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The Influence of Medical Personnel's Career Calling on Organizational Citizenship Behavior—An Empirical Study in Zhejiang Province, China

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Doctor of Management

Supervisor:
PhD Nelson Ramalho, Associate Professor,
ISCTE University Institute of Lisbon

March, 2021

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I declare that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university and that to the best of my knowledge it does not contain any material previously published or written by another person except where due reference is made in the text.

Signed:  Date: 26/2/2021

Name: Wang Yiyang

作者申明

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Abstract

The medical profession is inherently driven by a sense of duty to protect others' lives and well-being. These, so called, vocational professions, are characterized by a strong bond with the people they serve, as seen in the Doctor-Patient Relationship. This is a critical factor for the clinical and therapeutic success as well as for the organizational performance. However, the Doctor-Patient Relationship has been facing many challenges due to the changes in the social environment and the deepening of medical system reform. Acknowledging the importance of Doctor-Patient Relationship, it is relevant to identify existing resources that contribute to protect and improve it, namely two features of vocational professions: Career Calling and Organizational Citizenship Behavior. However, empirical research involving these constructs is lacking. The empirical research on the Career Calling rarely involves the medical industry, and most of the researches on the Career Calling and Organizational Citizenship Behavior are conducted in the context of Western culture. Research conducted in China on the Career Calling of medical personnel is more on the level of moral didacticism and lacks quantitative empirical research. The study of medical personnel's Career Calling provides a new approach for hospital organizational behavior and hospital human resource management, and provides a new perspective for hospital managers. Therefore, it is of great theoretical and practical significance to study the combination of medical personnel's Career Calling, Organizational Citizenship Behavior and Doctor-Patient Relationship.

Based on a review of the previous studies on the Career Calling, this research further puts forward two empirical studies. The first study adopted a mixed-methods approach to identify the structural dimensions of Career Calling of medical personnel in China. It integrated in-depth interviews with open questionnaires, to produce a scale that was found to have good psychometric qualities, namely, good reliability and validity. The scale comprises three-dimensions, divided each in two subdimensions, all parsimoniously measured with 23 items. A second study, of a quantitative nature, via structural equations modelling, tests the conceptual model that took both Job Engagement and Organizational Citizenship Behavior as the sequential mediators between Career Calling and Doctor-Patient Relationship. Likewise, the model previews a parallel path via Organizational Commitment. With a sample of 767 medical personnel in 10 3A hospitals in Hangzhou, China, results show Career Calling affects

Organizational Citizenship Behavior through Job Engagement or organizational commitment, which then is positively associated to Doctor-Patient Relationship. Several paths are uncovered that show a complex network of plausible relations helpful in promoting positive Doctor-Patient Relationship. These findings are analyzed in the light of the theory and can be taken as psychological assets contributive to leveraging Doctor-Patient Relationship with the well-known positive implications for clinical and hospital success.

Keywords: Career Calling of medical personnel; Job Engagement; Organizational Commitment; Organizational Citizenship Behavior; Doctor-Patient Relationship; Structural equation model
JEL: I18; Y40

Resumo

A profissão médica é inerentemente motivada por um sentido de dever de proteção da vida e bem-estar de outros. Estas chamadas profissões vocacionais são caracterizadas por um elo forte com as pessoas que servem, tal como expresso na relação médico-doente. Esta é um fator crítico para o sucesso clínico e terapêutico bem como para o desempenho organizacional. Porém, a relação médico-doente tem enfrentado muitos desafios decorrentes das mudanças no ambiente social e do aprofundamento da reforma do sistema médico. Reconhecendo a importância desta relação, é relevante identificar os recursos existentes que contribuem para a proteger e melhorar, nomeadamente duas características das profissões vocacionais: o sentido de missão profissional e o comportamento de cidadania organizacional. Contudo, a investigação empírica em torno destes constructos está em falta e raramente envolve o setor médico para além de que muita da investigação sobre este constructo e sobre a cidadania organizacional é realizada no contexto cultural ocidental. A investigação realizada na China sobre o sentido de missão profissional dos médicos queda-se pelo nível de pregação moral e carece de investigação empírica quantitativa. O estudo do sentido de missão profissional do pessoal médico oferece, no contexto hospitalar, uma nova abordagem ao comportamento organizacional e à Gestão de Recursos Humanos e faculta uma nova perspetiva aos gestores hospitalares. Assim, estudar a combinação do sentido de missão profissional dos médicos, com os comportamentos de cidadania organizacional e a relação médico-doente tem significado teórico e valor aplicado.

Partindo de uma revisão de literatura sobre o sentido de missão profissional, esta pesquisa desenvolve-se dois estudos empíricos. O primeiro adotou uma abordagem mista para identificar as dimensões estruturais do sentido de missão profissional do pessoal médico na China. Integrou entrevistas em profundidade com questionários abertos, para produzir uma escala com boas propriedades psicométricas, nomeadamente validade e fiabilidade. A escala compreende três dimensões, divididas cada em duas sub-dimensões, parcimoniosamente medidas com 23 itens. Um segundo estudo, de natureza quantitativa por via da modelação de equações estruturais, testou o modelo conceptual que tomou a dedicação no trabalho e o comportamento de cidadania organizacional como mediadores sequenciais entre o sentido de missão profissional e a relação médico-doente. Do mesmo modo, o modelo previa um caminho paralelo por via do compromisso organizacional. Com uma amostra de 767 médicos de dez hospitais de

nível 3A em Hangzhou, na China, os resultados mostraram que o sentido de missão profissional afeta os comportamentos de cidadania organizacional através da dedicação no trabalho ou do compromisso organizacional, que por sua vez estão associados positivamente à relação médico-paciente. Descobriram-se vários caminhos que evidenciam uma rede complexa de relações plausíveis contributivas para uma relação médico-doente positiva. Estes resultados são analisados à luz da teoria e podem ser tidos como ativos psicológicos que contribuem para alavancar a relação médico-doente e, consequentemente, a sua implicação positiva para o sucesso clínico e hospitalar.

Palavras-chave: Sentido de missão profissional do pessoal médico; Dedicação no trabalho; Compromisso organizacional; Comportamento de Cidadania Organizacional; Relação médico-doente
JEL: I18; Y40

摘　要

医疗职业本质上是由一种保护他人生命和福祉的责任感驱动的。这些所谓的职业，与他们服务的对象建立了牢固的纽带，正如医患关系中所呈现的那样。而医患关系是临床和治疗成功的关键因素，也是组织绩效的关键因素。然而，随着社会环境的变化和医疗体制改革的深入，医患关系面临诸多挑战。认识到医患关系的重要性，与确定保护和改善医患关系的现有资源是相关的，即职业的两个特征：职业使命感和组织公民行为。然而，涉及这些构念的实证研究还很缺乏。职业使命感的实证研究很少涉及医疗领域，而且对于职业使命感和组织公民行为的研究大多是在西方文化背景下进行的。中国对医务人员职业使命感的研究多停留在道德说教层面，缺乏定量的实证研究。医护人员职业使命感研究为医院组织行为学和医院人力资源管理提供了新的思路，为医院管理者提供了新的视角。因此，医护人员职业使命感、组织公民行为以及医患关系的结合研究具有重要的理论与实践意义。

本文在系统回顾以往职业使命感研究的基础上，进一步提出两个实证研究。第一项研究采用混合方法确定医护人员职业使命感的结构维度，通过深度访谈与开放式问卷相结合，编制出具有较好的心理测量学特征的量表，即良好的信度和效度。该量表包含三个维度，每个维度分为两个子维度，所有维度由23个条目组成。第二项研究是定量研究，通过结构方程模型检验概念模型，该模型将工作投入和组织公民行为作为职业使命感和医患关系之间顺序中介变量。同样，该概念模型通过组织承诺预览了一条并行路径。以杭州市10家三甲医院的767名医护人员为样本，研究结果显示，职业使命感通过工作投入或组织承诺影响组织公民行为，进而与医患关系正相关。揭示的数条路径显示，由众多合理关系构成的复杂关系网络有助于促进积极的医患关系。这些发现是根据这一理论对进行分析的，并可被视为有助于平衡医患关系的心理资产，对临床和医院的成功具有众所周知的积极意义。

关键词：医务人员职业使命感；工作投入；组织承诺；组织公民行为；医患关系 ；结构方程模型

JEL: I18; Y40

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Acknowledgements

Although the COVID-19 epidemic that hit the world in 2019 is not completely over, the outside world has been gradually recovering, and everyone is still full of expectations and hopes for the future. I hold that the future is always bright, while in a better future, health is always the first element. Without life and health, there is no bright future. Therefore, I have always been proud of myself as medical personnel and hospital management professional, and I am willing to fight for it all my life.

First of all, I would like to express my gratitude to my most beloved mentor, Professor Nelson Ramalho. Three years ago, I was fortunate enough to be a student of Professor Nelson. In fact, I'm clearly aware of the deficiencies in scientific ability and English proficiency. However, the professor did not mind my inferiority at all, and constantly guided me and gave me careful and patient guidance in academic and scientific research. The quick and pioneering thinking of professor make me see a wider world. Professor Nelson has profound capacity in statistical analysis and modeling, and his strong ability to extract theories from data impresses students. Professor Nelson, who is a beacon to me, gives me upward strength and benefits me for life.

