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**Effect of nurse's emotional labor on nurse-patient relationship and occupational
commitment: Evidence from China**

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Master in Human Resource Management and Organizational Consultancy

Supervisor:

PhD Shaozhuang Ma, Associate Professor

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Acknowledgment

Foremost, I would like to express my sincere gratitude to my supervisor Professor Shaozhuang Ma. His serious attitude not only helped me better conduct academic research, but also taught me the sense of being a man. Thank you for your patience and support.

Life is still walking, which makes us know that learning is an endless process. And in the journey of bitter and sweet, time has an end. Learning to say goodbye became a compulsory course for us. But I'm kind of like a shifter. Anyway, I will remember the feeling of sunshine, the trees, the air from the sea, as well as those lovely people, whether they were strong or fragile at that time.

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Resumo

A presente investigação tem como objetivo compreender a relação entre o trabalho emocional, a relação enfermeiro-paciente e o compromisso profissional. Usando uma amostra de 267 enfermeiros nos hospitais na província de Guangdong da China, a análise de regressão demonstra que: 1) o trabalho emocional está positivamente relacionado tanto com a relação enfermeiro-paciente quanto com o compromisso profissional. 2) a relação enfermeiro-paciente está positivamente relacionada ao compromisso profissional. (3) a relação enfermeiro-paciente desempenha um papel mediador parcial na relação entre o trabalho emocional e compromisso ocupacional.

Palavras-chave: trabalho emocional dos enfermeiros, relação enfermeiro-paciente, compromisso profissional

JEL:M54

Abstract

This study aimed to understand the relationship between emotional labor, nurse-patient relationship and occupational commitment. Using a sample of 267 nurses in hospitals in Guangdong Province of China, regression analysis showed that: 1) emotional labor is positively related to both nurse-patient relationship and occupational commitment. 2) nurse-patient relationship is positively related to occupational commitment. (3) nurse-patient relationship plays a partial mediating role in the relationship between emotional labor and occupational commitment.

Key words: nurse emotional labor, nurse-patient relationship, occupational commitment

JEL: M54

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1. Introduction

1.1 Background

Nursing is an important part of the medical system, and the professional skills of nursing staff are directly related to the quality of medical services in a country (Mei, 2017). With the development of China's economy, people's demands for health are gradually increasing, and at the same time, the gradual aging of Chinese society has led to the increasing demand for nursing staff, and the shortage of nursing staff is further aggravated. Despite the shortage of nursing staff has been a problematic issue for long in the world (Bowden & Schmus, 2021), it is much severe in China.

With only 3 nurses per 1,000 people, China ranked third from the bottom in the world and the shortage of nurses in China exceeded 800,000 (National Health Commission of the People's Republic of China, 2019). According to relevant reports, the current turnover rate of nurses in China stands at about 4%, while the survey shows that the turnover intention of nurses is as high as 10.34% - 17.6% (Cao et al., 2021). This situation makes the management of nursing staff more difficult in Chinese hospitals.

Nursing staff shoulder the responsibility of "healing the wounded and rescuing the dying". Meyer (2001) suggests that occupational commitment is the degree of unwillingness to change jobs caused by personal role and emotional sustenance, love and devotion to work. From this point of view, scholars assert that enhancing the occupational commitment of nurses can effectively reduce turnover (Hu et al., 2021). With the increase in employees' occupational commitment, their work enthusiasm will be greatly enhanced, and their turnover intention will be greatly reduced.

There are many factors affecting the occupational commitment of nursing staff, such as age, position, workload, professional title and other reasons. Some scholars considered that emotional labor may have some impact on their occupational commitment (Han et al., 2018).

Therefore, how to improve the occupational commitment of nurses, reduce the turnover rate of nurses and maintain the stability of the hospital nursing team has become an important task faced by the current medical industry managers (De Gieter et al., 2011).

Emotional labor was proposed by American psychologist Hochschild (1983). People in the service industry not only pay physical labor and intellectual labor in their daily work, but also perform a lot of emotional labor (Kruml & Geddes, 2000). Today, the role of nursing staff is increasingly required, not only to have professional nursing knowledge and skills, but also to master sociology, interpersonal relations and other related knowledge, pay close attention to the patient's condition and psychological state, and do a good job of communication with patients and their families. To do these jobs well, nurses not only have to pay a lot of physical and mental work, but also have to pay a lot of emotional work (Nam & Lee, 2018). However, continuous unreasonable emotional labor will have a greater negative impact on the physical and mental health of nurses, which may lead to a significant decline in the level of occupational commitment of nurses, and the decline in the level of occupational commitment may lead to the occurrence of turnover (Lee & Jang, 2019).

In addition, a considerable amount of literature has shown that the nurse-patient relationship can have an impact on the occupational commitment of nurses (Hagerty & Patusky, 2003). Nurse-patient relationship refers to the medical and nursing relationship between nurses and related patients in medical activities, which is an important interpersonal relationship in medical activities. Good nurse-patient relationship helps to improve the professional achievement of nurses, and the improvement of professional achievement will improve the level of occupational commitment of nurses.

