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# Doctor-Patient Relationship, Working Hours, and Job Burnout Among Medical Staff: A cross-sectional study

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Master in Management

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Iscte – Instituto Universitário de Lisboa

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BUSINESS
SCHOOL

Department of Marketing, Operations and General Management

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**Resumo**

A tensa relação médico-paciente e o burnout dos profissionais de saúde são dois grandes problemas no sistema de saúde chinês. No entanto, falta investigação sobre como a relação médico-paciente afeta o burnout. Este estudo analisa esse mecanismo e o papel moderador das horas de trabalho. Foram aplicados questionários e entrevistas semiestruturadas a 249 profissionais de um hospital terciário de classe A em Guangzhou, China. A taxa de burnout foi de 50,1%. A relação médico-paciente correlacionou-se positivamente com exaustão emocional e despersonalização, e negativamente com realização pessoal. As horas de trabalho moderaram significativamente a relação entre relação médico-paciente e despersonalização: quanto mais longas as horas, maior o efeito agravante de uma má relação médico-paciente no burnout. A análise temática das entrevistas identificou duas fontes principais de burnout e medidas de gestão. Este estudo revela que a relação médico-paciente é um fator ambiental chave, com as horas de trabalho a atuar como amplificador, fornecendo aos gestores hospitalares evidências para combater o burnout, melhorar a relação médico-paciente e proteger o direito ao descanso dos profissionais.

**Classificação JEL:** I19, J28

**Palavras-chave:** Profissionais de saúde; Relação médico-paciente; Burnout (ou Esgotamento profissional)

**Abstract**

The tense doctor-patient relationship and medical staff burnout are two major problems troubling China's healthcare system. However, there is a lack of in-depth research on how the doctor-patient relationship affects job burnout. This study investigates the mechanism through which doctor-patient relationship influences job burnout and the moderating role of working hours. A questionnaire survey and semi-structured interviews were conducted with 249 medical staff from a Class A Tertiary hospital in Guangzhou, China. The detection rate of job burnout among participants was 50.1%. Doctor-patient relationship was positively correlated with emotional exhaustion and depersonalization, but negatively correlated with personal achievement. More importantly, working hours significantly moderated the relationship between doctor-patient relationship and depersonalization: the longer the working hours, the stronger the exacerbating effect of a poor doctor-patient relationship on burnout. Thematic analysis of interview data identified two main themes: sources of burnout and management measures. This study reveals that doctor-patient relationship serves as a key environmental factor, with working hours acting as an amplifier, providing hospital managers with evidence-based insights to address burnout, improve doctor-patient relationships, and protect medical staff's right to rest.

**JEL Classification System:** I19, J28

**Key Words:** Medical staff; Doctor-patient Relationship; Job Burnout

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**Glossary of Acronyms and Abbreviations**

EE-Emotional Exhaustion

DP-Depersonalization

PA-Personal Accomplishment

DPR-Doctor-Patient Relationship

# CHAPTER 1-INTRODUCTION

## 1.1 Research Background

Burnout can be defined as a syndrome of emotional exhaustion and cynicism (Maslach & Jackson, 1981). Due to the unique and serious nature of the medical industry, medical professionals often face higher work demands and greater emotional investment in their jobs. Multiple studies have shown that job burnout is prevalent among medical professionals (Beschoner et al., 2019; Romani & Ashkar, 2014; Shanafelt et al., 2012). Given its seriousness, the World Health Organization included burnout in the 11th Revision of the International Classification of Diseases (ICD-11) in 2019, defining it as a syndrome resulting from chronic workplace stress that has not been successfully managed[1].

Job burnout has a profound and multi-dimensional negative impact on medical staff, not only reducing their work engagement but also causing a decline in the quality of care (Zhou et al., 2025). It even poses a serious threat to the mental health of medical staff (Nguyen et al., 2025).

Violence against healthcare workers has gained global attention, but in China, incidents of violence against medical staff caused by patient–doctor disputes occur more frequently and pose greater harm to society (The, 2020). The "2017 White Paper on the Practice Status of Chinese Physicians" points out that 70.67% of the physicians believe that the main sources of work pressure are medical disputes, heavy workload, and patients' unrealistic expectations, 62% of the physicians have experienced medical disputes and 66% have experienced patient–doctor conflicts of varying degrees of severity[2]. Every incident of violence against medical staff attracts widespread public attention. It not only endangers the lives of medical personnel but also infringes upon their personal dignity, further deteriorating the doctor-patient relationship and increasing their psychological burden. Previous study has confirmed that poor doctor-patient relationships can affect the work performance of medical staff and are one of the important factors contributing to burnout (Y. Liu et al., 2020).

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[1] World Health Organization. QD85 Burn-out. In: *International statistical classification of diseases and related health problems*. 11th ed. Geneva: World Health Organization, 2022. https://icd.who.int/browse11/l-m/en#/http://id.who.int/icd/entity/129180281.

[2] Chinese Medical Doctor Association. White Paper on the Practice Status of Chinese Physicians[R]. Beijing: Chinese Medical Doctor Association, 2017. https://www.cmda.net/

The phenomenon of overtime work is very common among medical staff. The Chinese Medical Doctor Association (2017) reported that only 14.43% of physicians worked within the legally stipulated working hours, and less than one-quarter were able to take their full statutory annual leave. The rest rights of medical staff are not guaranteed. The long-term high-pressure working environment not only leads to burnout but also reduces work efficiency and enthusiasm. Insufficient rest time and sleep time can also cause harm to the physical and mental health of medical staff (He & Qian, 2016; Jung et al., 2022).

Although previous research has confirmed that tense doctor-patient relationships can worsen job burnout among medical staff, it remains unclear how this effect operates under different workload conditions. Given the prevalence of overtime work in Chinese healthcare settings, long working hours may act as a key moderating factor that intensifies the psychological impact of poor doctor-patient relationships on burnout. This study therefore aims to explore the effect of doctor-patient relationships on job burnout and to examine the moderating role of working hours, with the goal of providing evidence for hospital managers and policymakers to develop targeted burnout prevention strategies.

### 1.2 Research questions

This study aims to examine how doctor-patient relationships and working hours affect burnout among medical staff. To achieve this aim, the following research questions are addressed:

·Prevalence: What is the current prevalence and severity of job burnout among medical staff in this hospital?

· Correlation: To what extent is the quality of the doctor-patient relationship associated with job burnout among medical staff?

·Moderation: Does working hours moderate the relationship between the doctor-patient relationship and job burnout?

### 1.3 Methodology

This study adopted an explanatory sequential design, with quantitative data collected first, followed by qualitative interviews to explain, combining questionnaire surveys and semi-structured interviews. The quantitative stage examined the relationship between the doctor-patient relationship, working hours, and job burnout, while the qualitative stage used interviews to interpret these results and attempt to propose corresponding improvement measures.

# CHAPTER 2-LITERATURE REVIEW

## 2.1. Job Burnout

### 2.1.1. Concept and Prevalence of Burnout

Burnout, as a psychological syndrome prevalent in helping professions, was first systematically proposed and described by Freudenberger (1974) in his seminal paper "Staff Burn-Out." And the study provided the first detailed description of the multidimensional manifestations of burnout, which included physical exhaustion and illnesses; behavioral quickness to anger, rigidity, stubbornness, and substance abuse; as well as cognitive disillusionment with ideals and a depressed emotional state(p.160-161),(Freudenberger, 1974). American social psychologist Maslach (1976) further deepened the concept of burnout by conducting cross-industry studies on various professional groups (such as those in law, medicine, and other fields). Job burnout describes a syndrome of emotional exhaustion and cynicism that always occurs in helping professions.

The problem of burnout among Chinese medical staff has become extremely serious. Wu et al. (2013) conducted a study on doctors in Chinese hospitals and found that 12.1% of them experienced high levels of burnout, which was higher than that in other Western countries. A study by Guan Yan et al. (2024) on primary care workers revealed a more serious situation. It found that 93.4% of these workers showed symptoms of burnout, and 50.2% worked an average of more than 50 hours per week. Especially for the medical staff of some specialized medical institutions and those with higher positions, such as those working in cancer centers and project directors(Chen et al., 2019). The stress and burnout among program directors (PD) in US radiation oncology residency programs found that the majority of PD patients suffer from severe fatigue, and about 80% of them have moderate levels of burnout. However, it is worth noting that, despite such a high level of burnout, the majority of PDs overall still feel satisfied with their work. (Aggarwal et al., 2015).

### 2.1.2. Measurement

**Maslach Burnout Inventory, MBI：** Maslach and Jackson (1981) developed a quantifiable tool for measuring burnout known as the Maslach Burnout Inventory (MBI). This instrument primarily focuses on assessing burnout in human service professions and is structured around three dimensions: Emotional Exhaustion, Reduced Personal Accomplishment, and

Depersonalization, comprising a total of 22 items. Currently, the MBI mainly consists of three versions: the Human Services Survey (MBI-HSS) for service industries, the Educators Survey (MBI-ES) for educational professionals, and the General Survey (MBI-GS) for broader applications(Maslach & Jackson, 1981).

**Copenhagen Burnout Inventory，CBI：**The core of the Copenhagen Burnout Inventory scale revolves around fatigue and exhaustion. It consists of three subscales designed to measure personal burnout, work-related burnout, and client-related burnout respectively. Its distinctive feature lies in the ability to assess burnout across three interrelated domains within a single inventory, thereby enhancing research efficiency (Kristensen et al., 2005).