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Wang Yiyang in Hangzhou, China

June 29, 2020

致　谢

尽管2019年冲击全球的新冠肺炎疫情还没完全过去，但外面的世界已经在逐步恢复中，所有人对未来都还是充满了期待与希望。我想，未来永远是美好的。

而美好的未来，健康永远是第一要素，没有生命和健康，未来不来，美好不在。所以，我一直为自己是一名从事医疗服务和医院管理的专业人士而自豪，并愿意为此奋斗终生。

2016年入学南方医科大学与葡萄牙ISCTE里斯本大学学院联合培养公共卫生政策与管理博士学位项目以来，一边工作，一边学习，面临了很多困难，在繁重的工作和学习压力下，甚至有过放弃博士学业的想法，但在所有人的帮助和支持下，终于完稿，并将迎来论文的送审和答辩。这对我和我的家人来说是具有历史意义的一刻。借这期盼已久的机会，向我读博生涯----这段生命中非常重要的路程中给予我无私帮助和关爱的人表达深切的感谢，你们的支持和为我所做的一切，是我这一生莫大的荣耀。

首先，我要向最敬爱的导师Nelson Ramalho教授表达谢意。三年前，有幸成为老师的学生，我深知自己科研底子和外语水平的不足，可教授不嫌弃我的鄙陋，不断把我引领入门，细致耐心地在学术和科研上给予我悉心的指导，特别是语言沟通上的障碍，迁就了我许多。老师敏捷的思维、开拓的思路，让我看到了一个更为广阔的世界。老师在统计分析与建模上的造诣功力深厚，对数据中提炼理论的能力之强，让学生叹为观止。老师于我，是良师，是明灯，给我始终向上的力量，并让我终生受益。

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尤其要感谢的是我的家人，我的妻子蔡树萍和女儿王芷欣，无条件的支持以及照

顾、体谅，让我得以安心地完成论文。还有我的父母，对我一直不断学习深造的理解和支持。还有我的妹妹王杰敏在翻译上的帮助。他们是我生命中最温暖的阳光。

王益阳于中国杭州

2020 年 6 月 29 日

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List of Abbreviations

AVE	Average Variance Extracted
CC	Career Calling
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CITC	Corrected Item-Total Correlation
CR	Composite Reliability
df	degree of freedom
DPR	Doctor-Patient Relationships
EFA	Exploratory Factor Analysis
GFI	Goodness-of-Fit Index
GT	Grounded Theory
HRM	Human Resources Management
OC	Organizational Commitment
OCA	Open Coding Analysis
OCB	Organizational Citizenship Behavior
OCQ	Organizational Commitment Questionnaire
PCA	Principal Component Analysis
RMR	Root Mean-square Residual
RMSEA	Root Mean Square Error of Approximation
SEM	Structural Equation Modelling
SFL	Standardized Factor Loading
TLI	Tucker-Lewis Index
JE	Job Engagement
WHO	World Health Organization

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Chapter 1: Introduction

1.1 Research background

1.1.1 Realistic background in China

Since the reform and opening up 40 years ago, China has continued to promote the reform of medicine and healthcare system and made many policies. From Decision of the Central Committee of the Communist Party of China and the State Council Concerning Public Health Reform and Development (January, 1997) to The Guiding Opinions of the Ministry of Human Resources and Social Security on Actively Promoting the Coordinated Healthcare, Medical Insurance and Pharmaceutical Reforms (June, 2016), the State Council, the Ministry of Health, the Ministry of Human Resources and Social Security and other state agencies issued 169 policy documents related to medicine and healthcare reform, covering many aspects of pharmacy, healthcare, and medical insurance. Medicine and healthcare industry has definitely become a key area of people's livelihood which is of national and social concern. At present, China's medicine and healthcare system reform is at a crucial stage, and it has great realistic value and profound historical significance to cultivate professionalism of healthcare industry that can fully embody the core socialist values. Medical personnel's Career Calling, which is the core of the professionalism, can reflect the essence of medical practice and the spirit of healthcare. It can not only stimulate the enthusiasm of medical personnel, but also enable them to unconsciously do their works from the perspective of the interests of people and patients. Medical personnel's Career Calling conforms to the requirement of healthcare practice in this new era and is pivotal in implementing the reform of medicine and healthcare system because it can spur the sense of social responsibility of medical personnel and make them more active in participating and promoting healthcare reform, which will give more guarantees to the life health of the public. To this end, in April 2012, the Ministry of Health held a symposium on medical professionalism within national healthcare system. It is apparent that the establishment of comprehensive and practical Career Calling of medical personnel is crucial for the existence and development of healthcare cause in this new social and economic environment. Policies introduced by the Ministry of Health have consolidated our research direction, giving us more momentum in exploring the topic of medical personnel's Career Calling.

With continuous development of society and economy, people's living standard has seen great improvement, and demands and focuses on health issues are increasing. However, vicissitudes of healthcare service system, penetration of market mechanism as well as mistakes made in the reform of medicine and healthcare system have jointly led to the absence of traditional medical personnel's Career Calling, kicking the professionalism into dilemma. As a result, medical personnel are regarded as a punch bag by the society and its citizens, because the issue of inadequate and overly expensive medical service. Sometimes they are exposed to vicious harm and violent murder. Conflicts between doctors and patients have become a daunting social problem (Shu et al., 2013). According to a survey, medical personnel believe that they are less respected and trusted by the general public, which is a huge blow to their professional confidence. Moreover, the phenomenon of medical disputes makes them nervous and have the idea of leaving the medical industry, or renders them take defensive medical behavior or negative withdrawal behavior at work to shirk medical responsibility. Such results form a vicious circle, not only hindering the advances in medical science but infringing on patients' right to seek medical care (Qin & Li, 2014). A total of 676 research studies on related topics such as a kind of mass disturbance--medical disputes were published in CNKI from 2006 to 2013, and more than 100 studies have been published in each of the past five years. These research studies, with topics on medical disputes, Doctor-Patient Relationship, reasons and preventive measures for medical disputes, the establishment of "the third party" mechanisms and medical liability insurance, are helpful in clarifying the Doctor-Patient Relationship and resolving disputes (Li, Lu, & Rong, 2014). However, with a single form of preaching at the abstract moral level, these studies ignore people's spiritual needs, social and cultural factors, mental and psychological factors, and the important influence of special working situations and specific fields in the medical industry. Besides, it is difficult to further deepen and improve the studies because of their limited discussions about decrying the declining moral values and emphasizing communication skills.

1.1.2 Theoretical background

With the refinement of social division of labor, medical personnel have played an increasingly prominent role, and their professional mission has emerged with the demands of professionalism. There is no denying the fact that the medical science is significant to human beings, medical health services are important to society, and the contribution of doctors to people's health. Medical personnel work in the forefront of medical and health services, and

are the main force for the reform of the medical and health system. However, the development of biomedical technology in the 21st century and the marketization of medical and health service management have presented the medical industry with a lot of challenges: medical personnel face increasingly prominent problems in their practices; medical personnel's Career Calling is facing multiple challenges; professional mission of medical personnel is questioned; doctor-patient trust is in crisis; and Doctor-Patient Relationship starts to deviate from the track. According to the 2015 *White Study on the Practice of Chinese Physicians*, nearly 60% of medical personnel have experienced verbal abuse; more than 10% of medical personnel have suffered physical injuries; more than 70% of doctors have called for more protections of their rights and interests when the Practitioners Law is revised; and nearly 50% of the medical personnel are dissatisfied with the practice environment, which results in negative work behavior such as work burnout and lack of enthusiasm (Liu, 2015).

In addition, the report also shows that the work pressure of medical personnel is not mainly from the competition within the industry, but from a large amount of work due to medical behavior, medical disputes, high expectations of patients and frequent incidents of offending medical personnel. The unpredictable and uncontrollable medical disputes have made medical personnel under greater psychological pressure. As one of the main bodies of the disputes between doctors and patients, the medical personnel suffer more than physical and mental harm. The disputes may affect their Career Calling and Job Engagement to varying degrees and the overall performance and social reputation of the hospital will then be influenced. As an individual's underlying value, the Career Calling will lead the professional thinking and pursuit of the practitioners. It is a strength the individual uses to constantly regulate his or her behavior when performing professional work. The health care industry needs affection and love, while medical personnel is the messenger of love, bringing comfort and hope to patients and their families. It is not easy to reverse the contradiction between doctors and patients and establish a harmonious Doctor-Patient Relationship, but the use of human resource management to effectively motivate and manage medical personnel has attracted more and more attention. And there is growing evidence that investing in hospital human resource management is an important tool for improving employee well-being and the quality of medical care (Ma et al., 2017). In order to further improve the current situation in the medical and health field, and reduce the pressure facing the medical personnel, it is a meaningful proposition to take Career Calling of medical personnel as a breakthrough point. Focusing on the research of the medical personnel's spiritual level and taking the Career Calling of medical personnel as the internal guidance of their work behavior, then the attention of the experts from the public health

management, organizational behavior and human resources can be drawn. In the future, the construction and cultivation of the Career Calling of medical personnel will be an irrevocable trend, and become an essential approach of hospital human resource management and medical service quality improvement.

1.2 Purpose and significance of the study

1.2.1 Research purpose

On the basis of combing the literature, this study through the grounded theory method, build medical personnel professional basic dimensions of mission, and the introduction of Organizational Commitment and Job Engagement, Perceived Organizational Support, the Doctor-Patient Relationship three intermediary (or regulation) variables, with organizational citizenship behavior as the dependent variable, the Doctor-Patient Relationship as the secondary dependent variable, to carry out the medical staff Career Calling influence on organizational citizenship behavior, and organizational citizenship behavior how to affect the Doctor-Patient Relationship in the further study.

In today's knowledge-oriented world, Career Calling and Organizational Citizenship Behaviors play a crucial role in organizational performance, but few studies have been focused on such topics in hospital, especially the quantitative research and empirical research of the medical personnel's Career Calling and there is also a lack of rigorously tested measurements. It is of practical significance to conduct such a research. By well knowing how medical personnel's Career Calling is dimensionally constructed, how it functions, how it affects other things and in what scale it is applied, as well as by deeply exploring how the Career Calling, organizational commitment, Job Engagement and Organizational Citizenship Behaviors influence the working performance in hospitals, it will help theory building and its application into practical use on development and revolution of medical and health undertakings. I am expected to see that my study will hopefully lay an empirical foundation for further medical and human resources management research, and provide some governing experience in dealing with doctor and patients, uplifting patients' satisfaction and improving working performance.

1.2.2 Theoretical significance

In recent years, positive psychology and positive organizational behavior (POB) have been greatly developed (Ceng & Zhao, 2007). Compared with traditional organizational management

and human resource management that focus on negative aspects such as work stress, work burnout, negative emotions and how to effectively resolve conflicts, positive psychology and POB pay more attention to the positive characteristics of people and organizations, and treat workplace and the work itself from a brand-new perspective. At present, many studies have confirmed that positive psychological capital appreciation such as hope, self-efficacy, optimism, resilience, and emotional intelligence will promote the healthy development of individuals and organizations and mobilize the inherent strength of human nature. Relevant researches have explored Job Engagement and interpersonal relationships, organizational commitment, individual health and organizational performance, and many important conclusions have been drawn. Practical modes of cognition, emotion and behavior can offer meanings and goals if we think from the meta level. The meta level includes gratitude and forgiveness, and spirituality such as Career Calling. The Career Calling of medical personnel will give meaning and value to work, which will further make the personnel be internally motivated, and be able to play their part through ethically and socially responsible values, attitudes, and behaviors. One study (Duchon & Plowman, 2005)found a positive relationship between the mentality of the hospital department and its departmental performance, such as the patients' satisfaction. They also inferred that by linking the meaning of the work with the mentality, employees' motivations could be stronger beyond working only for income. At present, China's POB researches are still at the adoption stage, and there is no in-depth theoretical construction and empirical research, also in the field of medical and health management.

At present, there are still some inadequacies in the studies of the relationship between doctors and patients. Most people study the relationship from the perspective of patients and their interests, ignoring medical personnel's voices, interests as well as their spiritual performance management, especially the evaluation of Organizational Citizenship Behavior. Most studies are carried out from negative points of view, such as work burnout and work pressure, instead of from positive points of view like work dedication, subjective well-being and Career Calling. Another problem is that most people choose to discuss impractical theories such as laws and ethics, failing to present scientific and measurable empirical studies. Therefore, it is necessary to study the relationship from the perspective of medical personnel themselves to improve their Career Calling. With organizational commitment, Job Engagement and Perceived Organizational Supports mediating variables, the harmony between doctors and patients will be improved through Organizational Citizenship Behavior, as a result, the overall performance will be promoted. This can enrich relevant researches, make up for the inadequacies and provide some suggestions for management practice.