However, in the context of the continuous deterioration of the nurse-patient relationship in China and the epidemic of COVID-19 context, nurses are facing increasing working stress. Thus this study aims to understand the level of emotional labor among Chinese nurses and the

effect of emotional labor on nurse-patient relationship and occupational commitment. This study targeted nurses in public medical institutions in Guangdong Province of China as the research object to investigate the relationship among nurses' emotional labor, nurse-patient relationship and occupational commitment to provide a reference for more related studies in the future. At the same time, the research findings may suggest implications to improve the level of occupational commitment of nursing staff, reduce the probability of nursing staff turnover, and promote the stability of the healthcare workforce.

1.2 Research Objectives

The main research objectives of this study are as follows.

1) To study the status of emotional labor, the nurse-patient relationship and occupational commitment of nursing staff in the context of COVID-19 pandemic. Nursing staff are facing the pressure of patients, patients' families and hospitals, and they need a lot of emotional labor every day. What is the current situation of emotional labor of nursing staff is one of the goals we need to study? Nurse-patient relationship as an important interpersonal relationship in medical care that is very important for nursing work. More importantly, this study is interested in learning whether nurse-patient relationship has been improved due to the COVID-19 pandemic setting in which Chinese people witness the sacrifice from doctors and nurses in fighting the pandemic.

2) To understand the influence of emotional labor on nurse-patient relationship and occupational commitment and put forward the path relationship model of the three variables, and then raise corresponding policy recommendations through the results of the study, so as to provide reference and help for the management departments of medical institutions to better maintain the stability of nursing staff.

1.3 Research questions

The main research questions of this study are as follows: 1) What are the status of Chinese nurses' emotional labor, nurse-patient relationship and occupational commitment in the COVID-19 pandemic context? 2) Does emotional labor influence nurse-patient relationship and occupational commitment? 3) What role does the nurse-patient relationship play in the relationship between emotional labor and occupational commitment?

1.4 Structure of thesis

The initial chapter mainly introduces the research background, research objectives and research questions. The second chapter reviews the relevant literature of emotional labor, occupational commitment and the nurse-patient relationship in China. Chapter three mainly introduces Investigation steps and data processing methods. The fourth chapter is the results and analysis of the research. The final chapter discusses all the conclusions of this study and systematically summarizes the relationship among the three variables.

2. Literature Review

2.1 Emotional Labor

Emotional labor can be traced back to 1979, the sociologist Hochschild (1979) published the first study on emotional labor, in which she put forward two important concepts, namely, the feeling rule and the expression rule, in which the feeling rule refers to the relevant situation of the subject feeling emotion. It includes the range of feelings, the intensity of feelings, the persistence of feelings and so on (Jeung et al., 2018). People regulate their own behavior through their inner feelings of emotions, so that their own behavior meets the requirements of relevant organizations. This concept points out that people's perception of emotions is the starting point for manipulating their own behavior. Another concept is the rule of expression. The rule of expression refers to whether the individual's behavior and emotions are well matched with the environment. Simply speaking, it is whether the individual's emotions are correct. For example, when attending a funeral, they should express heavy and sad emotions, not happy emotions. After the two concepts were put forward, the academic circles have conducted sufficient research on the two concepts.

Subsequently, Hochschild (1983) formally proposed the concept of emotional labor. Through field surveys, he found that employees in airlines had emotional problems in their daily work. It requires not only heavy physical labor but also intellectual labor. In the face of many passengers, they need to keep smiling and control their emotions, to better serve our customers. Hochschild named this behavior different from physical labor and intellectual labor as emotional labor, which he believed was "to create facial and physical manifestations that can be observed by the public through the management of emotions". Through emotional labor, employees can better adapt to the requirements of the external environment, to better serve customers and get their due remuneration.

Morris and Feldman (1996) suggest that the requirements of the two concepts for the subject are quite different. The feeling rules mainly emphasize the feelings of the subject, and the subject regulates its own behavior by perceiving changes in emotions in a specific external

environment. The rules of expression emphasize that the organization stipulates the environment in which the right emotions should be expressed. In the external public environment, the subject should show the correct emotions required by a certain organization, otherwise it is wrong. In the business environment, organizations will require employees to express the right emotions for their own interests, to attract customers to make profits. From the perspective of expression rules, organizations do not care about the true emotions of employees but stipulate that employee must express the right emotions.

When Hochschild first put forward the concept of emotional labor in 1983, he proposed two emotional labor strategies: surface acting and deep acting. Surface acting is displaying an unfeared emotion and deep acting is making a conscious effort to feel the required emotion (Hochschild, 1983; Lamothe et al., 2021). On this basis, Ashforth (1993) proposed a third variable about natural expression. Glomb and Tews (2004) named natural expression as "the expression of genuine emotion", and this definition has been recognized by many scholars.

Nurses must manage their emotions and the expression of emotion to perform best care, and thus nursing involves a lot with emotional labor. However, emotional labor is an under-appreciated aspect of nursing work and there is under-researched on emotional labor in the nursing profession (Cricco-Lizza, 2014). Lee (2018) studied the relationship between emotional labor and job burnout. He surveyed 344 nurses and collected the relevant data of nurses' burnout and emotional labor through questionnaires. He concluded that emotional labor is the main factor affecting nurses' burnout. At the same time, he also proposed that communication among colleagues can reduce the occurrence of nurses' burnout.