### 2.1.3. Influencing Factors of Burnout

**(1) Occupational factors**

The occupational factors usually refer to the demands that one has to face during the work process, such as physical or mental load, work pressure, overtime work, and environmental factors at work. Hospitals are in a particularly high-pressure environment. During the diagnosis and treatment process, doctors not only have to make high-risk judgments but also need to constantly be exposed to various pathogens. The professional factors related to the medical industry can significantly affect the job burnout of medical staff (Abdel-Azeem et al., 2024). Especially during the COVID-19 pandemic, the stress and anxiety levels of frontline workers were higher, and they experienced more burnout compared to non-frontline medical staff, and also suffered from psychological problems. And the stressors in daily work (Beschoner et al., 2019), such as working overtime, dealing with unreasonable expectations and negative emotions from patients. Medical staff not only need to perform physical labor in their work, but also need to put in a great deal of emotional labor. This will continuously deplete the energy of medical staff, easily leading to burnout (Luo et al., 2025).

**(2) Individual factors**

The subject of burnout is the individual, and its occurrence is closely linked to personal factors, such as behavioral lifestyle, personality, and coping mechanisms for stress.

Burnout is associated with unhealthy lifestyle behaviors, such as physical inactivity, obesity, and heavy drinking. Moreover, it is linked not only to individual risk factors but also to the co-occurrence of multiple unhealthy behaviors. This suggests that unhealthy behaviors may make

individuals more susceptible to burnout, while burnout, in turn, can comprehensively undermine the psychological and physical capacity needed to maintain a healthy lifestyle. (Ahola et al., 2012).

Coping styles refer to the measures and methods individuals adopt to resolve or alleviate stress when facing pressure. In 2021, Bartkowiak et al. investigated the relationship between stress coping styles and occupational burnout among Polish military officers, exploring the role of age in this dynamic. The findings revealed that among the three stress coping styles (task-oriented, emotion-oriented, and avoidance-oriented), emotion-oriented coping showed a significant positive correlation with all dimensions of burnout. Additionally, age was negatively correlated with emotion-oriented coping, indicating that stress coping styles can predict occupational burnout, and older officers tend to use emotion-oriented coping strategies less frequently when dealing with stress (Bartkowiak et al., 2021).

Feng et al. (2022) highlighted that personality traits play a critical role in occupational burnout, with neuroticism being a core risk factor. Neuroticism not only positively predicts job burnout but also acts as a moderating variable by reducing self-efficacy and psychological resilience, thereby exacerbating its negative impact on burnout. Individuals with high neuroticism are at an amplified risk of experiencing occupational burnout(Feng et al., 2022).

**(3) Social and Organizational Factors**

The factors influencing job burnout are closely related to organizational and social factors. For example, a survey of dentists in the UK revealed that external regulatory pressure and fear of lawsuit were the primary sources of stress, and these were significantly associated with declining mental health and suicidal tendencies (Collin et al., 2019). There are also some factors that can prevent the occurrence of burnout. Organizational support, as a working resource in the JD-R model, not only directly alleviates job burnout but also indirectly reduces the level of job burnout through job satisfaction (Fang, 2024). A study conducted on medical students has found that lifelong learning ability is a protective factor against burnout, while feelings of loneliness increase the risk of burnout (Gradiski et al., 2025). Furthermore, the practice model of the hospital also affects the level of burnout among medical staff. Professional autonomy and work flexibility are protective factors against burnout (Sartori et al., 2025). A study focusing on Jordanian midwives revealed that organizational factors—such as a healthy work environment

and support from colleagues and leadership—not only directly affect burnout but also indirectly influence it by impacting job satisfaction. Therefore, improving the work environment and organizational support systems can effectively enhance employee satisfaction and reduce the risk of occupational burnout(Al-Amer et al., 2025).

Among social factors influencing occupational burnout, social support is considered a key variable. Abdulmohdi (2024) investigated burnout among UK nurses during the second wave of the COVID-19 pandemic. The findings revealed that perceived organizational support, resilience, and the pandemic's impact on social roles were significant predictors of burnout. Organizational support enhances nurses' resilience in coping with stress and serves as a crucial protective factor against burnout (p.5-6). Additionally, the authors identified a unique psychosocial variable: role conflict during the pandemic exacerbates exhaustion and burnout. This indicates that when studying the impact of social factors on burnout, it is essential to consider not only macro-level social support but also the effect of excessive work demands on individuals' personal lives at the micro level.

### 2.2. Doctor-patient relationship

#### 2.2.1. Concept

The doctor-patient relationship is a form of interpersonal interaction, with its core participants being patients and doctors. The current state of doctor-patient relationships in China is challenging, and such relationships are a crucial component of high-quality healthcare. Research by Wu et al. (2021) highlights that patient trust is central to the doctor-patient relationship. From the patient's perspective, they place greater emphasis on the doctor's benevolence rather than their competence, which contrasts with doctors' own perceptions, as physicians tend to prioritize professional expertise(Wu et al., 2022).

#### *2.2.2.* Measurement

The Difficult Doctor-Patient Relationship-Ten-Item Version (DDPR-10), developed by Hahn et al. (1996), is an improved scale for assessing "difficult" doctor-patient relationships, based on the DDPRQ-30. It measures the doctor's experiences during interactions with patients from the physician's perspective. The items cover the doctor's subjective emotions, evaluations of the patient's objective behaviors, and specific scenarios that combine both(S. R. Hahn, 2001; S. R. Hahn et al., 1996).

The SEGUE Framework, proposed by Makoul (2001), is a widely used tool in North America for evaluating doctor-patient communication skills. It encompasses five key components: setting the stage, eliciting information, giving information, understanding the patient, and ending the encounter. This framework can be applied in medical education, clinical assessment, and communication research. Compared to other evaluation tools, the SEGUE Framework places greater emphasis on task orientation, making the assessment of communication skills more systematic (Makoul, 2001).

### 2.2.3.Correlation between doctor-patient relationship and burnout

The conflicts between doctors and patients are closely related to the "medical revenue supports the hospitals" system. Liu (2019) identified the origin and consequences of thsi system: This system was caused by the "medicine markup policy" established in the early days of the funding of China. Under the circumstances at that time, this policy alleviated the government's financial pressure and also increased the income of public hospitals. However, if this is cancelled, it will result in a significant decline in the hospital's total revenue, and even lead to a loss. It needs to be compensated through government subsidies and an increase in service prices. Hsiao (2008) further revealed the mechanism by which the " medical revenue supports the hospitals " system affects the doctor-patient relationship: This unreasonable incentive mechanism distorted the behavior of doctors, allowing economic interests to override professional ethics. As a result, patients lost trust in doctors, seriously damaging the doctor-patient relationship.

Moreover, the doctor-patient relationship can be seen as an external environmental factor that affects the physicians' psychological states and work attidude, positive doctor-patient relationships not only directly reduce burnout but also indirectly alleviate it by enhancing job satisfaction and social support (Liang et al., 2024; Zhang, 2020). Specifically, different dimensions of burnout have varying effects on the quality of medical care. Among them, the depersonalization dimension showed the strongest correlation with safety incidents during treatment, low professionalism, and patient dissatisfaction, which contribute to a tense doctor-patient relationship (Hodkinson et al., 2022; Ye et al., 2019). A 2023 study on Shanghai's pediatric staff during the pandemic found that the doctor-patient relationship was positively correlated with EE and cynicism, and negatively correlated with PA. Low salary satisfaction, intention to leave, and lack of psychological support predicted EE, while family support

protected against cynicism (Lyu et al., 2023).

In China, medical disputes occur frequently, and the tense relationship between doctors and patients is a widespread phenomenon and both doctors and patients generally agree that their relationship is tense (Guo et al., 2019; Mao et al., 2021). Regarding the causes of the tense doctor-patient relationship, objectively, it is mostly related to the marketization of public hospitals, the low professional skills of doctors, and the shortage of medical resources. Subjectively, it is mostly associated with patients' unreasonable expectations and communication issues (Song & Wang, 2020).

For doctors, during the interaction with patients, they are prone to being influenced by patients. The interaction between doctors and patients can affect the psychological state of the doctors. Further research has found that within the doctor-patient relationship, physicians who tend to share decision-making power with patients and respect patient autonomy are more likely to experience burnout. This suggests that in contexts with inadequate support systems and insufficient resources, "power-sharing" may deplete physicians' sense of self-efficacy and control, leading to job burnout. (Ahmad et al., 2018). Meanwhile, the empathy of medical staff plays a crucial role in determining the quality of the doctor-patient relationship,to a large extent. Healthy empathy serves as a resource for physicians, while unhealthy empathy can cause them distress. This refers to the anxiety and unease that arise in physicians as they witness patient suffering, thereby elucidating the psychological mechanism underlying burnout caused by an unhealthy doctor-patient relationship (Zhou, 2025); Patient violence, in particular, is more destructive to doctors. Compared with physical violence, doctors who experience verbal violence from patients are more likely to suffer from emotional exhaustion and develop burnout (Wu et al., 2020). In addition, there is gender differences in the incidence of violence in clinical work. All forms of mistreatment (discrimination, abuse, harassment) were more common among women. As a result, women are more likely to experience burnout and suicidal thoughts (Hu et al., 2019). All forms of mistreatment (discrimination, abuse, harassment) were more common among women. As a result, women are more likely to experience burnout and suicidal thoughts (Dong et al., 2013).