1.2.3 Realistic significance

The medical industry needs not only technology, but also humanistic spirit. It is a profession with a special mission and requires high dedication. "Devotion, vitality and concentration" are what qualities people expect medical personnel to have at work. With the improvement of people's life quality, there are higher demands on the quality of medical care and service. While the fact is that medical resources are relatively short and the service awareness of medical personnel has not been improved accordingly. In particular, for lack of medical knowledge, people have extremely high expectations of the existing medical technologies and have high spiritual expectations of the medical personnel's Career Calling, considering them as "the ones who can save the dying and heal the wounded" and "angels in white". However, once medical personnel cannot meet the spiritual and physical needs of patients and their families, "doctor-patient disputes", "the injuries caused to medical personnel in disputes" and other adverse events will happen, bringing about bad social impacts. Since we live in a harmonious society of economic development, we should attach more importance to the improvement of people's spiritual life quality while improving the material living standard. Therefore, studying medical personnel's professional spirit and improving the relationship between doctors and patients at the source based on the sense of professional mission of medical personnel have practical significance.

At present, Chinese society is generally considered to lack a Career Calling, especially medical personnel, teachers, cadres and other professions that people have high hopes for. Researchers believe that people who are engaged in professions such as professors and doctors are more likely to have a Career Calling than other occupational groups (Davidson & Caddell, 1994; Zhao & Guo, 2011). In the psychological research of the Career Calling, the Career Calling is regarded as an important source of the purpose and sense of meaning of individuals' work, and they will devote themselves to their mission work, surpass their original expectations and ignore external rewards (Elangovan, Pinder, & Mclean, 2010). For organizational managers, employee professional mission may mean higher organizational performance and customer satisfaction, which is significant in the current medical environment. This study believes that the professional mission of medical staff has a positive impact on Organizational Citizenship Behavior, and Organizational Commitment and Job Engagement, Perceived Organizational Support will play a mediating or moderating role.

In the period of globalization and intellectual economy, Organizational Citizenship Behavior has a key impact on organizational performance. However, there are few studies on

the Organizational Citizenship Behavior of medical personnel. Studying and discussing the dimensions, functions, influence mechanism of Organizational Citizenship Behavior of medical personnel and its influences on hospital work performance and the relationship between doctors and patients is of great practical significance to the theoretical construction and practice of medical and health reform and development in China. The doctor-patient disputes and the injuries caused to medical personnel in disputes have unprecedentedly affected the physical and mental health and safety of medical personnel, resulting in a pessimistic Career Calling of medical personnel and affecting their Job Engagement and Organizational Citizenship Behaviors to different degrees, which in turn has a negative influence on organizational performance and patient satisfaction. Thus, a vicious circle is formed. Whether medical personnel treat patients with constant enthusiasm, focus on diagnosis and treatment, and are devoted to their works is a key factor to improve the quality of medical services. There are few related studies on the Career Calling, organizational commitment, Job Engagement, Perceived Organizational Support and Organizational Citizenship Behaviors. In particular, there is no empirical study on the impact of the Career Calling on Organizational Citizenship Behaviors with medical personnel as the study object. In the case that external incentives, such as compensation performance and work title, fall flat on the medical personnel, how to form an intrinsic long-term mechanism that influences the organizational commitment, Job Engagement and Organizational Citizenship Behaviors of medical personnel in a deeper level is a significant question for hospital administration and human resource managers to further think about. One researcher (Lan, 2010) suggested that the combination of internal and external incentives and summed up nine suggestions, and one of them is to enhance the Career Calling and responsibility of the medical personnel, which is a mere suggestion as no detailed argumentation and empirical research has been conducted. With positive practical significance and management implications, this study intends to enhance organizational commitment and Job Engagement of medical personnel and the harmony of doctor- patient relationship via building a Career Calling of the medical personnel, and improve contextual performance through Organizational Citizenship Behaviors.

1.3 Research content and research method

1.3.1 Research content

This study focuses on how the Career Calling, organizational commitment, work investment

and Organizational Citizenship Behaviors are defined, how they are constructed dimensionally, how they are affected by other factors and how they function with each other, with the involvement of interdisciplinary such as Organizational Behavior and Human Resource Management.

1.3.2 Research method

Through theoretical and empirical researches on medical personnel's Career Calling, this study hopes to achieve the following outcomes:

Hope to build a knowledge of Career Calling, Organizational Citizenship Behaviors, organizational commitment, Job Engagement and Perceived Organizational Support through combing literature; to establish a scale measuring the medical personnel's Career Calling based on Grounded theory and explore the inner relationship of multidimensional construct, its relations with Integral construct and functional differences among dimensions; to give a deeper discussion of factors affecting Career Calling of medical personnel.

Hope to have a deeper understanding of influences that the newly designed scale will have on Organizational Commitment and Job Engagement.

Hope to give a certified answer that whether organizational commitment, work investment and Perceived Organizational Supports a intervening variable or a moderator variable in the mechanism where Career Calling works on Organizational Citizenship Behaviors. And put forward the following hypothesis model, as shown in Figure 1.1.

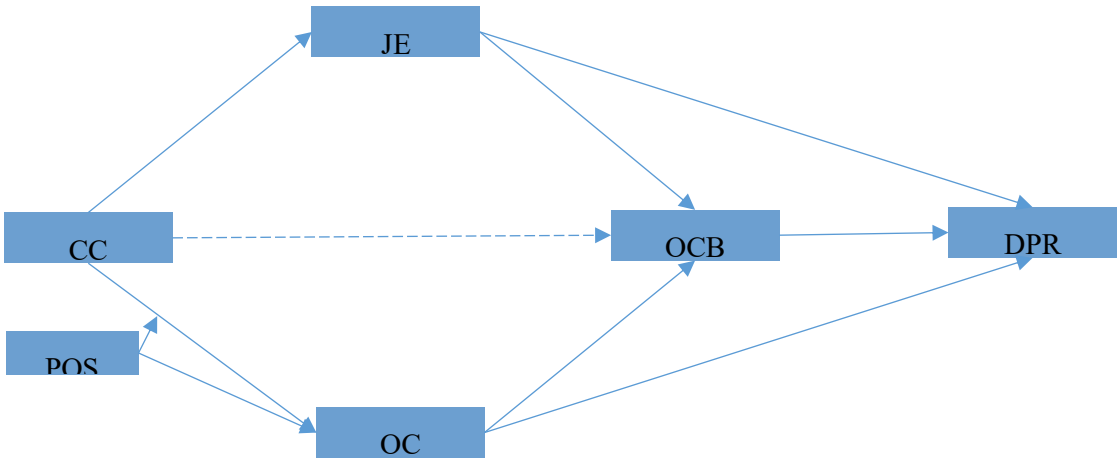

Figure 1.2 Concept Model of Career Calling influences on Organizational Citizenship Behaviors

Hope to give an analysis of Organizational Citizenship Behaviors among medical personnel. To have a deeper discussion about how the designed scale measuring sense of professional

mission awareness deeply influences medical personnel's organizational behavior.

Hope to give an analysis of the impact of medical personnel's Career Calling, Job Engagement, Organizational Commitment and Organizational Citizenship Behavior on Doctor-Patient Relationship.

1.4 Technical routes and structural arrangements

1.4.1 Technical route

See Figure 1.2.

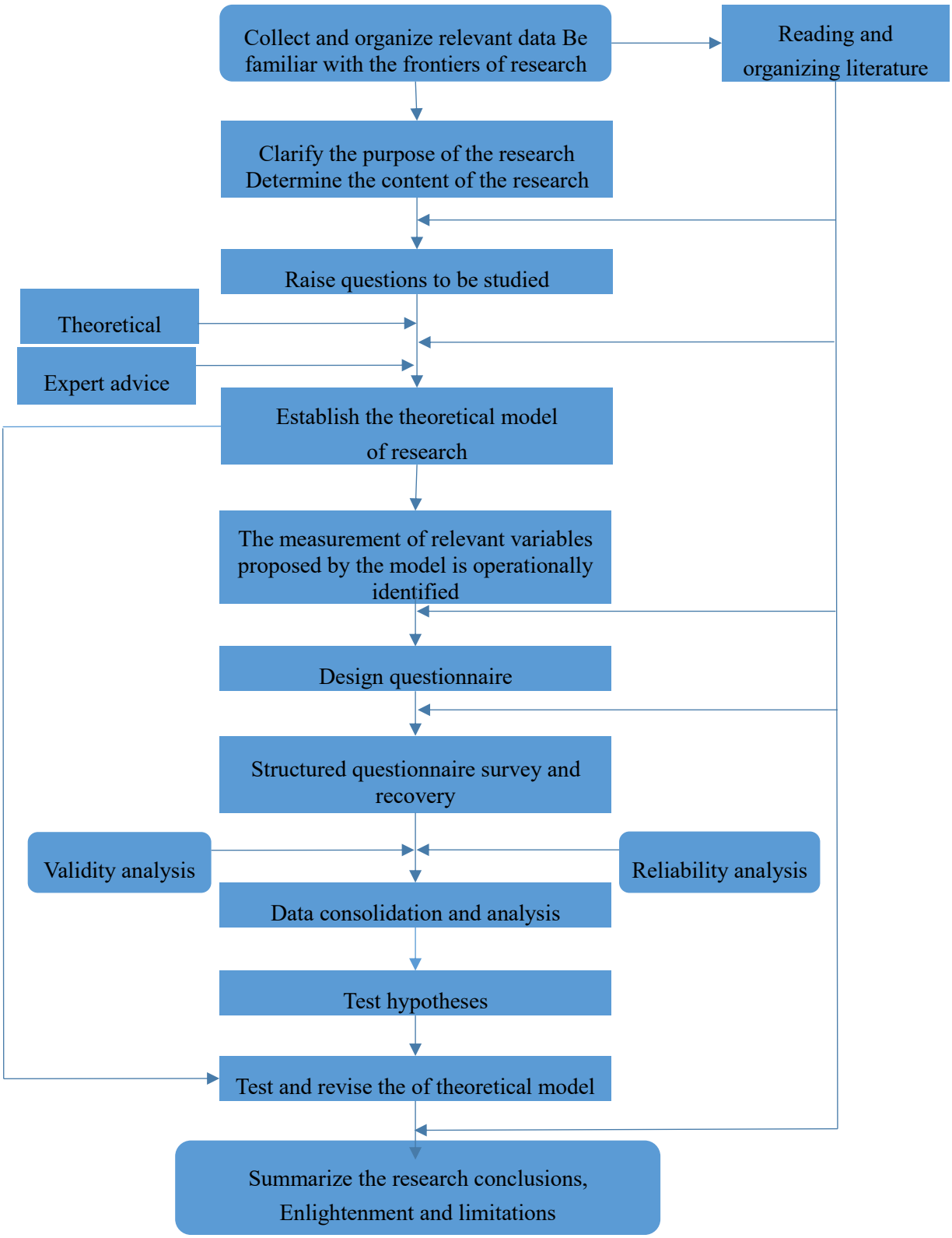

Figure 1.3 Schematic diagram of technical route

1.4.2 Structural arrangements

This study mainly includes the following contents:

Chapter 1, Introduction. This part indicates the research background, significance, difficulties and problems, Research Method and technical route.