2.2 Occupational commitment

The research on occupational commitment began in the 1980s. Meyer (1979) was the first scholar to study occupational commitment. He drew out the significance of occupational commitment in his research on organizational commitment. He believed that occupational

commitment was manifested in the following three aspects: 1) firm acceptance of professional goals and values; 2) willingness to make more efforts for the profession; 3) desire to be a member of the profession; Based on this definition, many scholars have carried out extended research. Hall (1988) has studied occupational commitment from the perspective of occupational behavior. He believes that occupational commitment refers to the work motivation of individuals in their occupational roles. From this perspective, occupational commitment is a driving force to maintain occupational behavior. Only when employees have a higher occupational commitment can they have a stronger motivation to work.

Some scholars analyze occupational commitment from a psychological point of view. Blau (1985) believes that occupational commitment is an individual's working attitude towards the occupation he is engaged in, that is, the degree of preference of employees for the current occupation. This view also regards occupational commitment as a reflection of employees' emphasis on work. Singhal (2018) also analyzed occupational commitment from an emotional perspective. He believed that occupational commitment could be measured by the amount of time employees spent on their career, in addition to the degree of individual identification with their career. Chinese scholars also have more in-depth research on occupational commitment. Long (2000) believes that occupational commitment is a kind of psychological identity of individuals to the profession they are engaged in, and at the same time, it produces strong psychological dependence with the passage of time. In addition, occupational commitment can also be the degree of reluctance to change careers due to occupational commitment and internalization of social norms. Weng and Xi (2010) studied occupational commitment from the perspective of employee turnover. He believes that occupational commitment, as a psychological factor, is a "psychological contract" signed between the individual's heart and the occupation he is engaged in. Occupational commitment can well measure the turnover intention of employees.

Jiang (2013) studied the relationship between occupational commitment and turnover of Chinese nurses in emergency department. The result revealed that the level of occupational commitment has a direct impact on the turnover of nurses, and it is necessary to improve the

level of occupational commitment of nurses by improving occupational stability and sense of belonging. Liu and Wu (2016) studied the relationship between occupational commitment and work pressure, satisfaction, and social support. He studied the data of 210 clinical nurses. Through the survey, he found that the occupational commitment level of nurses was low, which could be improved by alleviating the work pressure of nurses and improving their job satisfaction. Wang and Cheng (2021) analyzed the influencing factors of occupational commitment of nurses in the department of anesthesiology. She took 119 nurses in the department of anesthesiology as the subjects for data analysis. She believed that sympathy, burnout, secondary trauma, working environment and other factors would have a greater impact on nurses' occupational commitment.

2.3 The relationship between emotional labor and occupational commitment

Nurses need to face many patients with intense emotions, so they need a lot of emotional labor in their daily work. Taylor (2012) believes that in the daily work of nurses, teachers and other professions, organizations will require employees to suppress negative emotions and express positive emotions as much as possible. Emotional labor in the process of work will greatly consume energy, which will lead to emotional exhaustion and loss of interest in work, thus reducing people's occupational commitment. Brown (2011) believes that human emotion is a response to external stimuli, and the subjective experience of interpreting external information is also an instinct. If people engage in emotional labor for a long time, they will lose the emotional endurance brought by this instinct, so it may cause greater emotional stress, which will reduce people's professional identity, and then affect occupational commitment.

Song (2014) believes that emotional labor is a great harm to people's psychology. Long-term emotional labor will make people feel great mental pressure, which may reduce people's occupational commitment, and the reduction of occupational commitment may further affect the performance of employees. Sun (2013) believes that emotional labor will reduce people's enthusiasm for work, and over time, it will also reduce the level of occupational commitment of employees. The conservation of resource theory (Hobfoll 1989) holds that people have the

basic motivation to preserve the resources they value. When individuals are faced with stress, they strive to acquire, retain, and preserve valuable resources, and to minimize any threats that lead to resource depletion. In emotional labor, individuals need to consume their own psychological resources whether they perform emotional labor. Thus, we expect emotional labor is negatively related to occupational commitment in different manner.

H1: Emotional labor is negatively related to occupational commitment.

2.4 Nurse-patient relationship

The nurse-patient relationship is an important interpersonal relationship in the hospital. A good nurse-patient relationship is based on the mutual trust between nurses and patients. A quality nurse-patient relationship can not only help nurses better carry out nursing work, but also is very important for the physical and mental health of patients. The model of nurse-patient relationship was born out of the model of doctor-patient relationship, which was summarized by Szasz and Holender (1976) as three different models: 1) active and passive model, in which doctors are in a completely active position and patients are in a passive position under the guidance of doctors. In this relationship, the patient cannot question the authority of the doctor. 2) Coaching partnership model, in which the doctor plays the role of guidance, guiding the patient to put forward the doctor's treatment recommendations, and the patient can raise relevant questions. 3) Mutual participation mode, in which doctors and patients are in an equal relationship and participate in the determination of treatment plans.