Moreover, the working conditions and environment of doctors also have a significant impact on their medical practice, which in turn affects the quality and safety of medical care.

Patients of highly burnt-out doctors tend to skip the pleasantries and get straight to the point—stating their symptoms directly. This indicates that patients are not simply passive in the doctor-patient relationship; instead, they actively adjust how they speak based on whether the doctor seems burned out (Ratanawongsa et al., 2008). Doctors who had more disputes with patients in the past year were more likely to engage in defensive medicine. Unlike doctors in other countries, defensive medicine among Chinese doctors is not only aimed at increasing income, but is more often a form of self-protection to avoid gaps in evidence in the event of medical lawsuit. However, this practice is likely to further worsen the doctor-patient relationship (He, 2014). Many studies have shown that the mental health of doctors significantly affects the quality of doctor-patient relationships and medical practices. The doctor's job burnout and job satisfaction can affect whether patients actively choose to change doctors (Nørøxe et al., 2019). And doctors with high levels of burnout have a high rate of referrals, which may lead to medical waste (Kushnir et al., 2014). However, some studies have shown that physician burnout does not necessarily have a negative impact on patients, Physicians experiencing burnout tend to pay more attention to patients' psychological states and increase their consultation time. “In order to burn out, one has to be first 'on fire’.” those doctors who were already highly engaged and had a great deal of enthusiasm for their patients are the ones who are likely to become exhausted. On the other hand, doctors who are indifferent to their patients are less likely to experience burnout (Zantinge et al., 2009). The relationship between medical staff's burnout and the doctor-patient relationship is complex and dynamic. Establishing a good doctor-patient relationship plays an important role in alleviating medical staff burnout.

**2.3 Working Hours and Burnout**

Heavy workload will seriously affect the working status and efficiency of medical staff, and cause harm to their physical and mental health. Long working hours not only cause doctors to become exhausted, but also lead to a decline in job satisfaction and poor health conditions and could even lead to more medical disputes. (He & Qian, 2016; Jung et al., 2022). The physical and mental health of Chinese medical workers has been severely challenged, during the COVID-19 pandemic, a large number of patients and strict prevention and treatment standards led to longer working hours , who also had to face the risk of infection (Q. Liu et al., 2020). And long working hours not only takes up the rest and recovery time of medical staff, but also

disrupts the body's natural rhythms, leading to a decline in sleep quality (Virtanen et al., 2009), affecting the work performance and efficiency of medical staff. Reducing working hours, optimizing shift scheduling and working processes can effectively reduce burnout.

The working status of medical staff can affect the patient's experience from both objective and subjective perspectives. On an objective level, by devoting more consultation time and working hours to patients, doctors can enhance the communication, comprehensiveness and accessibility aspects of the patient experience. On the subjective level, the job satisfaction has a positive impact on the patient's medical visit experience (Schäfer et al., 2020). However, excessive working hours mean that medical staff are exposed to stressful doctor-patient relationships for a longer period, continuously depleting their emotional resources, which in turn leads to burnout.

**2.4 Conceptual Model**

The JD-R model categorizes work-related factors into two types: job demands and job resources. The JD-R Model not only focuses on the negative impacts brought about by work-related stress, but also takes into account those factors that can enhance work engagement and stimulate enthusiasm for work (Bakker & Demerouti, 2007).

Work demands refer to the physical and mental efforts or skills that employees need to continuously exert in their work, and the sources can be at any level - physical, psychological, social, or organizational. Common work demands include high-load work, emotional labor, and handling interpersonal relationships. When employees are faced with high work demands without adequate rest and recovery, it will cause them to become physically and mentally exhausted, ultimately leading to burnout and health problems (Edú-Valsania et al., 2022).

Work resources refer to the factors that can help achieve goals, reduce energy consumption, and promote personal growth. The work resources themselves do not eliminate the work demands, but they can reduce the harm caused by those demands. The emergence of work resources is not to make employees satisfied with their jobs, but to provide them with motivation and energy, enabling them to continue working and contributing to the high performance for the company. Therefore, in the context of high work demands, work resources become particularly important. When there is an abundance of work resources, an increase in

work demands has little impact on the stress and tension at work, as well as on work motivation.

Although the nature of the job demands themselves is not negative, moderate job demands can stimulate autonomy and a sense of achievement. However, when high work demands coexist with insufficient resources persist, the work demands will transform into stressors. This long-term fatigue can lead to employee burnout.

This study applies the Job Demands-Resources (JD-R) model to examine burnout among medical staff in China. It conceptualizes long working hours as a job demand and, drawing on emotional labor theory, treats doctor-patient relationships as an emotional job demand (Figure 2.1). While previous research has extensively explored the antecedents and consequences of burnout, few studies have investigated doctor-patient relationships from this emotional demand perspective, particularly in resource-constrained developing countries like China. Using empirical data from a public tertiary hospital in Guangzhou, this study examines how doctor-patient relationships affect burnout and whether working hours moderate this relationship. It extends the JD-R model to healthcare settings and provides new contextual insights from China.

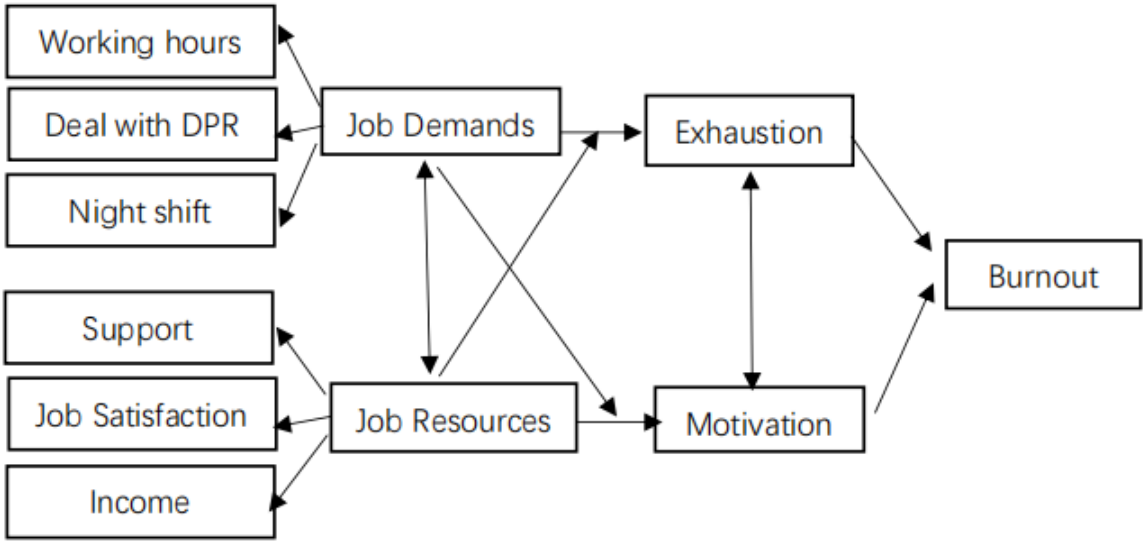



**Figure 2.1** *Pathway Diagram of Job Burnout Impact Based on JD-R Model*

## 2.5 Research Hypothesis

Based on previous literature on medical staff burnout and its influencing factors, reports from the Chinese Medical Association, and medical-related social news. It can be confirmed that in

the working environment of medical staff in China, the tense doctor-patient relationship is a complex and serious issue. Existing research has demonstrated that the doctor-patient relationship is a significant influencing factor of occupational burnout. The phenomenon of medical staff working overtime is widespread globally, and it is particularly prominent in countries with an imperfect primary healthcare system. Therefore, this study mainly explores the impact of the doctor-patient relationship on burnout, with working hours as a moderating variable, and proposes the following research hypotheses:

Hypothesis 1: The doctor-patient relationship has a significant impact on burnout among medical staff.

Hypothesis 2: Working hours play a moderating role in the relationship between the doctor-patient relationship and burnout.

This study selects medical staff from a tertiary hospital in Guangzhou as the research subjects. It examines the relationship between doctor-patient interaction and occupational burnout, and further explores whether working hours influence this relationship. Based on the hypotheses above, the study treats doctor-patient relationship as the independent variable, occupational burnout as the dependent variable, and working hours as the moderating variable. The initial model is constructed as follows:

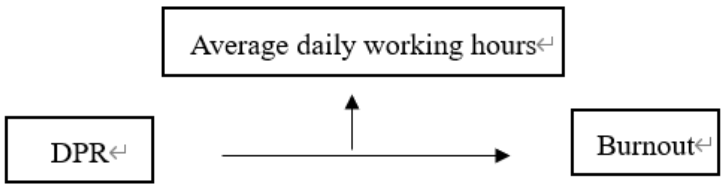



**Figure 2.2** *The Hypothesis Model*

# CHAPTER 3-METHOD

## 3.1 Research Design

According to Creswell and Plano Clark (2018), an explanatory sequential mixed methods design first collects quantitative data and then collects qualitative data to help explain the quantitative results. This study adopts this design. The quantitative stage aims to examine the prevalence of job burnout and its relationship with the doctor-patient relationship and working hours. The qualitative research stage aims to interpret the results of the quantitative research, particularly to explore management strategies that can alleviate job burnout. Semi-structured interviews were conducted with a middle-level manager and a frontline clinical doctor in the hospital. The thematic analysis method based on the six-stage framework proposed by Braun and Clarke (2006) was adopted to analyze the interview data.

