a predominantly female workforce, constituting 86% of the sample, with a significant majority being unmarried (57%). The age distribution shows that 37% of respondents are between 26 and 30 years old, and 30% are between 20 and 25 years old, indicating a relatively young workforce. Most respondents are employed as contract workers (74%), with a smaller proportion holding permanent positions within the

establishment (26%). The majority of respondents earn between 4,001 and 8,000 monthly (64%), and 48% work 5–10-night shifts per month. Work experience is mostly concentrated in the 2-5 years range (47%), with a small percentage having over 20 years of experience (8.3%). The

majority hold undergraduate degrees (73%), and the distribution of training and seminars related to medical-surgical nursing shows that most have attended between 1-10 such events (71%).

**Table 1.** Demographic characteristics of respondents.

Characteristic	N = 337
Department	
1	137 (41%)
2	107 (32%)
3	25 (7.4%)
4	39 (12%)
5	18 (5.3%)
6	11 (3.3%)
Age group	
22-25	100 (30%)
26-30	126 (37%)
31-40	82 (24%)
>40	29 (8.6%)
Gender	
Male	46 (14%)
Female	291 (86%)
Marital status	
Unmarried	193 (57%)
Married	142 (42%)
Divorced	2 (0.6%)
Nature of employment	
Contract workers	249 (74%)
Within the establishment	88 (26%)
Average monthly salary	
<4,000	45 (13%)
4,001-8,000	216 (64%)
8,001-12,000	66 (20%)
>12,000	10 (3.0%)
Number of night shifts per month	
0	36 (11%)
1-4	119 (35%)
5-10	163 (48%)
>10	19 (5.6%)
Year of work-related experience	
<1	48 (14%)
2-5	160 (47%)
6-10	38 (11%)
11-20	63 (19%)
>20	28 (8.3%)
Position	
Head nurse	23 (6.8%)
Overall responsibility	6 (1.8%)
Team leader	51 (15%)
General nurse	257 (76%)
Highest educational attainment	
Technical secondary school	2 (0.6%)
College	64 (19%)
Undergraduate	246 (73%)
Master's degree and above	25 (7.4%)
Number of trainings/seminars attended related to medical-surgical nursing	
0	13 (3.9%)
1-10	238 (71%)
10-20	49 (15%)
>20	37 (11%)

### 3.2. Comparison of Chinese Burnout Scores Across Demographic Characteristics of Respondents

The analysis of Chinese Burnout scores across various

demographic characteristics of the respondents reveals several notable patterns. Burnout scores are significantly higher among contract workers (mean = 52.88) compared to those employed within the establishment (mean = 45.86), indicating that contract workers experience greater burnout.

The number of night shifts per month is also a significant factor, with burnout scores rising from 41.19 for those with no night shifts to 57.19 for those working more than 10 night shifts per month. Additionally, respondents with less than one year of work experience report lower burnout scores (mean = 50.78) compared to those with 2-5 years (mean = 53.22) and 6-10 years (mean = 53.93) of experience, but those with over 20 years of experience have the lowest burnout scores (mean

= 40.95). Positions also impact burnout, with head nurses reporting the lowest burnout scores (mean = 39.71), whereas general nurses experience the highest (mean = 52.10). The age, gender, marital status, average monthly salary, educational attainment, and number of trainings/seminars attended do not show statistically significant differences in burnout scores.

**Table 2.** Comparison of Chinese Burnout scores across demographic characteristics of respondents.

Characteristic	Mean	Std.dev.	p-value
<b>Department<sup>a</sup></b>			
1	51.47	18.071	0.532
2	51.69	19.943	
3	51.04	14.954	
4	50.05	19.273	
5	52.74	13.798	
6	40.36	20.089	
<b>Age group<sup>a</sup></b>			
22-25	52.31	18.775	0.051
26-30	53.02	15.541	
31-40	49.22	19.586	
>40	43.36	23.864	
<b>Gender<sup>b</sup></b>			
Male	52.72	19.688	0.534
Female	50.79	18.303	
<b>Marital status<sup>a</sup></b>			
Unmarried	53.11	17.174	0.059
Married	48.28	19.959	
Divorced	48.67	4.714	
<b>Nature of employment<sup>b</sup></b>			
Contract workers	52.88	18.025	0.002**
Within the establishment	45.86	18.865	
<b>Average monthly salary<sup>a</sup></b>			
<4,000	54.93	18.713	0.464
4,001-8,000	50.23	18.619	
8,001-12,000	51.41	17.690	
>12,000	48.93	19.946	
<b>Number of night shifts per month<sup>a</sup></b>			
0	41.19	19.324	<0.001**
1-4	47.61	17.035	
5-10	55.03	16.482	
>10	57.19	29.073	
<b>Year of work-related experience<sup>a</sup></b>			
<1	50.78	17.222	0.012*
2-5	53.22	17.250	
6-10	53.93	15.087	
11-20	48.51	20.349	
>20	40.95	23.621	
<b>Position<sup>a</sup></b>			
Head nurse	39.71	19.785	0.022*
Overall responsibility	48.67	11.828	
Team leader	51.14	22.379	
General nurse	52.10	17.356	
<b>Highest educational attainment<sup>a</sup></b>			
Technical secondary school	42.67	16.971	0.911
College	51.08	19.606	
Undergraduate	51.23	17.801	
Master's degree and above	49.87	22.751	
<b>Number of trainings/seminars attended related to medical-surgical nursing<sup>a</sup></b>			
0	52.00	18.184	0.911
1-10	50.59	18.233	
10-20	51.89	16.964	
>20	52.58	22.354	
<b>Overall Chinese Burnout score</b>	<b>51.05</b>	<b>18.480</b>	