The nurse-patient relationship in China is not optimistic, and nurse-patient disputes and malicious attacks on medical staff occur from time to time. In July 2013, a patient in Beijing Anzhen Hospital clashed with nurses and beat four nurses, causing serious injuries to three nurses. In September 2014, a nurse in a hospital in Cangzhou City was beaten and seriously injured by the patient's family because she refused to be visited by her family in the ICU. In February 2014, the patient's family beat a pregnant nurse in Hangzhou, Zhejiang Province, causing the nurse to miscarry. In October 2020, a doctor and a nurse were seriously injured by

a patient's violent injury in the Third Affiliated Hospital of Sun Yat-sen University, Guangdong (Tang et al, 2020). Fang et al (2019) summarized the current situation of nurse-patient relationship in China. According to the relevant data of the Chinese Medical Doctor Association, more than 60% of medical staff have encountered verbal violence and personal attacks from patients in their work, while more than 15% of nurses have suffered physical injuries.

2.5 Relationship between emotional labor and nurse-patient relationship

From the previous analysis, we can see that nurses perform a lot of emotional labor in their daily work, and nurse-patient relationship is very important professional interpersonal relationship faced by nurses in their work. Therefore, there is a very close relationship between of both. Pan et al (2021) believes that nurse-patient relationship is an important part of nurses' work. Nurses not only need to provide nursing work for patients, but also need to maintain a good relationship with patients. Maintaining this relationship requires nurses to do a lot of emotional labor. Through continuous emotional labor, nurses can maintain a good relationship with patients (Yuan et al.,2021). Mann (2015) asserts that the goal of the organization requiring nurses to carry out emotional labor is to maintain the nurse-patient relationship, but excessive emotional labor will make nurses have greater psychological pressure, which is not conducive to the development of nurse-patient relationship.

H2: Emotional labor is negatively related to nurse-patient relationship.

2.6 Relationship between nurse-patient relationship and occupational commitment

He et al (2020) studied the relationship between nurse-patient relationship and occupational commitment through a survey of 1743 nurses and argued that the nurse-patient relationship is one of the sources of work achievement for nurses, and a good nurse-patient relationship has a positive effect on the occupational commitment of nurses. Li (2016) also conducted a study on this issue. She believed that the good nurse-patient relationship of clinical nurses would greatly

enhance the sense of professional benefits of nurses, and the sense of professional benefits brought by the nurse-patient relationship could enhance the occupational commitment of nurses, thereby reducing the turnover rate. Mrayyan (2018) studied the relationship between nurse-patient relationship and occupational commitment of nurses in Jordan. He believed that the performance of nurses' occupational commitment mainly includes: the acceptance of professional goals, the efforts they are willing to make for the profession of nurses, and the recognition of the profession of nurses. Good nurse-patient relationship will reduce the anxiety and mental stress of nurses. It makes nurses have a strong motivation to work, which also improves the level of occupational commitment of nurses.

Good nurse-patient relationship represents the recognition of nurses' work, and the recognition of nurses' work can enhance nurses' occupational commitment. From the research of these scholars, we can conclude that many scholars believe that the doctor-patient relationship will have a positive impact on occupational commitment. Based on the above analysis, this study proposed the following hypothesis:

Hypothesis 3: Nurse-patient relationship is positively related to occupational commitment.

Given the previous hypotheses (H1 and H2) and H3, it is apparent that nurses' emotional labor is negatively related to nurse-patient relationship which in turn influence their occupational commitment. Thus, this study proposed the following hypotheses.

Hypothesis 4: Nurse-patient relationship mediates the relationship between emotional labor and occupational commitment.

Based on the above hypotheses, this study proposes the following research model:

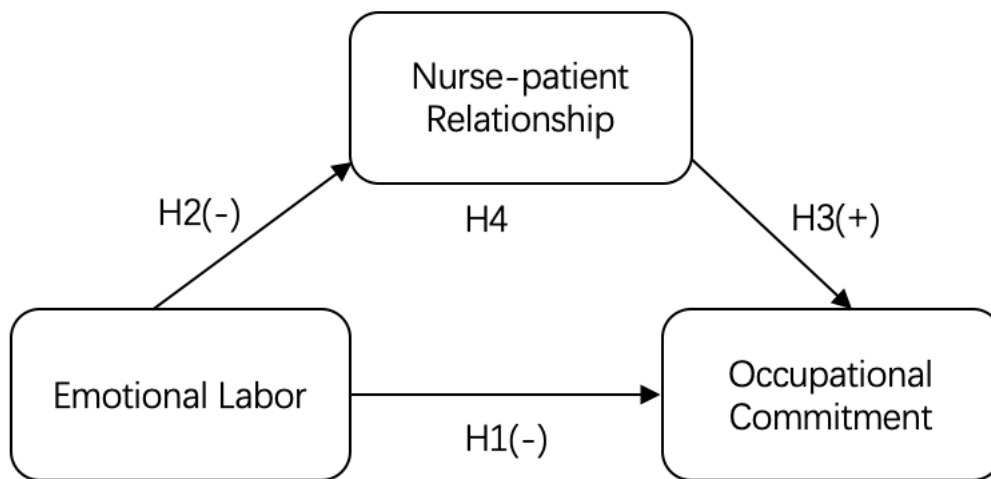


Figure 1. Proposed model of relationship among Nurse-patient relationship, emotional labor and occupational commitment.