## 3.2 Quantitative Phase

### 3.2.1 Data and Sample

For this study, my data was obtained from a questionnaire survey conducted at a tertiary hospital in Guangzhou, China. During my internship at this hospital, in October 2025, questionnaires were sent to all 384 medical staff of the hospital through the online group by scanning the QR codes of the questionnaires. A total of 252 questionnaires were collected. After screening, those with too short response times and those with regular repetitive responses were excluded. In total, 249 valid questionnaires were obtained, with a recovery rate of 64.8%. Among the 249 medical staff surveyed, the sample was predominantly female (84.3%), aged 20–39 years (87.2%) and held a bachelor's degree (48.6%). Most participants were nurses (37.3%) or doctors (28.5%), held junior or intermediate titles (65%), and earned an annual income of ≤150,000 yuan (48.6%). The majority had ≤5 years of work experience (39.8%) and worked 8–10 hours per day (83.1%), with 34.1% requiring night shifts (Table 3.1).

**Table 3.1** *Basic information of research subjects*

| Variable | | Quantity | Percentage（%） |
|---|---|---|---|
| Gender | Male | 39 | 15.7 |
| | Female | 210 | 84.3 |
| Age | ≤20 | 3 | 1.2 |
| | 20-29 | 102 | 41 |
| | 30-39 | 115 | 46.2 |
| | 40-49 | 23 | 9.2 |
| | ≥50 | 6 | 2.4 |
| Educational Level | Associate degree or Lower | 40 | 16.1 |
| | Bachelor's Degree | 121 | 48.6 |
| | Master's Degree or Above | 88 | 35.3 |
| Job Title | Junior Title | 80 | 32.1 |
| | Intermediate Title | 82 | 32.9 |
| | Associate Senior Title | 13 | 5.2 |
| | Full Senior Title | 10 | 4 |
| | No Title | 64 | 25.7 |
| Position | Clinical Physician | 71 | 28.5 |
| | Nurse | 93 | 37.3 |
| | Medical Technicians | 34 | 13.7 |
| | Other | 51 | 20.5 |
| Annual Income | ≤150,000yuan | 121 | 48.6 |
| | 150,000-300,000yuan | 97 | 39 |
| | 300,000-450,000yuan | 23 | 9.2 |
| | 450,000-600,000yuan | 5 | 2 |
| | ≥600,000yuan | 3 | 1.2 |
| Years of working | ≤5years | 99 | 39.8 |
| | 6-10years | 64 | 25.7 |
| | 11-15years | 58 | 23.3 |
| | 16-20years | 15 | 6 |
| | ≥20years | 13 | 5.2 |
| Average daily working hours | ＜8h | 16 | 6.4 |
| | 8-10h | 207 | 83.1 |
| | ＞10h | 26 | 10.4 |
| Night Shift | Yes | 85 | 34.1 |
| | No | 164 | 65.9 |
| Total | | 249 | |

### 3.2.2 Variables and Measures

The questionnaire adopts a mature scale that is widely used in China and has a Chinese version (Fang, 2024; Yang, 2011)： To measure the burnout level, the questionnaire adopts the Maslach Burnout Inventory - Human Services Survey (MBI-HSS) developed by Maslach and Jackson (1981). This scale consists of 22 items and includes 3 dimensions: emotional exhaustion (9 items), depersonalization (5 items), and personal accomplishment (8 items). It uses a 7-point rating scale from 0 to 6 (0 = Never, 6 = Everyday). The scoring criteria for the three dimensions are based on the norm of burnout for medical staff established by Ye Zhihong et al. (2008) through a survey of 1,320 nurses in Hangzhou. The two dimensions: Emotional Exhaustion and Depersonalization, the higher the score, the greater the degree of burnout. Specifically, the scores of the EE: ≤ 17, 18-26, and ≥ 27 are classified as low, moderate, and severe burnout; the scores of the DE: ≤ 3, 4-7, and ≥ 8 are classified as low, moderate, and severe burnout. In the "Personal Accomplishment" dimension, a lower score indicates a higher level of burnout. Specifically, the scores of the PA: ≥ 33, 25 - 32, and ≤ 24 are classified as low, moderate, and severe burnout, respectively. The degree of occupational burnout is positively correlated with Emotional Exhaustion and Depersonalization and negatively correlated with Personal Accomplishment. The Cronbach's α coefficients for each dimension are all greater than 0.8. The classification of overall burnout was determined using the criteria proposed by Chinese scholar Li Yongxin (Li, 2005). According to this standard:

·**Mild burnout** is indicated when the score on any one of the three dimensions exceeds the cutoff point.

·**Moderate burnout** is indicated when the scores on any two dimensions exceed their respective cutoff points.

·**Severe burnout** is indicated when the scores on all three dimensions exceed the cutoff points.

The cutoff points for each dimension were based on the criteria established by Ye Zhihong: Emotional Exhaustion ≥ 27, Depersonalization ≥ 8, and Personal Accomplishment ≤ 24.

To measure the doctor-patient relationship, the questionnaire used was the Difficult Doctor-

Patient Relationship Questionnaire (DDPRQ-10) developed by Hahn, (S. R. Hahn, 2001; S. R. Hahn et al., 1996). consisting of 10 items. It uses a 1 (not at all) - 6 (a great deal) scoring method, with some questions reversed for scoring. The total score ranges from 10 to 60, with higher scores indicating a more difficult doctor-patient relationship as perceived by the doctor. The Cronbach's α coefficient of this scale is 0.859.

#### 3.2.3 Data Analysis:

This study employed SPSS 27.0 for data analysis. Before conducting the analysis, the normality of the residuals was tested, and the data met the requirements for regression analysis. Pearson correlation was used to explore the relationship between the doctor-patient relationship and job burnout, and hierarchical regression was employed to investigate the influence of the doctor-patient relationship and working hours on job burnout.

### 3.3 Qualitative Phase

#### 3.3.1 Interview Participants

Semi-structured interviews were conducted online on December 30, 2025, at 3:00 pm China time, with one hospital middle-level manager and one senior frontline clinician. Each interview lasted approximately 15–20 minutes. It was hoped to gain an in-depth understanding of the underlying reasons and possible solutions behind these phenomena from a dual perspective.

#### 3.3.2 Interview Protocol

The interview questions were mainly designed based on the overall burnout situation identified in the quantitative research, as well as the impact of working hours and doctor-patient relationships on burnout. The specific interview questions can be found in the interview outline (Appendix B).

#### 3.3.3 Data Analysis

Data analysis adopts the Thematic Analysis method proposed by Braun and Clarke (2008). The analysis process follows the following six stages:

1. Familiarizing yourself with your data
2. Generating initial codes
3. Searching for themes
4. Reviewing themes
5. Defining and naming themes

6. Producing the report

To ensure the credibility of the qualitative research, this study constructed a thematic self-encoding table, the detailed coding information is provided in the Empirical Study Chapter (see Table 4.9), which comprehensively recorded the process from the original data to the initial coding, sub-themes, and core themes.

### 3.4 Integration of Methods

Following the interpretive sequential design proposed by Creswell and Plano Clark (2018), this study integrates the outcomes of the two stages of quantitative and qualitative research in the discussion section. The quantitative research presents key findings, while semi-structured interviews delve into the underlying reasons and potential management strategies from a dual perspective.

## CHAPTER 4-THE EMPIRICAL STUDY

### 4.1 The current situation of medical staff's burnout

Based on the study by Ye et al. (2008), which established burnout norms for Chinese healthcare professionals through a survey of 1,320 nurses in Hangzhou, the medical staff in this study scored 22.24 ± 12.77 for emotional exhaustion, 32.58 ± 9.38 for personal accomplishment, and 6.85 ± 6.74 for depersonalization, all indicating a moderate level of burnout ( Table 4.1).

**Table 4.1** *Burnout Score*

| Dimension | Score（M±SD） |
|---|---|
| Emotional Exhaustion | 22.24±12.77 |
| Personal Accomplishment | 32.58±9.38 |
| Depersonalization | 6.85±6.74 |

The overall severity of burnout was assessed using criteria proposed by Chinese scholar Li (2005) and Ye et al. (2008) standards. Among the medical personnel in this study, 51.1% exhibited varying degrees of job burnout. Among them, 17.3% had mild burnout, 24.5% had moderate burnout, and 8.8% had severe burnout. More than a quarter (24.5%) of the medical personnel were in a moderate or higher level of burnout (Table 4.2).

**Table 4.2** *Level of Burnout*

| Burnout Level | Quantity | Percentage（%） |
|---|---|---|
| No Burnout | 123 | 49.9 |
| Mild Burnout | 43 | 17.3 |
| Moderate Burnout | 61 | 24.5 |
| Severe Burnout | 22 | 8.8 |

### 4.2. Correlation Analysis between DPR and Burnout

A Pearson correlation analysis was conducted to examine the associations between doctor-patient relationships and job burnout, including its dimensions (emotional exhaustion, depersonalization, and personal accomplishment). The results revealed that doctor-patient relationships showed significant positive correlations with emotional exhaustion ($r = 0.664$, $p < 0.001$), depersonalization ($r = 0.648$, $p < 0.001$), and the total burnout score ($r = 0.731$, $p < 0.001$), while demonstrating a significant negative correlation with personal accomplishment (r

= -0.465, $p < 0.001$).