<sup>a</sup>Testing done via Analysis of Variance; <sup>b</sup>Testing done via t-test for independent samples  
\*Significant at 5% level; \*\*Significant at 1% level

### 3.2.1. Total Chinese Burnout Scores of Respondents

The data from Table 3 reveal that burnout is a notable concern among the respondents, with a majority experiencing mild burnout. Specifically, 51.34% of respondents fall into the mild burnout category (scores between 50 and 75), while 43.62% report no burnout or very minimal burnout (scores below 50). Only a small portion, 4.75%, experience moderate burnout (between 75 and 100), and a mere 0.30% report severe burnout (above 100).

**Table 3.** Total Chinese Burnout scores of respondents.

	n	%
No burnout (<50)	147	43.62%
Mild (50-75)	173	51.34%
Moderate (75-100)	16	4.75%
Severe (>100)	1	0.30%

**Table 4.** Total Chinese Burnout scores of respondents across three domains.

	mean	Std. dev.
Average Emotional Exhaustion score	14.32	6.856
Average Cynicism score	9.24	5.705
Average Reduced Personal Accomplishment score	24.74	7.500

### 3.3. Comparison of Nursing Career Retention Scores Across Demographic Characteristics of Respondents

The analysis of Nursing Career Retention scores across different demographic characteristics highlights several key factors influencing retention. Older respondents, particularly those over 40 years of age, report significantly higher career retention scores (mean = 23.31) compared to younger age groups, with those aged 20-25 having the lowest scores (mean = 19.72). This trend suggests that experience and job stability increase retention among older nurses. Similarly, individuals employed within the establishment have higher retention scores (mean = 22.16) compared to contract workers (mean = 19.93), indicating that permanent employment is associated with greater career commitment. The number of night shifts also impacts retention, with those not working any night shifts reporting the highest scores (mean = 23.36), while those working more than 10 shifts have the lowest scores (mean = 18.47). Higher salaries are linked to better retention, with respondents earning over 12,000 having the highest scores (mean = 23.70). Furthermore, head nurses report the highest retention scores (mean = 23.87), suggesting that higher positions may contribute to job satisfaction and career longevity. In contrast, factors such as gender, marital status, educational attainment, and the number of trainings or seminars attended do not show significant effects on retention scores.

#### 3.3.1. Total Nurses' Retention Scores of Respondents.

The results in Table 6 illustrate the distribution of career retention severity among respondents based on their Chinese career retention scores. A small percentage, 4.75%, report a low level of retention (scores below 12), indicating that only some individuals experience minimal retention. In contrast, a significant majority, 72.10%, fall into the moderate level category (scores between 12 and 24), suggesting that most respondents experience moderate retention. Additionally, 23.15% of respondents report a high level of retention (scores above 24), highlighting that a notable portion of the sample

### 3.2.2. Total Chinese Burnout Scores of Respondents Across Three Domains

The data from Table 4 provides insight into the burnout levels across three distinct domains: Emotional Exhaustion, Cynicism, and Reduced Personal Accomplishment. The average score for Emotional Exhaustion is 14.32 with a standard deviation of 6.856, suggesting that respondents generally experience moderate levels of emotional fatigue, with some variation. The Cynicism score averages 9.24 and has a standard deviation of 5.705, indicating a moderate level of detachment or negative attitude toward work, again with some individual differences. The highest average score is for Reduced Personal Accomplishment, at 24.74 with a standard deviation of 7.500, reflecting a more pronounced sense of decreased effectiveness and achievement in their roles.

experiences a more intense retention.