3. Methodology

3.1 Sampling and Procedure

The main target group of the study was nurses in public hospitals in Guangdong Province, China. Relevant questionnaires were distributed online through the Internet, mainly in the form of WeChat, e-mail, social media, and other channels. The questionnaire data were collected between March and May 2022. After eliminating the invalid questionnaires, 267 valid questionnaires were received.

3.2 Questionnaire

The questionnaire is mainly composed of two parts, the first part is the demographic characteristics survey, including age, gender, education background, professional title, marital status, department, nursing age, employment mode, night shift times and the size of the hospital beds. The second part is composed of emotional labor scale (Grandey, 2003), nurse-patient relationship scale (Zeng et al., 2018) and occupational commitment scale (Pei, 2007).

3.3 Statistical analysis

The questionnaire data were analyzed and tested by descriptive statistical analysis, correlation analysis and regression analysis. First, the questionnaire was analyzed by descriptive statistics to describe the demographic correlation, then the correlation analysis was carried out among the variables of the questionnaire, and finally the hypotheses were tested with regression analysis.

4. Results

4.1 Participants and Descriptive Statistics

The participants were nurses from public hospitals in Guangdong Province. As shown in Table 1 Descriptive, the majority of respondents were female (94.0%). The sample consists of predominantly under 29 years old nurses (61.4%). In terms of academic qualifications, the number of undergraduate graduates was the largest (52.4%), and the distribution of departments was relatively balanced, of which internal medicine department accounted for the largest proportion (23.6%).

The tenure of participants was mainly composed of nurses who had worked for 2-5 years (38.5%), of which 19.9% had worked for less than 2 years, 23.6% for 6-10 years, and only 18.0% for more than 10 years. Professional titles were mainly nurses (47.6%) and senior nurses (38.2%). The employment mode of their units is mainly contract system (53.6%), the staffing accounts for 25.1%, and the labor dispatch accounts for 21.3%. In addition, more than half of the nurses were married (65.2%).

Participants worked in hospitals with five levels of bed size. In terms of the average number of night shifts per week, 17.2% had zero shifts, 38.2% had one or two shifts, and 44.6% had three or more shifts.

Table 1 Descriptive (N=267)

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Man	16	6,0	6,0	6,0
	Female	251	94,0	94,0	100,0
Age	<25	79	29,6	29,6	29,6
	25-29	85	31,8	31,8	61,4
	30-34	48	18,0	18,0	79,4
	35-40	34	12,7	12,7	92,1
	>40	21	7,9	7,9	100,0
Education	Technical secondary school	29	10,9	10,9	10,9
	Junior college	86	32,2	32,2	43,1
	Undergraduate	140	52,4	52,4	95,5
	Master degree or above	12	4,5	4,5	100,0
WorkUnit	Outpatient department	49	18,4	18,4	18,4
	Internal medicine department	63	23,6	23,6	41,9
	Surgery department	38	14,2	14,2	56,2
	Emergency clinic intensive care unit	38	14,2	14,2	70,4
	Operating theater	34	12,7	12,7	83,1
	Other department	45	16,9	16,9	100,0
marital status	Married	174	65,2	65,2	65,2
	Spinsterhood	66	24,7	24,7	89,9
	Other (divorce etc.)	27	10,1	10,1	100,0
JobTitle	Nurse	127	47,6	47,6	47,6
	Senior Nurse	102	38,2	38,2	85,8
	Supervisor Nurse	32	12,0	12,0	97,8
	Deputy Chief Nurse	5	1,9	1,9	99,6
	Chief Nurse	1	0,4	0,4	100,0
NursingTe nure	<2	53	19,9	19,9	19,9
	2-5	103	38,6	38,6	58,4
	6-10	63	23,6	23,6	82,0
	>10	48	18,0	18,0	100,0
ContractFo rm	Contract worker	143	53,6	53,6	53,6
	Staffing	67	25,1	25,1	78,7
	Labor dispatch	57	21,3	21,3	100,0
BedSize	<500	41	15,4	15,4	15,4
	500-1000	68	25,5	25,5	40,8
	1001-1500	62	23,2	23,2	64,0
	1501-2000	42	15,7	15,7	79,8
	>2000	54	20,2	20,2	100,0
AveNightS heet	Zero	46	17,2	17,2	17,2
	Once or Twice	102	38,2	38,2	55,4
	Three or more times	119	44,6	44,6	100,0

4.2 Correlations

As shown in the Pearson correlation analysis results in Table 2, the mean score of emotional labor was 3.56 ± 1.13 . While the mean score of surface acting was 3.49 ± 1.28 ; that of deep acting was 3.68 ± 1.20 . The mean score of occupational commitment was 3.36 ± 1.01 . The mean score of nurse-patient relationship was 3.55 ± 0.99 .

Also shown in Table 2, there was a significant positive relationship between emotional labor and occupational commitment ($r = .549, p < .01$) and nurse-patient relationship ($r = .438, p < .01$). Similarly, both surface acting and deep acting were positively related to occupational commitment ($r_{\text{surface}} = .468, p < .01$; $r_{\text{deep}} = .550, p < .01$) and nurse-patient relationship ($r_{\text{surface}} = .335, p < .01$; $r_{\text{deep}} = .508, p < .01$). Lastly, there was a significant positive relationship between occupational commitment and nurse-patient relationship ($r = .792, p < .01$).