Given that higher scores on the Difficult Doctor-Patient Relationship Scale indicate poorer doctor-patient relationships, these findings suggest that worse doctor-patient relationships are associated with higher levels of emotional exhaustion and depersonalization, lower personal accomplishment, and higher overall burnout scores among healthcare professionals, collectively reflecting more severe burnout. Overall, the quality of physician-patient relationships is closely linked to the job burnout experienced by medical staff (Table 4.3).

**Table 4.3** *The correlation between the three dimensions of Burnout and DPR*

| Variable | | DPR | EE | PA | DP | Burnout |
|---|---|---|---|---|---|---|
| DPR | r | 1 | 0.664** | -0.465** | 0.648** | 0.731** |
| | Sig. | | <0.001 | <0.001 | <0.001 | < 0.001 |

### 4.3 Hierarchical Regression Analysis of the Association between DPR and Burnout

This study employed hierarchical regression analysis to examine the associations between physician-patient relationships and job burnout among healthcare professionals. To control potential confounding effects, demographic variables were first entered into the model as control variables, followed by the introduction of the doctor-patient relationship variable in the second step. This approach allows for the precise assessment of the independent explanatory contribution of doctor-patient relationships to job burnout after accounting for the influence of demographic factors, and all VIF values were below 4, indicating no multicollinearity issues..

After controlling demographic variables, doctor-patient relationships had a significant positive effect on job burnout ($\beta = 0.715$, $p < .001$). After adding the doctor-patient relationship variable, the explained variance increased by 45.9% (Table 4.4).

**Table 4.4** *Hierarchical regression of doctor-patient relationship and job burnout*

| Variable | Model 1 | | | | Model 2 | | | |
|---|---|---|---|---|---|---|---|---|
| | B | SE | β | p | B | SE | β | p |
| | 37.870 | 9.837 | | ＜0.001 | -12.732 | 7.587 | | 0.095 |
| Gender | -4.216 | 4.311 | -0.065 | 0.329 | -2.390 | 3.017 | -0.037 | 0.429 |
| Age | 2.421 | 4.129 | 0.077 | 0.558 | 3.613 | 2.888 | 0.115 | 0.212 |
| Educational level | 4.817 | 3.052 | 0.142 | 0.116 | 1.843 | 2.143 | 0.054 | 0.391 |
| Job title | 0.397 | 2.609 | 0.017 | 0.879 | -1.388 | 1.828 | -0.061 | 0.448 |
| Position-Clinical physician | -4.698 | 5.069 | -0.090 | 0.355 | 3.880 | 3.586 | 0.075 | 0.280 |
| Position-Medical technicians | -7.082 | 5.019 | -0.104 | 0.160 | -4.362 | 3.514 | -0.064 | 0.216 |
| Position-Other | 0.530 | 4.810 | 0.009 | 0.912 | -1.486 | 3.366 | -0.026 | 0.659 |
| Annual income | 1.308 | 2.606 | 0.045 | 0.616 | -0.763 | 1.827 | -0.027 | 0.677 |
| Years of working | -0.834 | 2.453 | -0.041 | 0.734 | -1.379 | 1.716 | -0.068 | 0.422 |
| Night shift | -9.214 | 3.502 | -0.186 | 0.009 | -0.985 | 2.503 | -0.020 | 0.694 |
| DPR | | | | | 2.066 | 0.131 | 0.715 | ＜0.001 |
| $R^2$ | 0.106 | | | | 0.565 | | | |
| $\Delta R^2$ | | | | | 0.459 | | | |
| F | 2.813 | | | | 27.940 | | | |
| Sig. | 0.003 | | | | ＜0.001 | | | |
| Sig.ΔF | 0.003 | | | | ＜0.001 | | | |

### 4.4 Analysis of Moderating Effects

To examine the mechanism through which doctor–patient relationships and working hours affect burnout, this study conducted multiple linear regression analysis using doctor–patient relationship as the independent variable, working hours as the moderator, and the three dimensions of burnout as dependent variables, while controlling for demographic variables. The regression analysis proceeded in three steps:

Step 1: Demographic variables were included as control variables.

Step 2: The centered scores of DPR and working hours were added as main predictors.

Step 3: The interaction term between DPR and working hours was introduced.

#### 4.4.1 Hierarchical Regression Analysis of Doctor–Patient Relationship and Working Hours on the Depersonalization Dimension

Under the control of demographic variables, physician-patient relationships and working hours explained 44.7% of the variance in the outcome. After adding the interaction term between

physician-patient relationships and working hours to the model, the explained variance increased by 1.1%, reaching 45.8%. Working hours positively strengthened the influence of physician-patient relationships on the depersonalization dimension (β = 0.109, p = 0.027), indicating a positive moderating role of working hours in the relationship between the two (Table 4.5).

**Table 4.5** *Regression analysis of doctor-patient relationship, working hours and de-personalization*

| Variable | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | SE | β | p | SE | β | p | SE | β | p |
| | 3.167 | | 0.005 | 2.475 | | 0.001 | 2.454 | | 0.002 |
| Gender | 1.250 | -0.060 | 0.376 | 0.978 | -0.037 | 0.482 | 0.970 | -0.037 | 0.476 |
| Age | 1.198 | -0.166 | 0.215 | 0.937 | -0.138 | 0.188 | 0.932 | -0.154 | 0.140 |
| Educational level | 0.885 | 0.107 | 0.240 | 0.699 | 0.036 | 0.614 | 0.693 | 0.030 | 0.670 |
| Job title | 0.757 | 0.125 | 0.285 | 0.592 | 0.052 | 0.57 | 0.591 | 0.072 | 0.425 |
| Position-Clinical physician | 1.470 | -0.027 | 0.782 | 1.178 | 0.108 | 0.171 | 1.172 | 0.093 | 0.238 |
| Position-Medical technicians | 1.456 | -0.045 | 0.544 | 1.138 | -0.008 | 0.889 | 1.131 | -0.016 | 0.787 |
| Position-Other | 1.395 | 0.061 | 0.466 | 1.090 | 0.029 | 0.656 | 1.082 | 0.023 | 0.720 |
| Annual income | 0.756 | 0.079 | 0.387 | 0.596 | 0.009 | 0.902 | 0.593 | 0.023 | 0.750 |
| Years of working | 0.712 | 0.087 | 0.478 | 0.559 | 0.071 | 0.458 | 0.555 | 0.060 | 0.530 |
| Night shift | 1.016 | -0.150 | 0.038 | 0.816 | 0.003 | 0.956 | 0.811 | 0.012 | 0.832 |
| Working hours | | | | 0.873 | 0.042 | 0.430 | 0.867 | 0.036 | 0.497 |
| DPR | | | | 0.043 | 0.629 | ＜0.001 | 0.043 | 0.636 | ＜0.001 |
| DPR×Working hours | | | | | | | 0.095 | 0.109 | 0.027 |
| R2 | | 0.084 | | | 0.447 | | | 0.458 | |
| ΔR2 | | | | | 0.363 | | | 0.011 | |
| F | | 2.183 | | | 15.879 | | | 15.282 | |
| Sig. | | 0.020 | | | ＜0.001 | | | ＜0.001 | |
| Sig.ΔF | | 0.020 | | | ＜0.001 | | | 0.027 | |

### 4.4.2 Hierarchical Regression Analysis of the Effects of Physician-Patient Relationships and Working Hours on Emotional Exhaustion and Personal Accomplishment

After controlling for the influence of demographic variables and main effect variables, the

inclusion of the interaction term hardly increased the explained variance in either dimension. Specifically, in the emotional exhaustion dimension, $\Delta R^2 = 0.01$, P = 0.64 (Table 4.6); in the personal accomplishment dimension, $\Delta R^2 = 0.01$, p = 0.076 (Table 4.7). No moderating effect was observed in either case.