Chapter 2, literature review. This part summarizes and sorts out the domestic and foreign literatures related to Career Calling, organizational commitment, Job Engagement Organizational Citizenship Behavior and Doctor-Patient Relationship, and puts forward the research direction of this study.

Chapter 3, research methods. The measurement of relevant concepts, including interview and questionnaire design, is described. The reliability and validity test methods of the measurement results are also introduced. Finally, the statistical methods used in this study are described.

Chapter 4, the research on the content structure of medical personnel's Career Calling. Firstly, rebuild the concept of medical personnel's Career Calling, and by using grounded theory, a measurement scale of medical personnel's Career Calling is designed. Then, the structural verification of Career Calling is carried out through predictive tests and formal tests.

Chapter 5, the influence model construction of Career Calling on the work behavior of medical personnel.

Chapter 6, model validation results and discussion.

Chapter 7, conclusion and prospect.

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Chapter 2: Review of Research Status at Home and Abroad

2.1 Relevant studies on Career Calling

2.1.1 The connotation of Career Calling

2.1.1.1 Religious origin of the Career Calling

The word "calling" first originated from religion, meaning devotion to God and engagement in priesthood. Only such religious duties as clergies and missionaries were regarded as calling. Later on, Martin Luther re-interpreted calling in his Reformation and gave secular meaning to it. He pointed out that calling is a God's business that people must accept and adapt to (Weber, 1930; Weber & Kalberg, 2009). He also pointed out that everyone should engage in their own vocation of calling, combine holy calling with ordinary people's vocations so as to transfer the unique calling of theologians into everyone's vocations. This secularized the concept of calling and sanctified secular vocations (Lin, 2010). Therefore, the people engage in labor not only because of the inspiration from God, but more to prove that they are chosen by God. In short, calling was valued in the Reformation, which enabled calling to have a deep religious foundation. In his book entitled *The Protestant Ethic and the Spirit of Capitalism*, the renowned sociologist Marx Weber spoke highly of the interpretation of the term "calling" in Reformation and concluded that it facilitated the emergence of the Protestant ethics of abstinence and thrift and even the spirit of modern capitalism. They both have the meaning of call, summoning or inspiration. This thought originated in Judaism, meaning "the Call of God".

The "calling" in the West emphasizes inspiration, which contains a call that has to be complied with. Calling emphasizes command. The similar notion in Chinese culture is referred to as "mandate" (Chinese pinyin: Shiming), which is also a sacred and noble word. The character "shi" in Chinese means command. So "Shiming" itself has the meaning of command or assignment. In his comments, Zuo Zongtang mentioned the example of Zhao Gongnian "disrespecting and refusing to obey orders in court." It can be seen that "calling" and "mandate" were very similar in their origins. The difference is that the Western "calling" originated from God, whereas the "mandate" in Chinese culture originated from "Heaven" or "Monarch", which is closely related to "Heaven". According to The Analects of Confucius·Zilu: "A person shall cherish a sense of ethics while doing things, try to be useful to the society and honor his/her

own mandate to the monarch. Only such a person can be regarded as an adequate official". This means that officials should be able to fulfill the orders by the monarch. Although mandate is related to the monarch, it is, in fact, also related to "Heaven". The monarch is the "Son of Heaven". Therefore, "mandate" originates not only from the "monarch" and the "imperial court", but more from "Heaven". Since ancient times, the unique "concept of destiny" of the Chinese people has taken roots in the cultural traditions of the Chinese Confucianism and Taoism. In other words, the "Heaven" in the hearts of the Chinese is the Supreme God, and destiny is the will and command of God, or the inevitability of the nature decided by God (Ding, 2009). "Mandate" is given to officials and acting under the orders of the monarch is a symbol of glory, whereas "calling" is given to clergies. Therefore, "mandate" originates from the orders of the monarch, and, in essence, from destiny. Same as calling, mandate also refers to the things one shall do under the orders/summoning of the supreme force.

2.1.1.2 Evolution of the secularization of Calling

The religious connotation of both "calling" in Western culture and "mandate" in Chinese culture has gradually reduced since modern times, and their secular connotation has gained development. After the Enlightenment and modern industrial revolution, the meaning of "God's call" has gradually faded for the term "calling". Instead, "calling" evolved into a general term describing vocations. In the *English-Chinese Dictionary* chiefly edited by Wang (1990), "calling" is defined as "the strong inner urge towards particular guidelines for actions or tasks, especially the urge emerged out of the deep belief in God's influence". It can be seen from this definition that, although calling still has religious connotation, its secular nature has become prominent. The *Far East English-Chinese Dictionary* chiefly edited by Liang (1997) translates calling into "vocation", "summoning" or "desire". *The Oxford American College Dictionary* defines calling as "the strong desire for a specific life or vocation". None of these definitions/explanations has embodied the religious connotation. The religious connotations of the Career Calling are fading. In China, the concept of calling increasingly emphasizes tasks and responsibilities, as well as individual aspirations and obligations. In this sense, it has the same meaning as "calling" in modern times. In short, "calling" and "mandate" have the same meaning and development trajectory in Chinese and Western cultures. Can say is: specific content is different; essence meaning is similar.

2.1.1.3 The Definition of Career Calling

Hall and Chandler (2005) differentiated calling in religious sense and calling in secular sense

mainly for fours aspects: source, objects of service, way of identification and meaningfulness. The religious calling emphasizes external forces and ignores human initiative, while the secular calling emphasizes human initiative and the importance of individuals. Hall and Chandler believe that calling could originate from a series of religious beliefs as well as from individuals' perception of selfness and meaningfulness. They define calling-driven vocations as "vocations regarded as the purpose of life by individuals".

There are three current ideas for defining calling. The first is the classical perspective, which has strong religious elements due to the inheritance of Judeo-Christian heritage. The classical perspective of calling highlights personal duty and destiny, holding that calling is "personal salvation realized for the purpose of common good summoned by God" (Ponton et al., 2014). Or it is described as "a place existing in the real world of work that is created or designed by individuals or destined to be realized due to the talents and abilities endowed by God or the opportunities in life" (Bunderson & Thompson, 2009). The second perspective of calling—modern perspective strongly underlines the inner drive towards self-realization and happiness in the process of occupational choice. Representative scholars include Dobrow and TostiKharas (2011) as well as Hall and Chandler (2005). For example, Dobrow and Tostikharas (2011) define calling as "a consuming and meaningful passion that individuals experience in specific area of work".

The third calling is neoclassical view, emphasizes the individual importance and social significance of calling. It pays attention to both the internal and external aspects of the individual, which is more in line with the original concept of calling (Ponton et al., 2014). Bunderson and Thompson (2009) research shows that zookeepers' Career Calling includes not only predetermination, but also passion and the meaning of life. They combine the classical view with the modern view to form the neoclassical Career Calling scale.

Bellah et al. (1985) believe that Career Calling is a complex experience and that people with Career Calling will connect their own identification with their vocation, combine work, individual and social meaning, expect their work to yield valuable contributions to the society and experience inner pleasure and self-realization at work. Justin et al. believe that calling is a characteristic of individuals in organizations. Employees' pursuit of higher achievement is attracted by certain aspects; But not all employees are able to demonstrate Career Calling in their work roles (Coulson, Oades, & Stoyles, 2010).

Dobrow and Tostikharas (2011)define Career Calling as the strong passion for a specific vocation and the experience of a strong sense of meaning. Elangovan, Pinder, and Mclean, emphasize three elements in the definition of calling: (1) action orientation, where calling

motivates individuals to take specific actions. It emphasizes the actual motivation effect; (2) clarity of life goals and individual tasks, according to which calling includes the clear understanding of personal goals, development direction, sense of meaning and life tasks; (3) pro-social intention, where calling incudes a series of actions with pro-social purpose and individuals aspire to make their own contributions to the society and the world. Therefore, they define Career Calling as "a series of actions with pro-social intention undertaken on the basis of such understandings as what individuals believe they want to do, should do and are actually doing"(Elangovan, Pinder, & Mclean, 2010).

At present, the definition of Career Calling is mainly as follows: 1. Professional mission can be external demand, internal passion, or external and internal fit; 2. Embodies a sense of meaning and mission;3. Altruistic or prosocial tendencies (Dik & Duffy, 2007; Hunt, Dik, & Bannning, 2010; Zhang, Wei, & Zhang, 2012).

In China, there are less studies on Career Calling, and its definition is mainly found in some non-academic vocational training works. Having a strong sense of calling to work is considered to be a work attitude, an attitude of an overall and comprehensive understanding of the relationship between work and life. Lu believes that Career Calling means knowing what one is doing and the significance of doing so (Lu, 2007). It is about devoting oneself to a great cause, unleashing the passion of life, embracing hardships, and upholding one's firm beliefs with bold practices. This view is consistent with the emphasis of the sense of meaning and passion in calling by Dobrow and TostiKharas (2011).

2.1.2 The dimensions of Career Calling

Dobrow and TostiKharas (2011) formulated a single-dimensional Career Calling scale. The single-dimensional measurement of Career Calling in early days includes the Calling-Oriented Scale (COS) developed by Wrzesniewski et al. (1997). Consisting of 18 entries, COS only requires respondents to answer yes or no. Therefore, it lacks rigorous reliability and validity (Wrzesniewski et al., 1997). The BCS (Brief Calling Scale), widely used by researchers, has only two items. The most prominent feature is the unclear source of Calling, which allows respondents to make corresponding choices based on their own understanding of Calling. BCS has high reliability and validity (Duffy & Sedlacek, 2007; Duffy & Dik, 2009). Dik et al. compiled the Calling and Vocation Questionnaire (CVQ), which is the most widely used calling scale in foreign countries. It is divided into three dimensions: transcendental mission, work meaning and prosocial behavior (Dik & Duffy, 2007). Other common calling scales are shown

in Table d.1 of Annex D.