Table 2 Result of Correlation Test

Variables	Mean (S.D.)	EL	SA	DA	OC	NPR	Gender	Age	Edu	Unit	Marriage	JobTitle	Tenure	Contract	BedSize
Emotional Labor	3,56 (1,13)	0,88													
Surface Acting	3,49 (1,28)	,949**	0,87												
Deep Acting	3,68 (1,20)	,828**	,611**	0,77											
Occupation Com	3,36 (1,01)	,549**	,468**	,550**	0,91										
NursePatientRelation	3,55 (0,99)	,438**	,335**	,508**	,792**	0,94									
Gender		,166**	,170**	0,116	,149*	,121*	1								
Age		-0,022	-0,053	0,041	0,087	,168**	-0,025	1							
Edu		-0,093	-,152*	0,036	0,046	,185**	-0,040	,223**	1						
WorkUnit		0,079	0,086	0,045	-0,049	-0,117	0,034	-0,088	0,065	1					
Marriage		-0,001	-0,014	0,022	-0,026	0,031	-,137*	-0,040	0,010	-0,051	1				
JobTitle		-,149*	-,219**	0,016	0,067	,208**	0,022	,545**	,491**	0,004	-0,037	1			
NursingTenure	2,40 (1,00)	-0,095	-,140*	0,011	,147*	,251**	0,006	,781**	,153*	-0,070	-0,026	,589**	1		
ContractForm		,149*	,147*	0,113	0,039	-0,043	-0,101	0,109	-,197**	-,126*	0,005	-,223**	-0,018	1	
BedSize		-0,080	-,141*	0,050	0,011	,164**	0,093	0,055	,267**	0,052	-0,004	,397**	,150*	-,258**	1
AveNightSheet	2,27 (0,74)	,164**	,181**	0,091	0,018	-,148*	0,094	-0,103	-,170**	0,044	-0,067	-0,114	-,127*	0,098	-0,086

Note: * p < 0,05; ** p < 0,01;

The mediating effect of nurse-patient relationship was assessed using the 3-step approach proposed by Baron and Kenny (1986). First, the effect of the independent variable (emotional labor) on the mediator (nurse-patient relationship) were examined. Next, the direct influence of the independent variable (emotional labor) on the outcome variable (nurses' affective occupational commitment) was tested. Finally, the direct influence of the mediator (nurse-patient relationship) on the outcome variable (affective occupational commitment) was examined. The significance of the mediation model was further examined using the Sobel Test.

Using multiple regression, the direct and indirect effects of emotional labor on nurses' affective occupational commitment were tested (Table 3). First, emotional labor was positively associated with affective occupational commitment ($\beta = .583, p = .001$). Thus, Hypothesis 1, "*Emotional labor is negatively related to occupational commitment*" is not supported.

Next, emotional labor was positively associated with nurse-patient relationship ($\beta = .518, p = .001$). Thus, hypothesis 2, "*Emotional labor is negatively related to nurse-patient relationship*" is not supported.

The final model (Model 6) showed that nurse-patient relationship reduced the effect of emotional labor on nurses' affective occupational commitment from ($\beta = .583, p = .001$) to ($\beta = .208, p = .001$), suggesting that nurse-patient relationship partially mediated the relationship between emotional labor and affective occupational commitment. The results of the final model (Model 6) suggest that both hypothesis 3 "*Nurse-patient relationship is positively related to occupational commitment*" and hypothesis 4 "*Nurse-patient relationship mediates the*

relationship between emotional labor and occupational commitment’.

Table 3 Results of Regression Analyses

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Gender	0,54* (0,25)	0,1 (0,21)	0,66* (0,26)	0,23 (0,22)	0,66* (0,26)	0,11 (0,15)
Age	-0,07 (0,08)	-0,14* (0,07)	-0,08 (0,08)	-0,15* (0,07)	-0,08 (0,08)	-0,05 (0,05)
Education	0,19* (0,09)	0,19* (0,08)	0,11 (0,08)	0,10 (0,08)	0,11 (0,10)	-0,04 (0,05)
Job Title	-0,03 (0,11)	0,06 (0,09)	-0,05 (0,12)	0,05 (0,10)	-0,05 (0,12)	0,01 (0,07)
Nursing Tenure	0,29** (0,10)	0,35*** (0,09)	0,243 (0,10)	0,31*** (0,09)	0,24* (0,10)	0,06 (0,06)
Contract Form	0,05 (0,08)	-0,02 (0,07)	0,09 (0,08)	0,01 (0,07)	0,09 (0,08)	0,02 (0,05)
Bed Size	0,06 (0,05)	0,06 (0,04)	-0,02 (0,05)	-0,02 (0,04)	-0,02 (0,05)	-0,06* (0,03)
Average Night Sheet	-0,15 (0,08)	-0,23** (0,07)	0,03 (0,08)	-0,07 (0,07)	0,03 (0,09)	0,11* (0,05)
Emotional Labor		0,45*** (0,05)		0,52*** (0,05)		0,19*** (0,04)
Nurse-Patient Relationship						0,73*** (0,04)
F statistic	4,51***	16,50***	1,85	16,25***	1,85	57,96***
R ²	0,12	0,36	0,05	0,36	0,5	0,69
ΔR ²		0,24		0,31		0,64

Note:

N = 267. Understandardized regression coefficients are reported. Standard errors in parentheses

* p < 0,05; ** p < 0,01; *** p < 0,001

5 Discussion and conclusion

5.1 The status of nurses' emotional labor

Because the anxiety of patients and their families about the disease can lead to impatience and other negative feelings, nurses often experience more emotional labor to ease the tension and impatience of patients. It can not only improve the nurse-patient relationship, but also meet the basic requirements of nurses (Wi & Yi, 2012).