**Table 4.6** *Hierarchical regression analysis of the doctor-patient relationship, working hours and emotional exhaustion*

| Variable | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | SE | β | p | SE | β | p | SE | β | p |
| | 5.324 | | 0.004 | 4.079 | | ＜0.001 | 4.086 | | ＜0.001 |
| Gender | 2.333 | -0.039 | 0.558 | 1.787 | -0.018 | 0.720 | 1.790 | -0.018 | 0.720 |
| Age | 2.235 | 0.036 | 0.785 | 1.713 | 0.059 | 0.561 | 1.720 | 0.055 | 0.584 |
| Educational level | 1.652 | 0.184 | 0.040 | 1.277 | 0.119 | 0.086 | 1.280 | 0.118 | 0.090 |
| Job title | 1.412 | -0.005 | 0.967 | 1.082 | -0.081 | 0.356 | 1.090 | -0.077 | 0.385 |
| Position-Clinical physician | 2.743 | -0.096 | 0.327 | 2.152 | 0.032 | 0.675 | 2.164 | 0.029 | 0.707 |
| Position-Medical technicians | 2.716 | -0.070 | 0.339 | 2.080 | -0.031 | 0.579 | 2.087 | -0.033 | 0.561 |
| Position-Other | 2.603 | 0.011 | 0.894 | 1.992 | -0.022 | 0.722 | 1.997 | -0.024 | 0.708 |
| Annual income | 1.410 | 0.123 | 0.174 | 1.088 | 0.046 | 0.513 | 1.094 | 0.049 | 0.489 |
| Years of working | 1.328 | -0.004 | 0.971 | 1.021 | -0.012 | 0.896 | 1.024 | -0.014 | 0.877 |
| Night shift | 1.895 | -0.167 | 0.019 | 1.491 | -0.008 | 0.892 | 1.497 | -0.006 | 0.918 |
| DPR | | | | 0.078 | 0.630 | ＜0.001 | 0.079 | 0.632 | ＜0.001 |
| Working hours | | | | 1.596 | 0.081 | 0.114 | 1.600 | 0.080 | 0.121 |
| DPR×Working hours | | | | | | | 0.176 | 0.022 | 0.640 |
| R2 | | 0.111 | | | 0.485 | | | 0.486 | |
| ΔR2 | | | | | 0.374 | | | 0.001 | |
| F | | 2.976 | | | 18.526 | | | 17.061 | |
| Sig. | | 0.001 | | | ＜0.001 | | | ＜0.001 | |
| Sig.ΔF | | 0.001 | | | ＜0.001 | | | 0.640 | |

**Table 4.7** *Hierarchical regression analysis of the doctor-patient relationship, working hours and personal accomplishment*

| Variable | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | SE | β | p | SE | β | p | SE | β | p |
| | 4.015 | | ＜0.001 | 3.574 | | ＜0.001 | 3.558 | | ＜0.001 |
| Gender | 1.760 | 0.067 | 0.324 | 1.568 | 0.044 | 0.476 | 1.561 | 0.043 | 0.476 |
| Age | 1.686 | -0.264 | 0.051 | 1.503 | -0.302 | 0.013 | 1.500 | -0.317 | 0.009 |
| Educational level | 1.246 | -0.027 | 0.768 | 1.120 | 0.046 | 0.581 | 1.116 | 0.040 | 0.625 |
| Job title | 1.065 | 0.039 | 0.738 | 0.950 | 0.083 | 0.429 | 0.950 | 0.102 | 0.331 |
| Position-Clinical physician | 2.069 | 0.077 | 0.442 | 1.888 | -0.055 | 0.545 | 1.887 | -0.070 | 0.445 |
| Position-Medical technicians | 2.049 | 0.132 | 0.081 | 1.825 | 0.110 | 0.102 | 1.820 | 0.103 | 0.124 |
| Position-Other | 1.963 | 0.036 | 0.671 | 1.748 | 0.056 | 0.461 | 1.741 | 0.050 | 0.505 |
| Annual income | 1.064 | 0.111 | 0.234 | 0.955 | 0.142 | 0.090 | 0.954 | 0.155 | 0.064 |
| Years of working | 1.001 | 0.159 | 0.198 | 0.896 | 0.196 | 0.077 | 0.893 | 0.186 | 0.093 |
| Night shift | 1.429 | 0.132 | 0.070 | 1.309 | 0.037 | 0.581 | 1.306 | 0.045 | 0.497 |
| DPR | | | | 0.068 | -0.478 | ＜0.001 | 0.068 | -0.472 | ＜0.001 |
| Working hours | | | | 1.400 | 0.099 | 0.106 | 1.396 | 0.094 | 0.126 |
| DPR×Working hours | | | | | | | 0.153 | 0.102 | 0.076 |
| R2 | | 0.062 | | | 0.265 | | | 0.275 | |
| ΔR2 | | | | | 0.203 | | | 0.010 | |
| F | | 1.578 | | | 7.080 | | | 6.841 | |
| Sig. | | 0.114 | | | ＜0.001 | | | ＜0.001 | |
| Sig.ΔF | | 0.114 | | | ＜0.001 | | | 0.076 | |

### 4.5 Simple Slope Analysis

To further investigate the specific pattern and direction of the moderating effect, we conducted simple slope analysis after confirming the significance of the interaction term. This method quantifies the strength and significance of the influence of the independent variable on the dependent variable at different levels (low, medium, high) of the moderator, thereby moving beyond a binary judgment of "whether moderation exists" to reveal the substantive pattern of "how moderation operates." Specifically, following the recommendation of Aiken and West (1991), we calculated and tested simple slopes at one standard deviation above and below the

mean of the moderator to intuitively illustrate the conditional nature of the moderating effect.

The simple slope analysis (Fig. 4.1, Table 4.8) indicated that the positive predictive effect of physician-patient relationships on depersonalization was significant across all levels of working hours (all $p < 0.001$). Specifically, when working hours were at a low level, the effect of physician-patient relationships was $\beta = 0.425$, 95% CI [0.307,0.544]; at a moderate level, $\beta = 0.512$, 95% CI [0.428,0.596]; and at a high level, the effect was strongest, with $\beta = 0.599$, 95% CI [0.490,0.707]. This gradient pattern supports the moderating role of working hours: the higher the level of working hours — that is, the longer the average daily working time—the stronger the promotive effect of deteriorated physician-patient relationships on depersonalization.

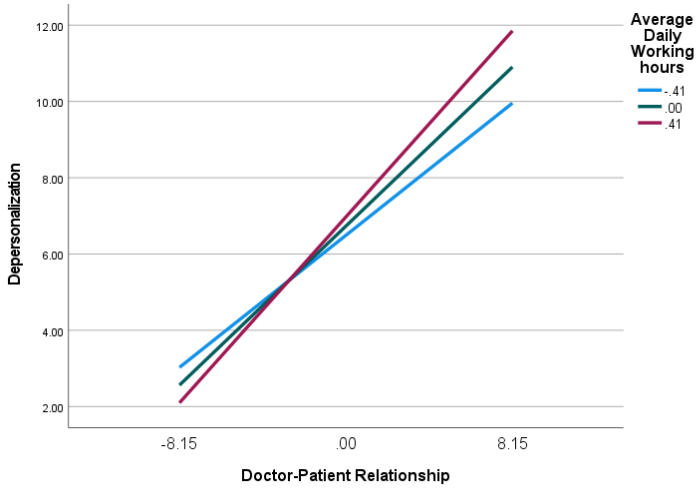



**Figure 4.1** *Simple slope graph*

**Table 4.8** *Simple slope analysis*

| M Level | β | SE | t | p | 95%CI |
|---|---|---|---|---|---|
| Low(-1SD) | 0.425 | 0.06 | 7.054 | ＜0.001 | [0.307,0.544] |
| Middle(Mean) | 0.512 | 0.043 | 12.037 | ＜0.001 | [0.428,0.596] |
| High(+1SD) | 0.599 | 0.055 | 10.885 | ＜0.001 | [0.490,0.707] |

### 4.6 Analysis of Interview Data

This study used the Thematic Analysis method proposed by Braun and Clarke (2008) to analyze the interview data. First, the interview recordings were transcribed into text and read repeatedly. Meaningful sentences were identified and open coding was conducted, resulting in 16 initial codes. Then, through cluster analysis, related codes were grouped into six sub-themes. Finally, two core themes were extracted. A detailed coding structure and representative interview quotes are provided in Table 4.9. Based on the coding structure, the following provides detailed explanations for each topic:

#### 4.6.1 The two major sources of burnout

The interview revealed that the sources of stress that cause medical staff to become burnout are not isolated but rather result from the combined effect of system pressure and the absence of support.

Systemic stressors mainly refer to the situation where hospitals transfer operational pressure to doctors. A manager who was interviewed stated: "Hospitals usually choose to reduce labor costs to cut expenses, which directly leads to an increase in the workload of each medical staff." Additionally, the strict professional title evaluation system and external supervision have further exacerbated the physical and mental stress of medical staff, resulting in burnout.

More importantly, when doctors are overburdened by work or face problems in doctor-patient communication, they cannot receive timely support from hospital management. Moreover, there are no clear laws and regulations to protect the legitimate rights and interests of doctors. Doctors often have to bear the risks brought about by conflicts alone. As the doctor said, "Hospitals often adopt a 'maintain peace' approach, compromising their medical staff to calm public opinion."

#### 4.6.2 Improved management measures

Regarding the two major sources of stress causing burnout, the respondents put forward several management suggestions as follows:

In terms of optimizing the system and assessment methods, the respondents believe that the current management mechanism and evaluation system need to be reformed. One manager pointed out that “Avoid conducting simplistic and one-size-fits-all assessments of the departments in terms of outpatient volume, income, and medical insurance cost control. Create

a relatively relaxed medical environment for medical staff.", and that "a relatively relaxed working environment should be created for medical staff". At the same time, the respondents generally reported that the working hours were too long, and suggested "reducing the workload of doctors, setting an upper limit on the number of daily consultations", and ensuring the implementation of the vacation system, in order to achieve a balance between "work, study and rest".

At present, the medical dispute handling mechanism in China is not yet fully developed, and the punishment measures for those who attack medical staff are not strong enough. The interviewed managers pointed out: "When dealing with medical disputes, the higher authorities often adopt a 'maintaining peace' attitude, sacrificing medical staff to calm public opinion, which leads to the inability to solve the problem fairly." In addition, the interviewed doctors believe that the hospital management does not fully assume responsibility when handling conflicts. "Replacing the attending doctor and inviting department heads or hospital managers to mediate" is considered an effective solution when disputes occur.