### 3.4. Correlation of Chinese Burnout Scores with Nursing Career Retention Scores

The correlation between Chinese Burnout scores and Nursing Career Retention scores is significant and negative, with a correlation coefficient of -0.649 ( $p < 0.001$ ). This indicates a strong inverse relationship between burnout and career retention among nurses. In other words, higher levels of burnout are associated with lower career retention scores, suggesting that as burnout increases, nurses are less likely to remain in their positions.

## 4. Discussion

The serious aging of China and the opening of the three-child policy have led to a gradual expansion of social demand for healthcare workers. Due to the busy work of nurses in medical and surgical clinical work, there are complex health care and doctor-patient relationships, and the severe environment of the nursing profession, physical and mental stress, which can lead to many negative consequences [21]. For example, nurses will have low work efficiency, fatigue, confusion, depression, absenteeism, sick leave, etc. will increase, which will reduce the quality of nursing work [10].

In describing the demographic characteristics of the respondents, similar to the findings of Du Yaqian, Lv Fangfang et al [14,36]. There is a large percentage of female nurses between the ages of 26-35 years old, who tend to earn up to 8,000 RMB per month, and the number of night shifts per month to be in the range of 5-10 days. In describing the respondents' knowledge skills, similar to the findings of Wan Chi-Ying and Cui Bi-Xue [22,31]. There was a large proportion of general nurses with bachelor's degrees, with a predominance of 10 years of work experience.

Burnout in nurses is a psychological syndrome resulting from chronic stress and negative emotions at work and having stress reactions in interpersonal interactions [19].

**Table 5.** Comparison of Nursing Career Retention scores across demographic characteristics of respondents.

Characteristic	Mean	Std.dev.	p-value
<b>Department<sup>a</sup></b>			
1	20.17	4.726	0.175
2	20.67	5.065	
3	20.12	4.693	
4	21.67	4.556	
5	18.89	4.626	
6	22.73	3.349	
<b>Age group<sup>a</sup></b>			
22-25	19.72	4.782	<0.001**
26-30	19.94	4.750	
31-40	21.37	4.599	
>40	23.31	4.384	
<b>Gender<sup>b</sup></b>			
Male	20.67	5.086	0.817
Female	20.49	4.756	
<b>Marital status<sup>a</sup></b>			
Unmarried	20.05	4.801	0.123
Married	21.13	4.761	
Divorced	21.00	2.828	
<b>Nature of employment<sup>b</sup></b>			
Contract workers	19.93	4.597	<0.001**
Within the establishment	22.16	4.987	
<b>Average monthly salary<sup>a</sup></b>			
<4,000	19.38	5.561	0.039*
4,001-8,000	20.40	4.478	
8,001-12,000	21.18	5.218	
>12,000	23.70	3.199	
<b>Number of night shifts per month<sup>a</sup></b>			
0	23.36	3.611	<0.001**
1-4	20.92	4.280	
5-10	19.83	4.674	
>10	18.47	7.827	
<b>Year of work-related experience<sup>a</sup></b>			
<1	20.27	5.035	<0.001**
2-5	19.71	4.767	
6-10	19.71	4.514	
11-20	21.87	4.275	
>20	23.54	4.443	
<b>Position<sup>a</sup></b>			
Head nurse	23.87	3.923	0.002**
<b>Overall responsibility</b>			
Team leader	20.78	3.916	
General nurse	20.12	4.875	
<b>Highest educational attainment<sup>a</sup></b>			
Technical secondary school	22.00	4.243	0.923
College	20.25	5.292	
Undergraduate	20.54	4.730	
Master's degree and above	20.80	4.340	
<b>Number of trainings/seminars attended related to medical-surgical nursing<sup>a</sup></b>			
0	18.92	6.184	0.227
1-10	20.77	4.679	
10-20	19.51	4.853	
>20	20.76	4.856	
<b>Overall Nursing career Retention score</b>	<b>20.51</b>	<b>4.795</b>	

<sup>a</sup>Testing done via Analysis of Variance; <sup>b</sup>Testing done via t-test for independent samples

\*Significant at 5% level; \*\*Significant at 1% level

**Table 6.** Total Nurses' retention scores of respondents.

	n	%
Low level (<12)	16	4.75%
Moderate level (12-24)	243	72.10%
High level (>24)	78	23.15%

**Table 7.** Correlation of Chinese Burnout scores with Nursing career Retention scores

	Correlation	p-value
Burnout-Retention	-0.649	<0.001

If nurses' burnout levels continue to increase and they face their work with negative attitudes, they will develop negative,

anxious, and depressed moods, and great physical and mental stress, which will result in the loss of nursing talent [23]. The survey of this study showed that 190 people with varying degrees of burnout, accounting for 56.38% of the total surveyed population. Similar to the results of the experiment conducted by the Chinese scholar, the mean burnout scores were located at a moderate level [10]. Women have more burdens and need to take care of children and parents, making it difficult for them to fully devote themselves to their work. We can find that leaders with excellent management skills, hospitals with excellent working environments, and policies that focus on nurses' physical and mental health influence nurses' career development and the degree of burnout. Chinese society generally believes that the status of nurses is lower than that of doctors, and working in a high-pressure environment can be physically and mentally exhausting causing them to leave the profession.