2.1.3 The antecedent variables of career calling

From the perspective of either vocational counseling or organizational management, it is very valuable to continuously probe into the influencing factors of calling. However, we know very little about the antecedents of calling, whether in professional psychology or in the field of organizational behavior at present. In theory, only Hall and Chandler as well as Longman et al. have discussed the influencing factors of calling (Hall & Chandler, 2005; Longman et al., 2011). Peterson et al., Creed, Kjoelaas, and Hood discuss factors that influence the Career Calling at the empirical level that both individual and environmental factor (Peterson et al., 2009; Creed, Kjoelaas, & Hood, 2015). Dobrow (2012) also proves that individuals that invest more in the fields Career Calling points to and individuals that feel social help will have stronger Career Calling in the beginning. Foreign scholars have found that professional mission is positively correlated with core self-assessment (Duffy et al., 2012). Personal values and life meaning have a positive predictive effect on professional mission (Peterson et al., 2009).

2.1.4 The effects of career calling

The study by Peterson et al. (2009) indicates that calling has a positive predictive effect on individuals' work satisfaction, which is consistent with the conclusion of Wrzesniewski et al. (1997). Hagmaier and Abele on the basis of multi-dimensional Career Calling measurement, further discovered that the dimensions of identification and the match between individuals and environment have stronger predictive relationship with work satisfaction. and that the two dimensions, namely, identification & the match between individuals and environmental as well as transcendental guidance, have a buffer effect on employees' work burnout (Hagmaier & Abele, 2012). Research by Markow and Klenke (2005) proves that Career Calling is positively related to organizational commitment. Data from the field of practice management show that Career Calling is related to individuals' less absenteeism (Wrzesniewski et al., 1997), Treadgold (1999) first explored the impact of calling on teachers' mental health. Studies show that the stronger the sense of calling, the lower the level of stress and depression experienced by individuals. The relationship between calling and employees' life satisfaction is a significant positive correlation (Peterson et al., 2009; Duffy et al., 2013).

2.1.4.1 Career calling and work satisfaction

A large sample study by Peterson et al. (2009) indicated that the correlation coefficient between

calling and employee work satisfaction is 0.54. The longitudinal tracking study conducted by Duffy et al. (2013) provide stronger evidence for the existence of a close relationship between calling and work satisfaction. Their study showed that the correlation coefficient between calling measured by different measurement tools and the work satisfaction of employees after 3 months is between 0.25 and 0.49. Besides, qualitative studies by Greene and Robbins (2015) show that people with strong calling exhibit high work satisfaction even in the face of vocational discrimination. One study shows that calling can enhance employees' work satisfaction by boosting their professional commitment and sense of work meaning at the same time (Duffy et al., 2012). Chinese researchers also showed that Career Calling has a positive impact on the work satisfaction of knowledge workers by increasing organizational commitment (Pei & Zhao, 2015).

2.1.4.2 Career Calling and Job Engagement

Research suggests that strong Career Calling of people with more work enthusiasm and sense of responsibility (French & Domene, 2010), willing to put more effort into work, in order to reflect personal value and meaning of life, about Career Calling and Job Engagement have the following views: the empirical study found that the Career Calling to Job Engagement has a guiding role, both have close relationship (Hirschi & Herrmann, 2012; Seco & Lopes, 2013; Wang, 2015). Dobrow and TostiKharas (2011) found in the development of 12-CS that whether using COS, NCS, BCS or 12-CS, the result is that there is a moderate correlation between calling and employees' Job Engagement (the correlation coefficient is between 0.58 and 0.68). Further research found that, after controlling for the relevant variables, Career Calling also presented a significant positive correlation with Job Engagement.

2.1.4.3 Career Calling and Employee Performance

Theoretically speaking, Career Calling has social affinity and altruism, which will lead to higher work enthusiasm. At present, there are few empirical studies on the work performance of employees with Career Calling, which belongs to the relationship between individual characteristics and work performance. Hall et al. pointed out that people with a strong Career Calling can achieve better performance because they are more flexible, more willing to change, and more willing to work hard (Hall & Chandler, 2005). Elangovan, Pinder, and Mclean (2010) also believe that people with a strong sense of professional mission are more resistant to setbacks and risks in addition to putting more effort into their work. A number of studies have shown that professionals with a stronger Career Calling think they are more productive through

self-evaluation, and there is a significant positive relationship between the Career Calling and work performance (Duffy et al., 2012; Lobene & Meade, 2013).On this basis, Park, Sohn, and Ha explored the intermediary mechanism between professional Career Calling and work performance. It is found that professional self-efficacy plays a sufficient mediating role in the relationship between sales staff's Career Calling and work performance (objectivity, non-self-evaluation). The results show that professional self-efficacy plays an important role in associating the Career Calling with work performance (Park, Sohn, & Ha, 2016).

According to the two-dimensional performance structure model proposed by modern human resource management theory, employee performance is composed of task performance and contextual performance. Task performance is directly related to work output and can be directly evaluated and measured. However, contextual performance is more dependent on extra-role performance such as Organizational Citizenship Behavior. Organizational Citizenship Behavior is a kind of extra-role performance. Theoretically, there should be a close relationship between Career Calling and Organizational Citizenship Behavior, as mentioned above, both of which are prosocial and altruistic.

According to the two-dimensional performance structure model proposed by modern human resource management theory, individual performance is composed of task performance and contextual performance. Task performance is directly related to the output of work results and can be directly evaluated and measured. However, contextual performance is more dependent on extra-role performance such as Organizational Citizenship Behavior. Organizational Citizenship Behavior is a kind of extra-role performance. Theoretically, there should be a close relationship between Career Calling and Organizational Citizenship Behavior, as mentioned above, both of which are prosocial and altruistic. People with a strong Career Calling usually pursue greater work value and life meaning beyond work goals and rewards (Elangovan, Pinder, & Mclean, 2010). further found that Career Calling was significantly positively correlated with two dimensions of Organizational Citizenship Behavior: OCBo directed at organizations and OCBi directed at individuals (Xie, Xin, & Zhou, 2016).

2.1.5 Summary

Researchers have their own expressions of the concepts of work calling and Career Calling and confuse their usages to some extent. Given the differences in their connotations, it is necessary to differentiate the concepts of work and vocation. In fact, there are significant differences between them. In the most basic sense, work refers to the tasks or behaviors carried out within

the scope of what we call a "post". These tasks are related to vocation. In comparison, vocation is a series of work. However, compared to work, vocation also includes a series of attitudes and behaviors related to work and life. Therefore, vocation is a basic manifestation of self-identification or self-concept.

This Thesis statement that Career Calling of medical personnel is the strong passion and belief experienced by medical personnel in the medical work, and the sense of life meaning, social value and responsibility experienced from it.

2.2 Relevant studies on Organizational Citizenship Behavior

2.2.1 Definition of Organizational Citizenship Behavior

The concept of Organizational Citizenship Behavior was put forward by Bateman and Organ, who believe that Organizational Citizenship Behavior (hereinafter referred to as the "OCB") is an extra-role behavior and gesture that is beneficial to the organization (Bateman & Organ, 1983). it is neither emphasized by the formal role nor induced by the contract of labor compensation, but rather composed of a series of informal cooperative behaviors. It's an autonomous work-related behavior that has no connection whatsoever with the formal reward system and is not required within the role, but it can effectively improve the overall efficiency of the organization. OCB exceeds the requirements of formal roles, making it difficult for managers to detect whether employees are engaged in this kind of behavior and to encourage such behavior through a system of rewards and penalties.

In 1989, OCB was officially defined by Organ as "the sum of behaviors not yet clearly or directly recognized in the formal compensation system of the organization, but is on the whole conducive to the operational effectiveness of the organization" (Bies, 1989). Subsequently, In 1997, Organ linked OCB to the "peripheral performance" put forward by Borman and Motowidlo (1993), claiming that OCB could not provide direct support for the realization of task performance, but could promote task performance by maintaining and improving the development of social and psychological environment in the organization (Organ, 1997).

2.2.2 The dimensions of Organizational Citizenship Behavior

Despite the growing interest in OCB, a review of the literature in this field reveals a lack of consensus on the dimensions of OCB, with studies showing that nearly 30 different forms of constructs have been identified (Podsakoff et al., 2000). Many researchers have put forward

their own views on the characteristic dimensions of OCB, such as a two-dimensional structure, three-dimensional structure, four-dimensional structure, five-dimensional structure or seven-dimensional structure. In conclusion, the main characteristic dimensions proposed by them include the following: altruism, generalized compliance, courtesy, cheerleading, peacekeeping, sportsmanship, civic virtue and conscientiousness. But several studies have found it difficult to distinguish between altruism, courtesy, cheerleading and peacekeeping, which is why some studies have grouped these four kinds of behaviors into one dimension: helping behavior. One such example is the categorization of OCB into the three dimensions of helping behavior, civic virtue and sportsmanship by Podsakoff and Mackenzie (1997). Graham, on the other hand, proposed a four-dimensional structure including interpersonal mutual assistance, individual initiative, individual diligence and loyal support (Dyne, Graham, & Dienesch, 1994). However, the most widely adopted one is the five-dimensional structure put forward by Organ, which is composed of altruistic behavior, courtesy, sportsmanship, conscientiousness, civic virtue (Zhang & Qi, 2001).

In 2004, Fan conducted a step-by-step study in Beijing, Shanghai and Shenzhen on the basis of the local OCB Scale constructed in Taiwan, China. have divided the OCB into ten dimensions: proactivity, willingness to help, expression of views, participation in group activities, elevation of organizational image, self-training, engagement in social welfare, protection and saving of corporate resources, and the maintaining of a clean workplace and a harmonious interpersonal relationship. After comparing with the dimensions of OCB in the West, the first five dimensions were classified as common dimensions and the last five extended dimensions. A concentric-circle model was then constructed with the ten dimensions divided into four categories: individual, group, organizational and social dimensions (Farh, Zhong, & Organ, 2004). Since then, Chinese scholars such as Yao, Xiao, and Pu have done some researches on the dimensional construction of local OCB, but no consensus has been reached. More researches tend to adopt the more influential Organ or Podsakoff and other structural dimensions (Hu & Wang, 2016).

Willams and Anderson divide OCB into two types. One is individual-oriented OCB (OCBI--behavior), also known as altruism, which directly benefits specific individuals and indirectly contributes to the organization in this way, such as helping others who are absent and caring for the personal interests of other employees. One is organization-oriented OCB (OCBO--behavior), also known as broad compliance, which is beneficial to the organization and complies with informal rules designed to maintain order, such as advance notice when you can't come to work. Tags such as OCBI and OCBO are used because altruism and compliance terms

imply restrictive assumptions about external rewards, which is inconsistent with the current conceptualization of OCB. Another reason is that in order to avoid confusion between the measurement methods used in the current study and those used in the previous study, a mixture of these two types was used in the previous study. This study adopts the two-dimensional classification of OCB-I and OCB-O (Williams & Anderson, 1991).