In terms of enhancing training and resource investment, the respondents suggested strengthening the professional training of medical staff, especially in communication skills, in order to more effectively handle the doctor-patient interactions in daily work. At the same time, resolving the contradiction between medical resources and demand requires addressing it from two aspects: one is to increase resource supply, such as expanding the medical staff team and improving medical equipment; the other is to reduce demand, through health education and disease prevention, to reduce the number of patients at the source.

To fundamentally change the current situation of intense work faced by Chinese medical staff, the government must play a leading role, increase financial subsidies for public hospitals, and alleviate the survival pressure on hospitals. At the same time, it is necessary to improve laws and regulations that protect the rest rights of medical staff and handle medical disputes, in order to create a social environment that respects doctors.

**Table 4.9** *Coding framework for interview data*

| Theme | Category | Code | Example of Data Experts |
|---|---|---|---|
| Sources of burnout | Systemic sources of pressure | Hospital operational pressure | “To cut costs, hospitals often reduce their workforce, which increases the workload of remaining staff” |
| | | Pressure from the evaluation system | “The criteria for professional promotion include clinical competence, research project counts, and publication records” |
| | | Pressure from external supervision | “Detailed government inspections complicate medical staff’s daily workflows and increase their procedural workload” |
| | Lack of support systems | Lack of internal protection | “When medical disputes occur, doctors are often blamed, leading them to lose confidence in their hospitals” |
| | | Insufficient policy and legal protection | “The punishment measures for those who attack medical staff are still not complete and severe enough” |
| | | | “One-sided media coverage, posting false statements online to attack hospitals and doctors, and even fostering the emergence of professional medical dispute agitator groups” |
| | | | “Hospitals often adopt a "keep the peace" attitude, compromising their medical staff to quell public opinion” |
| | | | "When dealing with difficult patients, the mechanisms for 'changing the doctor' and 'management intervention and coordination' are not well-established." |
| Management measures | Optimization of systems and evaluations | Flexible assessment | “Avoid simplistic and one-size-fits-all evaluations of departments in terms of outpatient volume and medical insurance cost control, and create a relatively relaxed medical environment for medical staff.” |
| | | Reducing working hours | "Reduce doctors' workload by setting a daily cap on the number of patients a doctor can see." |
| | | Ensuring leave entitlement | "As a constantly evolving discipline, medicine requires doctors to continuously update their knowledge and stay abreast of the latest developments, making it difficult to strike a balance between work, study, and rest." |
| | Support and protection mechanisms | Fair dispute resolution | "Currently, the punitive measures against medical violence are still inadequate, with insufficient penalties and a lack of strong policy support." |
| | | | "When handling doctor-patient disputes, higher authorities often adopt an attitude of "settling the matter to keep the peace," compromising medical staff to quell public opinion, which prevents the issues from being resolved fairly." |
| | | Improving mediation mechanisms | "When facing patients who are dissatisfied with treatment outcomes, medical staff need timely technical support and guidance from in-hospital experts to jointly develop or adjust treatment plans." |
| | | | "When disputes arise, measures such as replacing the doctor, involving department heads or hospital managers in mediation, and communicating with the patient can help ease tensions and prevent escalation." |
| | | Psychological support system | "Hospitals should provide organizational support to employees facing difficulties, place emphasis on humanistic care, pay attention to the mental health status of their staff, and foster a culture of mutual assistance and support." |
| | | | "Establish a psychological support system for medical staff and promptly relieve their work pressure." |
| | Improving training and resource allocation | Communication skills training | "Strengthen the professional training of doctors, including the improvement of communication skills with patients and professional capabilities." |
| | | Allocate more resources | "Increase medical resources, such as increasing the number of medical staff, enhancing medical equipment, and expanding hospital facilities." |
| | | Promoting health education | "Reduce the generation of medical demands by conducting more health education and publicity activities, promoting disease prevention, and thereby reducing the number of patients at the root cause." |
| | Fundamental measures | Increasing government funding | "Although public hospitals are defined as non-profit institutions, the government's financial subsidies are often insufficient. Most of the operating costs have to be borne by the hospitals themselves." |
| | | Strengthening legal protection | "Insufficient policy and legal safeguards, and a lack of strong national-level support." |

## CHAPTER 5- DISCUSSION

In this study, half of the participants exhibited varying degrees of burnout (51.1%), with moderate burnout being the most common (24.5%), the burnout among medical staff is quite common. Consistent with previous study (Beschoner et al., 2019; Luo et al., 2025), the findings confirm that burnout does not arise from an individual's weakness or incapability, but rather from structural factors. As the manager interviewed in the analysis said, medical staff face pressure from many sources, including hospitals, the government, and regulatory agencies. This results in a lack of rest time for medical staff and an inability to maintain a balance between work, study and rest. If this continues over a long period of time, it is very likely to lead to burnout.

The level of burnout is closely related to the development of society and the distribution of resources. In this study, moderate burnout was the most prevalent level, which is consistent with Chen et al. (2019)’s finding among Chinese doctors. This issue was also raised in the interview that medical staff are now more prone to burnout. One possible explanation is that, as society develops and patient attitudes change, modern patients tend to first search online for diagnostic information about their illness, then compare it with the doctor's diagnosis and raise questions. This can lead to increased working hours and emotional exhaustion for doctors. But compared with Guan et al. (2024), the burnout level in this sample was less severe, this disparity might stem from the differences in professional environments: primary care workers usually face heavier workload and fewer resources, while doctors in tertiary hospitals may have easier access to high-quality medical resources and institutional support, which can help alleviate burnout. The reason why the burnout levels of medical staff in China are generally higher than those in Western countries can also be explained by this. High-quality medical resources are mostly concentrated in large hospitals, and in addition, China does not have a well-established hierarchical medical treatment system. Whether it's a serious illness or a minor one, patients all go to major hospitals for treatment and have to endure longer waiting times. Meanwhile, small hospitals are facing the threat of closure.

In line with He (2014) and Zhang (2020), this study also found that doctor-patient conflicts influence doctors' behavior. That is, the better the doctor-patient relationship is, the lower the

level of burnout will be. Our interviews identified two ways that poor doctor-patient relationships lead to burnout. First, when patients are unhappy with treatment results, doctors may lose confidence in themselves. Over time, this can reduce their sense of personal achievement, which is a core part of burnout (Maslach & Jackson, 1981). Second, some patients direct verbal abuse at doctors because of financial pressure or dissatisfaction with society, rather than problems related to medical treatment. In these situations, doctors have to spend a lot of mental energy dealing with patients' aggressive words and behavior and also try to control their own negative emotions to keep professional. This kind of continuous emotional labor can easily result in emotional exhaustion and depersonalization, which are also key dimensions of burnout.

This study makes a theoretical contribution to the job demands-resources (JD-R) model by specifying how job demands lead to burnout. Consistent with Wu et al. (2013) and Guan et al. (2024), the results confirm that the quality of the doctor-patient relationship is a significant predictor of burnout among medical staff. However, unlike He and Qian (2016) and Jung et al. (2022), who treated working hours as a direct predictor of burnout, no direct effect was found in this study. Going beyond these, this study combines the doctor-patient relationship and working hours to examine their interaction. The results identify working hours as a critical moderator: the beneficial effect of a good doctor-patient relationship will weaken when working hours are long. In contrast with Fang (2024), who focused on the alleviating effect of work resources on job burnout, this study focuses on the exacerbating effect of job demands on burnout. It further refines the mechanism in the JD-R model regarding how job demands lead to exhaustion. Long working hours erode the mental resources when they deal with "relationship-based needs" (e.g., difficult or tense doctor-patient interactions), thereby exacerbating burnout. This finding helps explain why some people work hard but still feel energetic. They may face fewer relationship-based demands, or they may have other resources (such as strong organization support) that reduce the negative effects of long working hours. In other words, working hours alone do not directly cause burnout. Instead, it is the combination of long hours and relationship-based stress that leads to emotional exhaustion. This provides a more detailed explanation of the JD-R model, showing the specific conditions under which job demands lead to exhaustion.

Furthermore, consistent with Hodkinson et al. (2022) and Ye et al. (2019), this study found that doctor-patient relationships are often significantly associated with depersonalization, with poorer doctor-patient relationships showing a particularly strong association. This finding extends the emotional labor theory (Luo et al., 2025) to the medical context. Based on the analysis of the interview data, one possible explanation is that depersonalization (manifested as a cold and negative attitude towards patients) is a coping mechanism adopted by doctors when they are constantly exposed to interpersonal stress over a long period of time. When doctors repeatedly encounter patients with poor attitudes, the practice of treating patients as "objects" rather than living individuals may help them preserve emotional resources and maintain a distance from the source of the distress. In this sense, depersonalization is not only a manifestation of job burnout but also a psychological adaptation mechanism for dealing with tense relationships. This might explain why the correlation between doctor-patient relationships and depersonalization is more closely related than other dimensions. And further refined the JD-R model, clearly indicating that demands based on relationships may lead to a specific coping mechanism of depersonalization, rather than having the same impact on all dimensions of job burnout.