The global shortage of nurses and the issue of nurse career retention has always been a hot topic of concern for healthcare organizations and nursing administrators. The key to solving the shortage of nurses is to retain them in the profession [24]. Chinese nurses have a high turnover rate of 8.2%, and 12% of nurses will not return to nursing after leaving [25]. Understanding the factors associated with nurse career retention to reduce nursing turnover is utmost important. To develop effective strategies for career retention and optimize the level of nursing managers. The result of this study showed that the total mean score of nurses' career retention was 20.51, and the overall career retention were at a moderate level with some room for increase, which is similar to the most recent study [20]. The intensity of work and the inability to care for their families and family members' acceptance of their work affects nurses' judgment of their jobs [26]. Dealing with the relationship with leaders and coworkers. The reform of the healthcare system and the elimination of staffing in many tertiary hospitals have led to career instability.

Another study in China found that working hours, working years, and education all affect the level of burnout among nurses [27]. Contract nurses had the highest level of burnout. Contract nurses are less stable than the regular nurses because they do not have long term job security and face the risk of losing their jobs at any time [10]. Likewise risk and the welfare benefits of nurses after retirement are more secure which can be a reason to stay in the job [10]. Furthermore, Nurses with greater than 10-night shifts per month had the highest burnout. It is known that burnout increases with the number of night shifts per month and each night shift increases nurses' fatigue [28]. As night shifts in China are usually done by 1-2 nurses working together, and they need to manage patients more than their capacity, leading to suffering from tremendous physical and psychological stress. Year of work-related experience less than 10 years nurse's burnout is more intense. The workload and nature of clinical nursing care in hospitals are arranged according to nurses' years of work-related experience. For example, nurses with long years of work-related experience are engaged in the main shift and management teaching, and they are well paid, enjoy the right to speak in the department, and are highly respected by the patients, and are able to effectively deal with a variety of difficult problems. On the contrary, new nurses are worried about their inability to complete the night shift independently, or are anxious about the lack of recognition of the completion of their usual work [29]. General nurses will undertake most of the clinical nursing operations, more likely to be subject to

complaints from service users and criticism from the leadership, physical and psychological burnout performance is more apparent [30].

Comparisons were made between the demographic characteristics, knowledge and skills of medical and surgical nurses and career retention scores. The career retention of nurses aged >40 years and 31-40 years was significantly higher than that of nurses aged 22-25 years and 26-30 years. This suggests that career retention may increase with experience and potentially with age, warranting further investigation into the underlying reasons for this age-related trend. These young nurses often face significant financial pressures related to family and childcare, leading to job instability. Our results corroborate those of [31]. Research found that career retention among nurses increases with age, with younger nurses showing a greater propensity to leave their jobs. Within the establishment, nurses enjoy job security for life, with no mid-life crisis, especially with holidays, welfare allowances and double retirement pay. Nurses with average monthly salary of >12,000 had the highest score for career retention, and nurses with monthly salary of <4,000 had the lowest score. Salary is the most basic protection for nurses, and the salary level is conducive to driving nurses' motivation to work [32]. Nurses with lower number of night shifts were better able to spend time with family members and children and balance life and work [33]. Nurses with high number of night shifts and high work pressure are not favourable to physical and mental health and develop physical hormonal disorders of shift work or other diseases to treat and prevent occupational diseases in nurses [20]. It can be seen that new nurses who have just started their careers and senior nurses with >10 years of experience are more likely to retain their current position. This is because new nurses, who are new to the job and passionate about nursing are more likely to be isolated when they step into a new environment [34]. General nurses have low career retention scores due to their single job content, heavy and tedious workload, and the risk of redundancy [35].