2.2.3 The antecedent variables of Organizational Citizenship Behavior

2.2.3.1 Personality characteristics and Organizational Citizenship Behavior

The relationship between personality characteristics and OCB is the predictive role of the population and dimensions of personality characteristics on the population and dimensions of OCB. It is found from relevant studies at home and abroad that personality characteristics have a positive effect on OCB, which is a basically consistent conclusion. Further analysis shows that personality characteristics have an impact on OCB both directly and indirectly.

George et al. found that personality factor is an indirect rather than a direct influence factor on OCB. The study found that some dimensions of personality characteristics, such as sense of responsibility and emotion, would make employees more inclined to the orientation of colleagues and managers, and make them feel more satisfied with their job, more supportive and more committed, thus affecting OCB. It is pointed out that attitude variables can explain the correlation between personality traits and OCB, that is, attitude variables are mediating variables between personality traits and OCB (Neuman & Kickul,1998).

In terms of direct correlation, some studies have also confirmed that achievement value, conscientiousness and agreeableness should be used to predict OCB, which is conducive to employees' altruistic behavior and obedient behavior. Chinese scholars have also confirmed this point through the study of Chinese enterprises (Organ & Ryan, 1995; Zeng & Wu, 2009).

Chinese scholars in the study of medical personnel found the relationship between the big five personality traits and OCB, medical personnel responsible of big five personality traits, openness, agreeableness, extraversion and OCB is significantly positively related to the dimension of civic responsibility, openness, agreeableness, extraversion and actively participate in the dimension of OCB is significantly related to the commitment and OCB significantly positively related to the dimension of responsible behavior; In the process of the influence of personality traits on OCB, the internal incentive type of psychological contract plays an intermediary role (Lu, 2015).

2.2.3.2 Leadership characteristics and Organizational Citizenship Behavior

Studies on the relationship between leadership characteristics and OCB mainly center upon leadership styles, which generally includes laissez-faire leadership, transactional leadership and transformational leadership. Studies show a negative correlation between laissez-faire leadership and OCB and a positive correlation between transactional leadership, transformational leadership and OCB. But leadership style is deeply influenced by cultural characteristics, and the connotation and effectiveness of leadership may vary in different contexts. Zheng and Zhuang maintain that Western leadership theory is based on equality between superiors and subordinates, while Chinese society on a clear-cut relationship between superiors and subordinates as well as role patterns. Paternalistic leadership, which can be categorized into benevolent leadership, moral leadership and authoritarian leadership, also influences employees' OCB. Zheng et al. (2003) believe that benevolent leadership and moral leadership are positively correlated with OCB, while authoritarian leadership was negatively correlated with OCB. With the development of cross-cultural studies, more and more scholars have found that patriarchal leadership is not an exclusive product of Chinese society. Nevertheless, there are still differences between Chinese and Western scholars' researches on patriarchal leadership. First, Chinese scholars' value benevolent leadership and moral leadership, while Western scholars pay more attention to authoritative leadership. Second, China's domestic paternalistic leadership is strongly characterized by the rule of men, while Western organizations are not. This thesis attributes it to the different development paths of Chinese and Western organizations. Chinese organizations are heavily influenced by traditional culture and other informal systems, while Western organizations follow highly rational and legitimate construction logic. Different development paths lead to different relationships between paternalistic leadership and OCB. The studies of Lin and Yang have confirmed that, despite coexisting in the cultural circle of East Asian, Chinese and Korean employees differ significantly from each other in such relationship.

Byrman (1992) believed that managers must be trustworthy and have the integrity of personality, otherwise subordinates would only undertake the most basic responsibilities without any spontaneous or innovative behaviors (Hunt & Ropo, 1993).

The research on the relationship between leadership characteristics and OCB mainly focuses on leadership style, including free leadership, transactional leadership and transformational leadership. The research shows that laissez-faire leadership is negatively correlated with OCB, transactional leadership and transformational leadership are positively

correlated with OCB, but leadership style is deeply influenced by cultural characteristics, and the connotation and effectiveness of leadership may be different in different environments (Hu & Wang, 2016). Zheng, a scholar from Taiwan, believes that Western leadership theory is based on superior and subordinate equality, while Chinese society is based on superior-subordinate relations and role models. The most common paternalistic leadership in China can be divided into benevolent leadership, moral leadership and authoritarian leadership. These three leadership styles also affect employees' OCB, bona fide leadership and moral leadership are positively related to OCB, while authoritarian leadership is negatively related to OCB (Zheng et al., 2003; Zheng & Zhuang, 1981).

Byrman (1992) believes that managers must be reliable and have the integrity of personality, otherwise subordinates are only willing to undertake the most basic responsibilities, and will not have any spontaneous and innovative behavior (Hunt & Ropo, 1993). Leadership behavior is closely related to OCB, work attitude and task variables. Work attitude such as trust is a necessary tool to maintain social exchange, which helps to alleviate the speculation about managers' opportunistic behavior tendency. Task variables such as work intrinsic motivation affect OCB through work attitude (such as job satisfaction), while temporary reward behavior in leadership behavior affects OCB through cognitive mechanism (Zheng, 2006).

2.2.3.3 Job characteristics and Organizational Citizenship Behavior

Psychologists Oldham and Hackman established the Job Characteristic Model (Job Characteristics Model, JCM), which is a widely used theory in employee performance evaluation. The job characteristic model contains five core dimensions, namely skill diversity: it refers to the range of skills and abilities that employees need to possess to accomplish a task. The more meaningful the employees experience in their work, the more motivated they will be. Task identity: refers to the extent to which work needs to be done as a whole and can clearly see the results of the work, which is more meaningful when employees think they are involved in the whole process rather than part of it; task importance: refers to the impact of work on other people's lives or work, and the higher the impact of work on other people's lives, the greater the perceived meaning. Work autonomy: refers to the degree of freedom, independence, discretion and control that employees have. In this case, employees will assume greater personal responsibility and motivation; job feedback: refers to whether the work can enable employees to directly and clearly understand the performance of the work. The beneficial results of jobs with these five characteristics are greater employee motivation and job satisfaction, as well as higher quality and quantity of work (Hackman & Oldham, 1975).

There are few researches on the relationship between job characteristics and OCB in both China and western countries. However, according to the existing western research literature, we can infer that the improvement of these dimensions can help employees to show OCB (Ali et al., 2014; Duffy et al., 2012; Hwang & Jang, 2020). Hackman and Oldham (1975) believe that high-level job characteristics have a positive impact on organizational members' internal work motivation, job satisfaction and job performance, and then have a positive impact on OCB (Hackman & Oldham, 1975). Podsakoff et al. (2000) found that there was a consistent relationship between task characteristics and OCB, and that job feedback, job regularization and job satisfaction were significantly correlated with enthusiasm, politeness, responsibility, sportsmanship, civic morality and other dimensions of civic organization members. Smith, Organ, and Near (1983) found that the interdependence of tasks in environmental variables affects the presentation of OCB. Highly interdependent work requires frequent mutual adjustment to achieve coordination, which promotes social norms that promote cooperation, help and needs of others, as well as a greater sense of social responsibility and teamwork, and promote higher levels of group cohesion, thus showing more OCB. Task interdependence is a potential source of emotion and OCB. OCB may be just a manifestation of a broader tendency towards prosocial behavior. As can be seen from the above literature, there are relatively few studies on OCB focusing on working characteristics. Its role in the interpretation and prediction of OCB needs to be further studied.

Most of the researches of domestic scholars are carried out from these aspects, and the research results are very similar to those of the West. The reason why Chinese and Western researchers have reached a consensus here may be the lack of research results, or it may be that the impact of job characteristics on OCB is universal and will not be disturbed by too many situational factors.

2.2.4 The outcomes of Organizational Citizenship Behavior

At present, the research on OCB result variables is mainly focused on its impact on performance, that is to say OCB can improve organizational performance. For example, Organ (1988) believes that employee OCB can improve organizational performance (Bies,1989). In the study of the influence mechanism of OCB on organizational performance, Podsakoff (2000) concluded that OCB can improve the productivity, cooperation and management efficiency of organizational members, release more human and intellectual and emotional resources into productive activities, effectively coordinate cooperation between organizational members and

organizational groups, create a more enjoyable working environment, and enhance the organization's ability to attract talents. It can improve the stability of the organization and improve the ability of the organization to adapt to environmental changes (Podsakoff et al., 2000).

The research of Podsakoff and Mackenzie shows that there is a negative correlation between help behavior and performance in OCB, while there is a positive correlation between civic virtue and organizational performance. Podsakoff et al. (2000) conducted a meta-analysis of previous studies and found that OCB could explain 19% of the variation of performance variables, 18% of the variation of performance quality, 25% of the variation of financial efficiency index, and 38% of the customer service index. These studies effectively support the basic hypothesis of Organ (1988): OCB can improve organizational performance.

He, a scholar from China Taiwan, proposed that "relationship orientation" is the quintessence of Chinese social psychology, while "individual orientation" is the quintessence of western social psychology. The influence of interpersonal relationship is more prominent in the organizational performance of Chinese enterprises, while OCBs, which is characterized by cooperation and good will, has a greater impact on organizational management in the context of China (Zhang & Ling, 2003).

Karambayya (1990) believes that members of high-performance teams are more likely to exhibit OCB than those of low-performance teams. However, it is still controversial whether the improvement of team performance is due to more civic behavior of employees or because they are in a high-performance team. In addition, OCB has an important impact on employee satisfaction, organizational justice, Organizational Commitment and leadership support.

2.3 Study of Organizational Commitment

The concept of Organizational Commitment (hereinafter referred to as the "OC") has been a research hotspot in the field of organizational behavior and human resources since it was proposed in the 1960s.As an important variable of employee attitude, Organizational Commitment can affect many organizational behaviors of employees, such as job satisfaction, attendance, job engagement, organizational performance, employee relations. Therefore, it is of great significance and application value to deeply understand the implementation and mechanism of organizational commitment.

2.3.1 Definitions of Organizational Commitment

Organizational Commitment generally refers to the extent of an individual's identification with and commitment to an organization. Different from the formal written contract of employment signed by employees and employers, it is kind of "psychological contract" (O'Reilly & Chatmen, 1986). Since 1960, American sociologist Becker put forward the concept of organizational commitment, it has attracted more and more attention from researchers in fields of human resources management and organizational behavior.

With the further and in-depth study, OC has been variously defined by different scholars, as listed in Table d.2 of Annex D.

According to the above table, many researchers give the definition of organizational commitment. The problem is that, as Morrow found in his 1983 review of more than 30 Organizational Commitment definitions, many researchers focused on developing their own definitions and scales to measure OC and ignored the work of others, so there is a serious conceptual redundancy in the definition of organizational commitment (Morrow, 1983).