This study also has practical implications. After the "medical revenue supports the hospitals" system (Hsiao, 2008) was abolished, the assessment system centered on quantity and profits still exists. The same pressure has merely been shifted, from the price addition on medicine to increment the number of patients served. This indicates that simply abolishing price addition on medicine cannot fundamentally solve the operational pressure problems of hospitals; it merely changes the way profits are generated. If this profit-based evaluation mechanism is still unchanged, the burnout of medical staff will continue to worsen, further exacerbating the doctor-patient relationship. The root cause of burnout lies in the contradiction between medical resources and medical demands. Only when the state government takes action can this problem be resolved. At the macro level, broader health system reforms may also help. Establishing a well-developed hierarchical medical system, supporting primary healthcare institutions, and reducing medical costs can significantly improve the doctor-patient relationship. Improving the doctor-patient relationship requires not only the efforts of medical professionals themselves,

but also the policy support at the national level (Gao et al., 2024).

In addition to these macro-level policies, hospitals can also implement internal management strategies. Based on the quantitative data discovery and qualitative interview analysis data, this study has proposed several management strategies. Firstly, increase the investment of working resources: hospitals should organize case-based training on doctor-patient conflict management, including role-play and scenario analysis; Secondly, based on the theory of organizational support, hospitals should establish peer support groups facilitated by mental health professionals to provide regular stress debriefing; Thirdly, hospitals should optimize their responsibility allocation system. Designated managers should be responsible for handling medical disputes and providing timely support to doctors. Based on a systematic review of conflict cases, a standardized dispute resolution mechanism should be established. Moreover, although the responsibility for medical accidents must be clearly defined, before assigning individuals responsibility, managers should maintain an objective and fair attitude and conduct on-site investigations to determine the causes of disputes or accidents. Respect the professional competence of doctors and encourage the reporting of errors, rather than causing defensive medicine among doctors. Overall, these strategies aim to enhance the professional skills and psychological resilience required by doctors in their work, helping them better cope with various challenges in their jobs.

A strength of this study is its mixed methods design, which allowed for both quantitative testing and qualitative explanation of the findings. However, several limitations should be acknowledged. First, as a cross-sectional study, this research captures only the current state of burnout among medical staff. It cannot reveal trends over time or establish causal relationships between the doctor-patient relationship and burnout. Secondly, due to time and resource constraints, the sample only included one tertiary hospital in a first-tier city of China. This may limit the general applicability of the research results to other regions or different types of hospitals and their medical staff. For future research: in terms of the research content, future studies could expand their focus from burnout to the broader mental health conditions of medical staff. More research is needed to explore whether the tense doctor-patient relationship leads to anxiety or depression, and whether these issues cause burnout. In terms of sample

selection, future studies could compare different regions or hospitals at different levels. This would enhance the representativeness of the research results and provide more practical insights.

In conclusion, this study confirms that the doctor-patient relationship significantly affects burnout among medical staff, and that working hours act as a moderator. Furthermore, poor doctor-patient relationships are closely linked to the depersonalization of medical staff, especially when working long hours, which may serve as a coping mechanism. These findings refine the JD-R model by specifying how job demands lead to exhaustion and extend emotional labor theory to the medical context. Therefore, addressing both relationship quality and working hours is essential for reducing burnout.

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**APPENDIXES**

## Appendix A: Questionnaire

**Research on the Work Status and Work Environment of Medical Staff**

Dear Sir or Madam,

Greetings!

In order to gain a deeper understanding of the work status of our medical staff, better care for and support our employees, enhance their job motivation, and improve hospital management, we are now conducting a survey on job burnout among medical personnel. Your participation is highly appreciated.

This survey is conducted anonymously. All data will be kept strictly confidential and used solely for hospital management research. To ensure the authenticity, accuracy, and scientific validity of the survey results, please answer the questions based on your actual situation.

Thank you for your cooperation!

## Part One: Basic Information Form

**1. Gender** *

○Female

○Male

**2. Age** *

○≤20

○20-29

○30-39

○40-49

○≥50

**3. Education background***

○High School or Technical Secondary School

○Associate Degree

○Bachelor's Degree

○Master's Degree

○PhD/Postdoctoral

**4. Position:** *

○Medical Practitioner

○Nursing Staff

○Medical Technical Staff

○Other

**5. Professional Title:** *

○Resident Physician

○Attending Physician

○Associate Chief Physician

○Chief Physician

○None

6. **Personal Annual Income (RMB)**: *

○≤100,000

○100,000-200,000

○≥200,000

7. **Years of Work Experience**: *

○≤5 years

○6–10 years

○11–15 years

○16–20 years

○≥20 years

8. **Your daily working hours are:** *

○Less than 8 hours

○8–10 hours

○More than 10 hours

9. **Do you need to work night shifts?** *

○Yes

○No

**Part Two：Maslach Burnout Inventory (MBI-HSS)**

| | Never | A few times a year | Monthly | A few times a month | Every week | A few times a week, | Everyday |
|---|---|---|---|---|---|---|---|
| **I. Emotional Exhaustion** | | | | | | | |
| I feel emotionally drained from my work. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I feel used up at the end of the workday. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I feel fatigued when I get up in the morning and have to face another day on the job. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Working with people all day is really a strain for me. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I feel burned out from my work. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I feel frustrated by my job. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I feel I’m working too hard on my job. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Working with people directly puts too much stress on me. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I feel like I’m at the end of my rope. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **II. Personal Accomplishment** | | | | | | | |
| I can easily understand how my recipients feel about things. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I deal very effectively with the problems of my recipients. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I feel I'm positively influencing other people's lives through my work. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I feel very energetic. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I can easily create a relaxed atmosphere with my recipients. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I feel exhilarated after working closely with my recipients. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I have accomplished many worthwhile things in this job. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| In my work, I deal with emotional problems very calmly. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| **III. Depersonalization** | | | | | | | |
| I feel I treat some recipients as if they were impersonal "objects". | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I've become more callous toward people since I took this job. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I worry that this job is hardening me emotionally. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I don't really care what happens to some recipients. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I feel recipients blame me for some of their problems. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**Part Three：The Difficult Doctor-Patient Relationship Questionnaire (DDPRQ-10)**

| | Not at all | Disagree | Slightly Disagree | Slightly Agree | Agree | A great deal |
|---|---|---|---|---|---|---|
| How much are you looking forward to this patient's next visit after seeing this patient today? | ○ | ○ | ○ | ○ | ○ | ○ |
| How "frustrating" do you find this patient? | ○ | ○ | ○ | ○ | ○ | ○ |
| How manipulative is this patient? | ○ | ○ | ○ | ○ | ○ | ○ |
| How difficult is it to communicate with this patient? | ○ | ○ | ○ | ○ | ○ | ○ |
| To what extent are you frustrated by this patient's vague complaints? | ○ | ○ | ○ | ○ | ○ | ○ |
| How self-destructive is this patient? | ○ | ○ | ○ | ○ | ○ | ○ |
| Do you find yourself secretly hoping that this patient will not return? | ○ | ○ | ○ | ○ | ○ | ○ |
| How at ease did you feel when you were with this patient today? | ○ | ○ | ○ | ○ | ○ | ○ |
| How time-consuming is caring for this patient? | ○ | ○ | ○ | ○ | ○ | ○ |
| How enthusiastic do you feel about caring for this patient? | ○ | ○ | ○ | ○ | ○ | ○ |

## Appendix B: Interview Outline

### Interview Questions

**Opening Remarks:**

Hello, thank you for agreeing to this interview. My research focuses on the relationship between doctor-patient relationship and burnout among medical staff. Our quantitative study has revealed some meaningful findings, and we hope to gain a deeper understanding of the underlying causes and potential solutions from both managerial and frontline clinical perspectives. All interview content will be kept strictly confidential and anonymized.

**Question 1: Perception and Attribution of Overall Burnout**

- **Background:** Preliminary surveys indicate that medical staff in this hospital are experiencing moderate levels of burnout overall, with nearly half showing signs of varying degrees of occupational burnout.
- **To Department Head:** From your perspective, what do you consider to be the most significant structural factors contributing to this situation? (For example: not enough staff, unclear work procedures, high pressure from performance evaluations, etc.)

**Question 2: The Vicious Cycle Between Doctor-Patient Relationships and Burnout**

- **Background:** Research suggests that strained doctor-patient relationships significantly contribute to burnout among medical staff.
- **To Department Head:** In your view, what kind of support do healthcare professionals most need but often lack when dealing with challenging doctor-patient interactions? How can our management system provide more effective support in this regard?
- **To Doctor:** In your daily work, what kind of support (For example: having someone step in to help manage the situation.) would you find most relieving and practical?

**Question 3: The Moderating Role (Focus on Working Hours)**

- **Background:** Data shows that over 90% of staff work more than 8 hours per day. Excessive working hours act as an "amplifier," intensifying the impact of doctor-patient relationship issues on burnout (particularly in terms of Depersonalization, where individuals may become emotionally detached).
- **To Department Head:** What are the most significant practical challenges the hospital currently faces in reducing working hours and safeguarding rest rights for medical staff? Are there any feasible adjustment plans for the future?
- **To Doctor:** To ensure adequate rest and recovery, what specific improvements or welfare measures (e.g., mandatory rest periods) would you most appreciate?

**Question 4: Management Measures and Resource Needs**

- **To Department Head:** If the hospital aims to address both doctor-patient relationships and staff burnout at their roots, what resources or measures should be prioritized for investment or implementation? (e.g., enhanced communication training, introduction of psychological support systems)