The results of this study showed that burnout of medical-surgical nurses was significantly negatively correlated with career retention in a hospital in Jingzhou. Several studies showed similar result that there is inverse relationship between burnout and career retention [36,31]. It means that as burnout increases, their tendency to stay in the profession becomes low [37]. Regarding demographic profile, nature of employment, number of night shifts per month, year of work-related experience and position can significant influence burnout and career retention. Collective decision-making, open and transparent management, and increasing the number of positions within the establishment can be adopted to improve nurses' motivation and execution and reduce burnout [31]. There are fixed partners at work, and more attention is paid to the psychological state of young nurses at work, so as to improve the degree of dedication and the ability to work together [38]. Provide and create a warm and humane working environment, coordinate nurses to fully adapt to the departmental environment, and form a distinctive culture for each nursing department [39]. Suggesting a need to explore strategies and effective interventions in alleviate and reduce burnout among nurses.

This study shows that there is a significant correlation between burnout and career retention among nurses and a strong inverse relationship. We need to explore strategies and effective interventions to alleviate and reduce burnout among

nurses. To establish a theoretical programme for healthcare institutions and nursing managers to improve the quality and efficiency of nursing work.

On a personal level, for young nurses to enter the job should be hospital nursing work to understand in advance, in advance to do a good job of psychological preparation. Establish good interpersonal relationships in life, you can find a partner to talk about their feelings, cultivate a variety of hobbies and interests, and find a spiritual support. Establish good living and eating habits, actively exercise and improve physical fitness. In order to maintain the physical and mental health of individuals, rational emotive behavioural therapy can be used to transform irrational thinking and change the negative emotions that nurses are currently facing by debating and discussing them [40]. Forming a nursing team in the form of a discussion group where nurses listen to and discuss with each other to analyse the causes of the problem increases the sense of a congenial atmosphere in the nursing team [41]. Improve the cognitive power of adverse nursing events by increasing positive thinking and relieve the stress of burnout through breathing and meditation [42]. Nurses need to exercise regularly and can try restorative yoga to adjust physical and mental stress and negative emotions through breathing, relaxing the muscles and bones of the body and alleviating burnout among nurses [43]. Learning Chinese medicine and experiencing the therapeutic means of traditional Chinese medicine, such as recalling the emotions at the time, achieving the effect of toning the body and mind through acupressure and acupuncture, and pressing acupoints, to promote the release of emotions [44].

At the level of hospital administrators, the hospital management system is optimised to provide more nursing positions on staff and to improve overall nurses' salaries. The department carries out title performance appraisal to balance and coordinate nurses' promotion needs [31]. Nursing managers arrange free regular medical check-ups and psychological counselling for nurses to understand their physical and mental health. A binary coping, flexible hierarchical management system was applied to adjust scheduling flexibility, relieve nurses' work pressure, improve work compliance, and reduce burnout [45]. Based on the division of tiers according to different working years, positions, skills, and nursing abilities, different tiers are organised to participate in the work together with different work tasks to improve nursing work ability and rapid growth. Nurse managers can carry out psychological lectures on burnout in the department, create a good atmosphere in the department, and strengthen the communication between senior nurses and new nurses. Cultivate more nursing backbones among young nurses, which is conducive to future clinical collaboration. Nursing managers should apply flexible management mode to stimulate nurses' independent learning and work enthusiasm. Maintain humane management, which can alleviate nurses' burnout and increase career retention [46].

## 5. Conclusion and Recommendations

This study of 337 medical-surgical nurses in Jingzhou City revealed significant associations between several demographic and employment factors and both burnout and career retention. Specifically, demographic profile, knowledge and skills, nature of employment, number of night shifts, years of experience, and position significantly influenced burnout levels. Similarly, age, nature of

employment, average monthly salary, number of night shifts, years of experience, and position impacted career retention. A significant negative correlation was found between burnout and career retention, indicating that higher burnout scores were associated with lower career retention. Addressing nurse burnout is crucial to mitigate its negative impact on retention and improve the overall quality of nursing care.

Based on the study's findings, several recommendations are proposed to address nurse burnout and improve career retention. Targeted interventions should be developed and implemented to mitigate identified risk factors, including strategies to reduce the burden of night shifts (e.g., improved scheduling, additional staff, better compensation), enhance work-life balance (e.g., flexible scheduling, employee assistance programs), and improve compensation and benefits to reflect the demanding nature of the profession. Investing in ongoing professional development opportunities will enhance nurses' skills and knowledge, boosting job satisfaction. Furthermore, fostering a supportive work environment that values teamwork and open communication, perhaps through mentorship programs or peer support groups, is crucial. Future research should explore the mechanisms linking burnout and retention, evaluating the effectiveness of interventions through quantitative and qualitative studies to gain deeper insights into nurses' experiences. Finally, advocating for policy changes at the hospital and governmental levels is necessary to address risk factors and promote well-being. This includes advocating for improved staffing ratios, increased funding for nursing education, and the implementation of evidence-based burnout prevention strategies. A longitudinal study should track burnout and retention rates over time to assess the long-term impact of interventions and identify emerging trends.