Many researchers equate Organizational Commitment with psychological contract. However, there are similarities and differences between the two. The similarity is that they are both formed based on unwritten contracts and mutual expectations between employees and organizations beyond the terms of the formal employment contract (Kim, 1995). These expectations are difficult to express formally in writing or verbally. It is based on such factors as morality, responsibility, habit and trust. The performance of a contract is not mandatory by law. The differences lie in: psychological contract represents the relationship between an employer and an employee. In a given period and under certain conditions, both sides have unwritten expectations of each other, emphasizing their own expectations and commitments (Cheng, Fang, & Ling, 2001). OC focused on exploring why employees wanted to stay in the organization and expressing their willingness to work for the organization's benefit. Morrison and Robinson (1997) have pointed out that Organizational Commitment is the result of psychological contract. After perceptions and comparison of the mutual responsibilities of both sides, employees develop different degrees of commitment to the organization.

2.3.2 Dimensions of Organizational commitment

Scholars in different periods have put forward different structural model theories. According to different dimensions of organizational commitment, scholars have put forward one-dimensional model, two-dimensional model, three-dimensional model, four-dimensional model and five-

dimensional model. According to the literature, it is summarized in Table d.3 of Annex D:

Based on different theories, scholars have proposed different measurement methods. The first is the Organization Commitment Questionnaire (OCQ), which was developed by Porter and Styles and is a widely used tool for measuring organizational Commitment (Porter et al.,1974). There are two versions of OCQ. The long version of OCQ, consisting of 15 projects, has been widely used over the past 20 years to measure three different types of organizational commitment: identification, engagement, and loyalty. Later, Reichers (1985) reduced the long version of OCQ to a short version with only 9 items, believing that the 6 items deleted overlapped with the items used to measure turnover intention. Therefore, the long version of OCQ is superior to the short version of OCQ in measuring the relationship between OC and turnover intention.

The second OC scale proposed by Randall, Fedor, and Longenecker (1990) is called the Non-QCQ Attitude Scale. The third OC scale is a three-dimensional tissue commitment scale developed by Allen and Meyer. It was also the most widely used scale in the OC study, with 24 items (Meyer & Allen, 1990).

At present, the most used in China is the five-dimension Organizational Commitment scale proposed by Zhang, Fang, and Ling. Using the research on employees' willingness to stay, they conducted empirical tests on emotional commitment, normative commitment, ideal commitment, economic commitment and opportunity commitment respectively. The 25-item Organizational Commitment scale showed sufficient discriminative validity and internal consistency (Zhang, Fang, & Ling, 2001).

2.3.3 Antecedent variables of Organizational commitment

Because different scholars have different definitions of OC, their views on the factors affecting OC are vastly different. Steers was the first person to study the affecting factors of OC. He examined the extent to which OC is related to variables such as individuals, work, roles and organizational characteristics(Steers,1977). In addition, he examined the relationship between OC and several important outcome variables, including absenteeism, turnover intention and work performance. His research has a great impact on the later researchers' studies. The three commonly agreed influencing factors of OC include organizational factors, personal factors and work factors.

2.3.3.1 Organizational factors

Organizational factors mainly include organizational support, organizational motivation and

fairness, leaders' acceptance of new views and ideas, and team spirit. A review of a large number of empirical studies by Shore and Wayne (1993) found that the stronger the Perceived Organizational Support (POS), the higher the affective commitment. Meanwhile, strong organizational culture is significantly correlated with OC. The higher the consistency of organizational culture is, the higher the Organizational Commitment of members will be.

The Chinese scholars Jiang and Zhao proposed that organizational culture can promote employee's work satisfaction, and employee's work satisfaction has a significant positive impact on organizational commitment. Therefore, employee's work satisfaction plays a mediating role between organizational culture and employee's organizational commitment (Jiang & Zhao, 2011). Fan, Yan, and Zhang (2012) found that the motivation and fairness of corporate culture are positively correlated with the affective commitment of knowledge-based talents.

2.3.3.2 Individual factors

Individual factors include the length of service, age, education background, marital status, work experience and other factors. Steers (1977), and Meyer and Allen (1991) found that age was positively correlated with organizational commitment, and the older employees are, the more likely they are to be affectively committed to the organization. Porter et al. (1982) considered that educational level is negatively correlated with organizational commitment. On the basis of a large number of questionnaire surveys, Chinese scholar Cui (2003) applied the theory of organizational behavior to analyze the relationship between Organizational Commitment and turnover intention of Chinese employees and found the individual factors have significant impact on OC of employees. Meanwhile, it is pointed out that employee's OC has a significant impact on turnover intention. This study is meaningful for improving employee Organizational Commitment and preventing employee turnover.

2.3.3.3Working factors

Work factors include work challenges, clear responsibilities of position, goal difficulty.

The research on the impact of work factors on Organizational Commitment shows that OC is positively correlated with spontaneity of work and high-quality work, and negatively correlated with workplace size and frequency of work-family conflict (Fields, 2004). Kushman (1992) found that Organizational Commitment was positively correlated with work satisfaction. Mathieu and Zajac believe that satisfaction is closely related to employees' OC (Mathieu & Zajac, 1990). Meyer and Allen found that satisfaction and work challenges affect affective commitment (Meyer & Allen, 1991).

2.3.4 Outcomes of Organizational commitment

2.3.4.1 Employees' withdrawal behavior

Employee withdrawal behavior is mainly manifested in turnover intention, attendance rate, work change. Morris and Sherman (1981) found that Organizational Commitment can effectively predict employee absenteeism and turnover behavior. Meyer and Allen (1991) believe that different components of OC have different impacts on employees' behavior. The impact of OC on employees depends on the conditions. For young people, the shorter the time interval is, the greater the impact; for older people, the longer the time interval is, the greater the impact. Steers found that Organizational Commitment can enhance employees' willingness to stay in the enterprise (Steers, 1977).

2.3.4.2 Work performance

Currently, there is no consensus among scholars regarding how closely OC and work performance are related to each other, but they all agree there is correlation between OC and work performance. Steers believes that although there is no linear relationship between OC and work performance, there is a weak correlation between them (Steers, 1977). Chinese scholar Hu and Shi pointed out that there should be intermediate variables between OC and work performance, such as salary, clarity of work objectives. Among them, salary may play a moderating and balancing role between OC and work performance. If the employee's salary is directly tied to work performance, there will be higher correlation between OC and work performance; clarity of work objectives may also serve as a mediating variable between affective commitment and work performance (Hu & Shi, 2004). Therefore, OC exerts different impacts on work performance through different intermediate variables.

2.4 Study of Job Engagement

With the rise of positive psychology, compared to work stress, career burnout, the strengths and advantages of human beings have received wide attention and thus been heavily studied. Some studies have shown that positive feelings towards work such as Job Engagement can help improve employee work satisfaction and performance, and even organizational performance. However, there is currently still no commonly agreed upon definition of the Job Engagement, so it is very important to explore the evolution of the concept and its essence.

2.4.1 Connotations of Job Engagement

At present, it is believed that Job Engagement refers to employee's positive, satisfying and sustained feelings towards work, which is mainly characterized by vitality, dedication, concentration and perseverance, and it has the characteristics of persistence and dispersion (Hu & Wang, 2014) .

In 1990, Kahn first proposed the concept of personal engagement, or known as employee engagement, or Job Engagement. Based on Goffman 's theory, Kahn developed a new concept suitable for the organization - personal engagement. He defines personal engagement as the ability of members of an organization to fully involve themselves into their work roles and freely express themselves. Through in-depth interviews and ethnographic studies, Kahn found that engaged employees share the following characteristics: physically active participation in tasks; cognitively cautious, sensitive and focused; emotionally able to express their thoughts and feelings at work, their creativity, beliefs and values, show empathy for others and establish good personal relationship. Kahn put forward three dimensions of Job Engagement, namely physiological needs, cognition and emotion and argued, which are greatly influenced by sense of meaning, sense of security and accessibility(Kahn,1990).

The concept of Job Engagement proposed by After Kahn received immediate attention from scholars from many fields, especially management psychology and human resources development (Haugen & Davis, 2009; Shuck, 2011). Job Engagement, as the opposite concept of work burnout, was first studied by Maslach and Leiter (Maslach & Leiter,1997). Maslach, Schaufeli, and Leiter (2001) developed three dimensions of Job Engagement, namely high energy, high involvement and high efficiency by reversing the concepts of three dimensions of work burnout, that is, emotional exhaustion, cynicism and low efficacy. They used the opposite scores in work burnout scale to assess Job Engagement, thus shifting the study of work burnout to that of positive work emotions. From this point of view, Maslach and Leiter arguably developed the scientific concept of Job Engagement (Wefald & Downey, 2009). Schaufeli et al. argue that Job Engagement is a more complex concept than the opposite concept of work burnout. An employee without work burnout does not mean he is fully engaged and feel passionate about his work. They believe that Job Engagement is a positive, substantial, more lasting and universal emotional-cognitive state (Schaufeli et al., 2002). Job burnout is negatively correlated with job engagement. Job burnout is mainly predicted by job demand and lack of job resources, while job engagement is mainly predicted by available job resources. Burnout is not only associated with health problems, but also with turnover intentions, whereas

job engagement is only associated with turnover intentions. So, Job Engagement can also be defined as high energy and a strong sense of identification with work (Schaufeli & Bakker, 2004). The concept of Job Engagement proposed by Schaufeli is different from the opposite concept of work burnout put forward by Maslach and Leiter's (1997) because Schaufeli and Bakker (2004) argued Job Engagement represents a state of being where employees are fully engaged and fulfilled in what you're doing. Schaufeli et al.'s research on Job Engagement is one of the most widely cited paradigms in academic and practical fields.

2.4.2 Dimensions of Job Engagement

In the related research of job engagement, the three-dimensional composition model of job engagement is widely used. Kahn put forward three dimensions of job engagement, namely physiological needs, cognition and emotion, and proposed that sense of meaning, security and accessibility have a great impact on job engagement. The most representative one is Schaufeli and Bakker (2003) who proposed a three-dimensional model of Job Engagement, namely Vigor, Dedication and Absorption. The Vigor Dimension is assessed by six items: high energy, high resilience level, willingness to work hard, not easy to get fatigued and perseverance in the face of difficulties. The Dedication Dimension measures a person's sense of meaning acquired from work, passion and pride in work through five items; and the Absorption Dimension uses six items to assess the extent to which employees are completely and joyfully immersed in their work (Schaufeli & Bakker, 2003). UWES scale is the most commonly used scale for Job Engagement, which has good consistency among European countries, and its Chinese version has good cross-cultural consistency (Zhang & Gan, 2005).

The concept of job engagement put forward by Kahn is a perfect representation of the individual's cognitive, emotional and physical state at work, and it is not confused with the antecedent and outcome variables of job engagement. The understanding of such views in terms of the composition dimension of job engagement also has certain reference value for our research (Kahn,1990).