The correlation analysis shows that professional title is negatively related to emotional labor, indicating that nurses with higher professional titles have lower scores in emotional labor than those with lower professional titles. The result is consistent with the research of Chinese scholar Li et al (2022). The reason may be that nurses with higher professional titles have more working experience, they will perform emotional labor to handle nursing affairs.

The correlation results seem to indicate that emotional labor of dispatched nurses is relatively higher than that of the contract and formal nurses. The result may indicate the dispatched nurse engage in more emotional labor than those with a permanent contract. In addition, these nurses with more night shifts have reported a higher level of emotional labor, given the positive relationship between emotional labor and the number of night shifts. Walsh (2009) came to a similar conclusion in a study of British nurses.

In addition, the study result suggests that nurses with higher education levels are less inclined to treat their patients in a superficial or perfunctory manner, probably because they will think about how to better serve patients from the perspective of patients (Park & Park, 2020). Furthermore, nurses with longer nursing age and more working experience and are more focused on improving the quality of patient services, so the score of surface acting is relatively lower.

5.2 The status of nurses-patient relationship

The nurse-patient relationship is a very important interpersonal relationship faced by nurses in their work. This study reveals some interesting findings.

The age, nursing tenure, education, job title, and the size of the hospital (bed size) are positively related to the nurse-patient relationship. The results are consistent with the research of Belcher (2009). Such results may indicate that senior and more experienced nurses tend to deliver closer nurse-patient relationships. This is understandable, because such nurses can deal with the bad moods of patients through various methods, but also can consider patients' conditions in different ways.

Nurses with better education and higher titles tend to be able to create closer nurse-patient relationship than those with weak education or in junior positions. Since better-educated nurses would own stronger professional skills (An & Guo , 2020). Similarly, nurses in higher titles are supposed to be more competent in nursing which results in higher nurse-patient relationship.

The results of this study seem to indicate that the larger the hospital scale, the better the nurse-patient relationship of nurses, the larger the hospital scale, the more perfect medical facilities. Doctors and nurses there may have higher technical level, and patients may give more trust, therefore facilitating a better nurse-patient relationship.

The number of night shifts is negatively related to the nurse-patient relationship of nurses, suggesting the detrimental effect of workload on the nurse-patient relationship. In reality, in night duty, nurses need to prepare a large quantity of medicines and other materials that need to be used, so they may not have sufficient energy to take care of patients perfectly, which leads to unsatisfactory relationship with patients (Pei, 2011).

5.3 The status of occupational commitment

In this study, nursing tenure is positively related to nurse' occupational commitment which indicates that older nurses have higher scores of occupational commitment. It is fair as the older nurses have richer experience, higher professional titles and income. Accordingly, they are more likely to identify themselves with the nursing profession and more willing to deeply engage in this profession, so the level of their occupational commitment is higher than that of junior nurses (Caricati et al.,2015) .

5.4 Hypotheses Testings

5.4.1 The relationship between emotional labor and occupational commitment

There is a positive relationship between emotional labor and occupational commitment, thus Hypothesis 1 is not supported. It suggests that when Chinese nurses perform either surface or deep acting, they would impose a positive impact on their occupational commitment (He, 2021). Many scholars have mentioned in the study of emotional labor that surface acting will consume more psychological resources of individuals, thus increasing their work pressure of individuals and reducing their occupational commitment (Parry, 2018). However, some Chinese scholars believe that emotional labor does cause the consumption of people's psychological resources, but the degree of such consumption of psychological resources would vary with occupations (Wu, 2021).This study finds that deep acting may scored higher than surface acting. In other words, Chinese nurses perform more deep acting and as a result emotional labor is positively related to their occupational commitment.

Other interpretation is that nurses have become accustomed to this kind of surface role. Therefore, the consumption of psychological resources is smaller than shown by theoretical study. As a result, the surface acting may not have a negative impact on the occupational commitment of nurses (Wu, 2021). Other scholars believe that nurses hold a higher social status in China, so a lot of nurses identify this profession psychologically, while forming emotional dependence on this profession and investing a lot of energy in this job. Thus, the social norms

of this profession are internalized into their inner norms. Regardless of any dimension of emotional labor, their external performance is friendly positive emotions, which will affect patients and their families, and can greatly improve the nurse-patient relationship. The improvement of the nurse-patient relationship has greatly enhanced the self-confidence of nurses, while patients give more love and respect to the work of nurses, in turn boosting the occupational commitment of nurses (Gu, 2015).