## References

- [1] Dall'Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in nursing: a theoretical review. *Human Resources for Health*, 18(1). <https://doi.org/10.1186/s12960-020-00469-9>.
- [2] Jun, J., Ojemeni, M. M., Kalamani, R., Tong, J., & Crecelius, M. L. (2021). Relationship between nurse burnout, patient and organizational outcomes: Systematic review. *International Journal of Nursing Studies*, 119, 103933. <https://doi.org/10.1016/j.ijnurstu.2021.103933>.
- [3] Han, F., Li, A., Zhang, D., Lv, L., Li, Q., & Sun, J. (2022). Relationship between emotional labor and sense of career success among community nurses in China, Beijing: A cross-sectional study based on latent class analysis. *PLoS ONE*, 17(5), e0268188. <https://doi.org/10.1371/journal.pone.0268188>.
- [4] Marufu, T. C., Collins, A., Vargas, L., Gillespie, L., & Almghairbi, D. (2021). Factors influencing retention among hospital nurses: systematic review. *British Journal of Nursing*, 30(5), 302–308. <https://doi.org/10.12968/bjon.2021.30.5.302>.
- [5] Lu, Y. E., Wang J., Zhang W., Mao, F. F., Sun M., & Cao, F. I. (2022). Analysis of potential categories of psychological violence in the workplace and its relationship with burnout. *Journal of Shandong University (Medical Sciences)* (05), 118-124. <https://doi.org/10.6040/j.issn.1671-7554.0.2021.1023>.
- [6] Zhang, L., Jin, T., & Jiang, H. (2020). The mediating role of career calling in the relationship between Family-Supportive supervisor behaviors and turnover intention among public hospital nurses in China. *Asian Nursing Research*, 14(5), 306–311. <https://doi.org/10.1016/j.anr.2020.08.011>.



- [7] Kelly, L. A., Gee, P. M., & Butler, R. J. (2020). Impact of nurse burnout on organizational and position turnover. *Nursing Outlook*, 69(1), 96–102. <https://doi.org/10.1016/j.outlook.2020.06.008>.
- [8] Zhu, X. P., Liu, C. X., Chen, X. M., Yang, L.M., & Zhou, L. S. (2018). Research progress and enlightenment of nurse burnout abroad. *Nursing Research* (10),1509-1513. doi:10. 12102/j. issn. 1009-6493.2018.10.005.
- [9] Bu, T., Peng, C., Liu, J., Qiu, X., Qiao, Z., Zhou, J., Ke, S., Kan, Y., Hu, X., Qiao, K., Liu, X., Cao, D., & Yang, Y. (2024b). Nurse burnout: deep connections and solutions revealed by network analysis. *BMC Nursing*, 23(1). <https://doi.org/10.1186/s12912-024-02190-7>.
- [10] Shi, X. P., Li, Y., & Zhang, C. C. (2021). Correlation between professional respect, burnout and willingness to leave nurses. *Nursing Research*2021,35(15):2654-2660.doi:10. 12102/j. issn. 1009-6493.2021.15.005.
- [11] Gan, L., Zhang, H., Shang, W., Li, X., Ma, X., Wu, Z., & Mo, L. (2020). Analysis of the current situation and influencing factors of nurse turnover rate. *Chinese Journal of Nursing* (02), 198-203. <https://doi.org/10.3761/j.issn.0254-1769.2020.02.007>.
- [12] Liu, Y., & Aunguroch, Y. (2019). Work stress, perceived social support, self-efficacy and burnout among Chinese registered nurses. *Journal of Nursing Management*, 27(7), 1445–1453. <https://doi.org/10.1111/jonm.12828>.
- [13] Cook, K. S., & Rice, E. (2006). Social exchange theory. In *Springer eBooks* (pp. 53–76). [https://doi.org/10.1007/0-387-36921-x\\_3](https://doi.org/10.1007/0-387-36921-x_3).
- [14] Du, Y. Q. (2022). The ICU nurses the status of social support, organizational commitment and job burnout and the relationship between research (a master's degree thesis, jiangxi medical college),2022. doi:10.27959/d. cnki. ggnyx. 2022. 000123.
- [15] Jiang, H., Huang, N., Jiang, X., Yu, J., Zhou, Y., & Pu, H. (2021). Factors related to job burnout among older nurses in Guizhou province, China. *PeerJ*, 9, e12333. <https://doi.org/10.7717/peerj.12333>.
- [16] Yao, X., Shang, L., Pang, R., Luo, X., & Jiao, L. F. (2022). Research on the impact of job satisfaction, burnout and organizational commitment on nurses' turnover intention. *Evidence-based Nursing* (14), 1916-1920.doi:10. 12102/j. issn. 2095-8668.2022.14.014.
- [17] Qian, Z. (2020). The nurse job burnout status and influence factors analysis (a master's degree thesis, anhui medical university). 2021,46(2):232-236.doi:10.13898/j. cnki.issn. 1000-2200. 2021.02.025.
- [18] Kim, Y., & Lee, S. (2023). The Nursing Work Environment, Supervisory Support, Nurse Characteristics, and Burnout as Predictors of Intent to Stay among Hospital Nurses in the Republic of Korea: A Path Analysis. *Healthcare*, 11(11), 1653. <https://doi.org/10.3390/healthcare11111653>.
- [19] Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52(1), 397–422. <https://doi.org/10.1146/annurev.psych.52.1.397>.
- [20] Shao, N., Zhang, Y., Yang, H. Y., & Duan, Y. Y. (2021). Research on the impact of clinical nurses' work intensity on willingness to stay in the job from the perspective of humanistic care. *Chinese Medical Ethics*, 34(12), 1624-1630.doi: 10. 12026/j.issn .1001-8565.2021.12.20.
- [21] Li, L., Fan, J., Qiu, L., Li, C., Han, X., Liu, M., Zhao, S., & Wang, Y. (2024). Prevalence and factors associated with job burnout among nurses in China: A cross-sectional study. *Nursing Open*, 11(6). <https://doi.org/10.1002/nop2.2211>.
- [22] Wan, Z., Lian, M., Ma, H., Cai, Z., & Xianyu, Y. (2022). Factors associated with burnout among Chinese nurses during COVID-19 epidemic: a cross-sectional study. *BMC Nursing*, 21(1). <https://doi.org/10.1186/s12912-022-00831-3>.
- [23] Ohue, T., Aryamuang, S., Bourdeanu, L., Church, J. N., Hassan, H., Kownaklai, J., Pericak, A., & Suwannimitr, A. (2021). Cross-national comparison of factors related to stressors, burnout and turnover among nurses in developed and developing countries. *Nursing Open*, 8(5), 2439–2451. <https://doi.org/10.1002/nop2.1002>.
- [24] Alharbi, F. S. H. S., Mustafa, Z., & Benoy, M. (2022). Nurses turnover: Retention of the staff. *Open Journal of Nursing*, 12(03), 199–219. <https://doi.org/10.4236/ojn.2022.123013>.
- [25] Zhou, M., Zhao, L., Kong, N., Campy, K. S., & Qu, S. (2018). What Caused Seriously Shortage of Chinese Nurses?. *Iranian journal of public health*, 47(7), 1065–1067.
- [26] Babapour, A., Gahassab-Mozaffari, N., & Fathnezhad-Kazemi, A. (2022). Nurses' job stress and its impact on quality of life and caring behaviors: a cross-sectional study. *BMC Nursing*, 21(1). <https://doi.org/10.1186/s12912-022-00852-y>.
- [27] Han, X., Zhang, J., Xue, Y., Dai, J., & Zhou, M. (2021). Analysis of the influence of workplace violence and emotional labor on nurses' quality of professional life. *Evidence-based Nursing* (15),2076-2081. doi:CNKI:SUN:XZHL.0.2021-15-018.
- [28] Min, Y., Lee, H., Kwon, S., Lee, I., Kim, K., Kim, J. S., Han, J. H., & Lee, H. (2023). Occupational and psychological factors associated with burnout in night shift nurses. *Psychiatry Investigation*, 20(10), 904–911. <https://doi.org/10.30773/pi.2023.0084>.
- [29] Kong, Y., Song, K., Zhang, D., Zhou, T., & Liu, G. (2023). Research progress on the workplace adaptation of newly recruited nurses. *Chinese Journal of Nursing* (01),125-128. <http://dx.doi.org/10.3870/j.issn.1001-4152.2023.01.0125>.
- [30] Ma, H., Zou, J. M., Yin, J., & Song, D. (2022). Correlation between job burnout and depression among junior nurses in Zigong city. *Industrial hygiene and occupational disease* (6), 495-497. doi: 10.13692 / j. carol carroll nki gywszyzb. 2022.06. 014.
- [31] Cui, B. X. (2021). Research on the current situation and countermeasures of job burnout and turnover intention of nurses in a district hospital in Tianjin (Master's Thesis, Tianjin University), 2021. doi: 10.27356/d.cnki.gtjdu.2021.004064.
- [32] Wang, L., Liu, S. H., Chen, L., Li, J. F., Yuan, M. L., & Gao, Y. F.(2022). Construction and practice of nursing performance compensation distribution scheme in public hospitals. *Chinese Nursing Management* (08),1247-1252. doi:10.3969/j. issn. 1672-1756.2022.08.026.
- [33] Zheng, S. Y., Lu, J. F., Zhang, T., Bao, Y. Q., & Zhang, H. Z. (2024). Investigation and analysis of job burnout status and influencing factors of female nurses in general hospitals in Wuhan. *Health vocational education* (02) 148-151, doi: 10. 20037 / j.i SSN. 1671-1246.2024.02.46.
- [34] Gou, L., Ma, S. Z., Wang, G. F., Zeng, W. L., Wen, X. X., & Zhang, Y. X. (2020). Mediating effect of workplace exclusion and emotional exhaustion in nurses' emotional labor. *Modern Clinical Nursing* (06),1-6. doi:10.3969/j.issn.1671-8283.2020. 06. 001.
- [35] Wu, X. (2020). The impact of transformational leadership on nurses' job burnout and turnover intention (Master's Thesis, Yangzhou University). Master of <https://link.cnki.net/doi/10.27441/d.cnki.gyzdu.2020.001999>doi:10.27441/d.cnki.gyzdu.2020.001999.
- [36] Lv, F. F. (2023). Study on the relationship between job burnout and intention to stay of ICU nurses in Class iii Grade A