5.4.2 The relationship between emotional labor and nurse-patient relationship

This study found that there is a positive relation between emotional labor and nurse-patient relationship, which rejected Hypothesis 2. Recently a doctoral research found a similar result: both surface acting and deep acting are positively related to the doctor-patient relationship in a sample of dentists in China(Wen, 2022). In addition to our early interpretation that deep acting scored higher than surface acting and played a more dominant role in emotional labor which resulted in stronger nurse-patient relationship, there is another possibility. Mandatory wearing of masks in the COVID-19 pandemic has left patients difficult to recognize the face of nurses. As a result, even if a nurses may do surface acting in their work, patients may be not easy to notice it. At the same time, whether it is the surface acting or the deep acting, nurses finally show positive emotions, which will improve the nurse-patient relationship.

5.4.3 The relationship between nurse-patient relationship and occupational commitment

A positive association is found between nurse-patient relationship and occupational commitment. The result is as expected, supporting Hypothesis 3. Good nurse-patient relationship may give nurses a great sense of achievement and self-confidence which in turn improve their occupational commitment.

5.4.4 The mediating effect of nurse-patient relationship on the influence of emotional labor and occupational commitment

In fact, the nurse-patient relationship played a partial mediating role in the influence of emotional labor on occupational commitment. By summarizing all the above results, it can be concluded that emotional labor of nurses can have a positive impact on the nurse-patient relationship which would in turn improve nurses' work pride, sense of achievement and professional identification, finally strengthening their occupational commitment (Li & Wu, 2020).

5.5 Implication

People may have limited energy while conducting high-intensity work, so nurses need to master emotional management skills in daily work to maintain professional services. At the same time, more efforts should be made at the information communication level, especially in the epidemic situation, the medical treatment process in China is more complex than before. Sometimes patients can't understand the difficulties of nurses' work when they don't understand the rules or get enough information. Similarly, nurses also need to be patient to empathize with patients. If they serve patients from the heart, it is conducive to creating a truly harmonious environment. Surface acting may bring nurses a sense of professional achievement, but if they maintain the unnatural state for a long time, they may experience other uncertain problems.

The hospital can strengthen the emotional management of employees, including necessary psychological counseling for nurses. Increase their sense of security at work. In the current epidemic situation, while formulating strict work specifications, hospital managers should give more space for humanistic care to help nurses ease tension and improve good communication with patients, to improve nurses' occupational commitment and team stability.

5.6 Limitations

There are also some limitations in this study. First, The results may not be applicable to hospitals in other regions and provinces in China due to the limited sample size and the narrow scope of the questionnaire survey incorporating only one economically developed province and city in China. Second, there are only three variables in this research, which may not provide a complete understanding of the issues involved. In the future research, based on emotional labor, nurse patient relationship and occupational commitment, explore the influence of other factors on variables, and further expand the research content.

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Appendix: Questionnaire

The questionnaire is an academic survey, which aims to understand the problems existing in the nursing profession, and hopes to provide more positive references for medical management. This questionnaire is anonymous, for research purposes only, and is confidential. Please fill in the following two parts with confidence according to your actual situation.

Thank you for your support!

I. Respondent's information [single choice]

1. Gender

Male

Female

2. Age

<25

25-29

30-34

35-40

>40

3. Education

Technical secondary school

Junior college

Undergraduate

Master degree or above

4. Work Unit

Outpatient department

Internal medicine department

Surgery department

Emergency clinic and intensive care unit

Operating theater

Other department

5. marital status

Married

Spinsterhood

Other (divorce etc.)

6. Job Title

Nurse

Senior Nurse

Supervisor Nurse

Deputy Chief Nurse

Chief Nurse

7.NursingTenure

<2 years

2-5years

6-10years

>10years

8.ContractForm

Contract worker

Staffing

Labor dispatch

9.BedSize

<500

500-1000

1001-1500

1501-2000

>2000

10.AveNightSheet

Zero

Once or Twice

Three or more times

II. Scale evaluation

[Please select the option that best fits your actual situation and mark " ✓ " in the option.]

<u>Emotional Labor</u>	No	Rarely	Occasionally	Sometimes	Often	Always
In order to get along with the patient properly, I will use the "performance" method.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pretend to be in a good mood.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I make a show.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I pretend I have the emotions I need to express at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In order to express the emotion I need in my work, I will wear a "mask".	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to really experience the emotions I need to show.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to really feel the emotions I need to show the patient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to feel the emotions I need to show the patient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<u>Occupational Commitment</u>	Completely disagree	disagree	uncertain	agree	Strongly agree
Nursing profession is very important to my self-image.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being a nurse makes me happy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am proud to be in the field of nursing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'd love to be a nurse.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I highly agree with the nursing profession.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm passionate about my career.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<u>Nurse-patient Relationship</u>	Completely disagree	Disagree	Basically disagree	Basically agree	Agree	Completely agree
The patient believes that I will take his/her care to heart.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Patients trust my nursing work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The patient is willing to cooperate with my nursing work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The patient believes that my nursing measures are appropriate and reasonable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I always patiently inform the patients or their families of the nursing and treatment measures I have taken to let them know about the treatment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I always take care of patients carefully.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try my best to care for patients in nursing work (such as reducing pain, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I always respond enthusiastically and promptly to the questions of patients and their families.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>