- hospitals (Master's Thesis, Dalian Medical University). <https://link.cnki.net/doi/10.26994/d.cnki.gdlyu.2023.001562doi:10.26994/d.cnki.gdlyu.2023.001562>.
- [37] Kelly, L. A., Gee, P. M., & Butler, R. J. (2020b). Impact of nurse burnout on organizational and position turnover. *Nursing Outlook*, 69(1), 96–102. <https://doi.org/10.1016/j.outlook.2020.06.008>.
- [38] Zhai, Y. X., Lin, X., & Pang, Y. H. (2023). The effect of psychological capital on willingness to leave among low seniority nurses: the role of dedication and burnout chain mediation[J]. *Journal of Nursing Management*, 2023, 23 (4): 305-309. doi:10.3969/j.issn.1671-315x.2023.04.016.
- [39] Zhou, X. H., Tong, J. I., Wang, C., & Jiang, Y. (2023). The mediating role of job burnout in the relationship between individual-job matching and turnover intention in nurses. *Nurse education magazine* (19), 1758-1762 + 1768. doi: 10.16821/j.carol carroll nki HSJX. 2023.19.006.
- [40] Zhang, Ruimiao.(2022). A case study on the role of rational-emotive therapy in nurses' job burnout (Master's Thesis, Southwest University). Master of <https://link.cnki.net/doi/10.27684/d.cnki.gxndx.2022.002908doi:10.27684/d.cnki.gxndx.2022.002908>.
- [41] Yang, H. B., Hou, Z. Y., & Liu, F. (2022). Effects of Balint group intervention on emotional intelligence and job burnout of operating room nurses. *Industrial hygiene and occupational disease* (4), 286-288 + 293. doi: 10.13692/j. carol carroll nki gywsyzyb. 2022.04.010.
- [42] Wang, L., Yang, F. F., & Wang, F. (2024). Effects of a blended mindfulness-based stress reduction on resilience, job burnout, and turnover intention of ICU nurses. Under the contemporary nurses (ten-day), (4), 143-147. The doi: 10.19793 / j. carol carroll nki. 1006-6411.2024.12.034.
- [43] Miyoshi, Y. (2019). Restorative yoga for occupational stress among Japanese female nurses working night shift: Randomized crossover trial. *Journal of occupational health*, 61 (6), 508–516. <https://doi.org/10.1002/1348-9585.12080>
- [44] Zeng, M. P., Li, X. Z., & Ou, L. F. (2020). Effect of Acupoint-plucking Emotional Freedom Method on Psychological Stress in Nurses Working at Front Line to Fight Against Epidemic. *Shanghai Journal of Needle Journal* (05), 526-529. doi:10.13460/j.issn.1005-0957.2020.13.1017.
- [45] Ning, J. Q. (2021). Application of Dyad coping in job burnout of night shift nurses. *Psychological issue* (09), 11-12. doi: 10.19738 / j.carol carroll nki psy. 2021.09.005.
- [46] Alsalmi, M., & Alilyyani, B. (2023). The role of authentic leadership in nurses' stress and burnout in emergency departments. *Leadership in health services* (Bradford, England), ahead-of-print(ahead-of-print), 10.1108/LHS-01-2023-0005. <https://doi.org/10.1108/LHS-01-2023-0005>.