2.4.3 Antecedent variables of Job Engagement

Hang et al. (2012) found that occupational categories and work characteristics are the influencing factors of Job Engagement. Work characteristics refer to the factors or attributes related to work. Work characteristics can stimulate three key psychological states, namely, the meaning of work, perceived responsibilities in work and the results of work. Strengthening

these work characteristics can enhance employees' internal work motivation and enable employees to produce positive feelings and feel passionate about their works. Kahn (1990) believe Job Engagement is influenced by three antecedent variables, that is, sense of meaning, sense of security and availability.

2.4.4 Outcomes of Job Engagement

Job Engagement emphasizes the "best performance" of employees at work and is closely related to happiness of employees (Hallberg & Schaufeli, 2006). Job Engagement, as a positive and fulfilled work state, has been widely recognized for its positive impact on the organization (Saks, 2006). Table d.4 of Annex D summarizes the influential empirical studies on the outcome variables of Job Engagement in recent year.

Research on Job Engagement as an intermediary variable just started recently. Kataria, Garg, and Rastogi (2013) found Job Engagement plays a moderating role between psychological climate and OCB.

To sum up, the related research on Job Engagement has been gradually deepened not only in concept, but also in its impact mechanism and path. Its positive impact on organizations and individuals has also been supported by more and more empirical studies, which is expected to provide solid support and guidance for management practice.

2.5 Research on the Perception of organizational support

In 1986, American psychologist Eisenberg et al proposed the concept of Perception of Organizational Support (Eisenberger et al., 1986) . Its theoretical basis is the social exchange theory of social psychology about interpersonal relationship. The theory emphasizes that the relationship between people is essentially a kind of social exchange, including material exchange and non-material exchange. When we receive positive treatment from others, we tend to reciprocate positive treatment. When applied in an organizational environment, employees will give more positive feedback to the organization when they feel cared for, appreciated and recognized by the organization.

In the previous studies of Perception of Organizational Support, the relationship between organizations and employees focuses on the loyalty and trust of employees to the organization, which is called organizational commitment. Social exchange theory points out that the commitment between the organization and the employee is mutual, which is not only reflected in the commitment of the employee to the organization, but also should include the commitment

of the organization to the employee. Therefore, the research of POS has attracted more attention.

2.5.1 Concept and connotation of Perception of Organizational Support

Eisenberger et al. (1986) defined POS as an employee's overall belief in the extent to which the organization values their contribution and CARES about their well-being. Two core points are embedded in this concept :(1) There is a perception that the organization is paying attention to its happy employees;(2) There will also be certain perceptions and feelings about whether the organization attaches importance to its employees.

McMilin took the service personnel as the research object and put forward his own opinion. He pointed out the deficiencies of Eisenberger et al. in their study and believed that they only paid attention to the two aspects of respect support and intimate support while neglecting another important aspect -- instrumental support, that is, the information, training, equipment and tools needed by employees to complete their work (McMillan, 1997).

Chinese scholar Ling, Yang, and Fang gave their definition of Perception of Organizational Support, namely the support that employees could feel from the organization (Ling, Yang, & Fang, 2006).

2.5.2 Dimensions of Perception of Organizational Support

Eisenberger first proposed the one-dimensional structure of the Perception of Organizational Support. He thought the organization to staff's support comes mainly from emotional support, in the follow-up study, the scale has been the widespread use of scholars, However, due to the large number of items contained in this scale, it is inconvenient for the subsequent analysis. With the deepening of the research on the Perception of Organizational Support, most scholars begin to doubt the dimension of the Perception of Organizational Support. They believe that the Perception of Organizational Support is not a single-dimensional structure, but has multiple dimensions. McMillin believes that organizational support includes instrumental support as well as emotional support (McMillan, 1997), which was also recognized by Kraimer and Wayne. They also divided the Perception of Organizational Support into three dimensions, namely, the sense of financial organizational support, the sense of adaptive organizational support and the sense of career organizational support. There were 12 questions in total (Kraimer & Wayne, 2004). Bhanthumnavin (2003) believes that organizational support includes three dimensions, namely emotional support, organizational support and information support.

Chinese scholar Ling, Yang, and Fang proposed that the Perception of Organizational

Support was manifested in three aspects: help on work, concern on interests and recognition of value. Through empirical research, it is pointed out that the organizational support of employees includes three dimensions: job support, identity value and concern for interests. These three dimensions form a 24-item questionnaire on Perceived Organizational Support, which has good reliability and validity (Ling, Yang, & Fang, 2006).

2.5.3 Antecedent variables of Perception of Organizational Support

Based on the relevant domestic and foreign literature, it is found that leadership support, organizational fairness, working conditions and organizational reward are the three main factors affecting Perception of Organizational Support (Rhoades & Eisenberger, 2002; Stamper, 2007). Rhoades and Eisenberger (2002) proved that leadership support has an important impact on employees' Perception of Organizational Support. Organizational justice can be divided into two categories: procedural justice and distributive justice, which mainly emphasizes the fairness of various resource allocation methods among employees. Procedural fairness means that the process and procedure of the event are fair to both the stakeholders and the parties concerned. Distributive justice refers to the sense or perception of fairness of employees to their own distributive results.

2.5.4 Influence and consequences of Perception of Organizational Support

The study of Eisenberg et al. found that Perceived Organizational Support can reduce the absenteeism rate. For employees with strong exchange consciousness, the relationship between Perceived Organizational Support and absenteeism rate is greater than that of employees with weak exchange ideology. These findings also support the idea of social exchange, in which employees' perception of Organizational Commitment strongly influences their perception of organizational commitment. Perceived Organizational Support is hypothesized to increase employees' emotional attachment to the organization and their expectation that additional efforts to achieve organizational goals will be rewarded. The degree to which these factors increase work effort depends on the strength of employees' exchange ideology, which tends to exchange work effort for material and symbolic benefits (Eisenberger et al., 1986).

The impact and results of organizational support on organizations and individuals are mainly reflected in the following aspects: (1)The Perception of Organizational Support can improve employees' emotional commitment; (2)The Perception of Organizational Support can improve employees' work satisfaction; (3)The Perception of Organizational Support can

improve the performance level of employees; (4)The Perception of Organizational Support can improve employees' OCB; (5) The Perception of Organizational Support can increase employees' work input; (6)The Perception of Organizational Support can reduce the absenteeism rate of employees. Table d.5 of Annex D summarizes some researchers' studies on Perceived Organizational Support outcome variables, as shown in the following table.

The significance of the research on the Perception of Organizational Support lies in that previous studies have always emphasized the contribution of employees to the organization and neglected the support of the organization for employees. Organizational support shows people a new research direction. An important factor that employees are willing to contribute to the organization is organizational support for employees, which has a positive impact on work satisfaction, OCB, organizational performance and other factors, and has become a new hot spot in the research on organizational behavior and human resource management.

2.6 Research on Doctor-Patient Relationship

2.6.1 Concept and connotation of Doctor-Patient Relationship

Doctor-Patient Relationship refers to the interpersonal relationship formed between the doctor and the patient in the medical process, and the narrow sense of Doctor-Patient Relationship refers to the specific medical relationship formed between the doctor and the patient in the medical process. In a broad sense, Doctor-Patient Relationship refers to the crowd relationship between the doctor-centered physician and patient-centered patient (Fu, Xiao, & Tang, 2010).

Szasz and Hollander summarized three models of Doctor-Patient Relationship on the basis of existing studies: 1. Active-passive model. Doctors dominate medical activities and patients are in a passive dependence position. It is mainly found in patients with mental confusion, shock and severe symptoms.2. The guidance-cooperation model is still a dominant Doctor-Patient Relationship. According to the treatment plan, doctors appropriately mobilize the enthusiasm of patients, guide patients, and enable patients to actively cooperate with medical activities to achieve the goal of curing patients. It is more common in patients with moderate or regular disease. 3. Participation-negotiation mode. The status and relationship between the doctor and the patient are equal. The doctor provides the alternative treatment plan and explains the advantages and disadvantages. The final decision right rests with the patient. The Doctor-Patient Relationship is a cooperative partnership to complete medical activities through joint consultation. There is no good or bad among the three relationship modes. In different times,

different national conditions, social and economic environments, and the actual situation of patients, the Doctor-Patient Relationship mode will be different (Szasz & Hollender, 1956).

Hayes Bautista proposed four scenarios based on whether the patient is satisfied with the doctor's diagnosis and treatment plan: both the doctor and the patient are satisfied, the doctor is satisfied and the patient is not satisfied, the patient is satisfied and the doctor and the patient are not satisfied. The latter three scenarios are the reasons for the deterioration of the Doctor-Patient Relationship and the decline in trust (Hayes-Bautista, 1976).

With the increase of patients' awareness of rights and the change of disease spectrum, the status of the Doctor-Patient Relationship has gradually changed, and the Doctor-Patient Relationship is more inclined to the instruction-cooperation mode or participation-consultation mode, or even more diversified. In the process of dynamic change, new characteristics will emerge and even cause social problems, which need to be paid attention to and paid attention to, and need to be further explored and studied by scholars.

The Doctor-Patient Relationship discussed in this study is from the perspective of medical prescriptions, that is, medical personnel. It focuses on doctors, nurses and medical technicians' perception of the bad degree of doctor-patient interaction based on subjective experience and patient objective behavior.

2.6.2 Constituent dimensions of Doctor-Patient Relationship

Hahn et al. (1994) developed a Difficult Doctor Patient Relationship Questionnaire-30. On this basis, Hahn et al. (1996) developed ddPRQ-10 for doctors. There are three dimensions in DDPRQ-10, which are the Subjective experience of the Physician, the quasi-objective question concerning the Patient's Behavior, and the symptoms-associated Elements of the Patient's Behavior and of the Physician's Subjective Response. Van der Feliz-Cornelis et al. developed a patient-physician relationship scale (PDRQ-15) for patients (Yang & Wang, 2011). PDRQ-15 has 15 entries in three dimensions, namely, patient's satisfaction with the doctor, doctor's affinity, and patient's attitude towards medical symptoms. In China, Yang and Wang localized and revised the two scales of Doctor-Patient Relationship widely in foreign countries. Good reliability and validity are obtained after adjusting the entries respectively, and the three dimensions can be basically reflected (Yang & Wang, 2011).

Most of the previous evaluations of Doctor-Patient Relationship in China were qualitative studies, lacking rigorous and quantitative measurement tools. The scale used in foreign countries is limited and its validity and validity need to be further tested. In 2018，Zeng, Ma,

and Gou developed Doctor-Patient Relationship in China（DPR-C) Scale based on Chinese context, which includes two dimensions of "doctor-patient trust" and "patient-centered diagnosis and treatment", a total of 10 items (Ma et al., 2017). It shows good reliability and validity, and provides an effective evaluation tool for the further study of Doctor-Patient Relationship from the perspective of medical personnel in China.

2.6.3 Antecedent variables of Doctor-Patient Relationship

Some scholars investigated the Doctor-Patient Relationship in China, and concluded that the causes of the contradiction between doctors and patients were multi-factor (Lian et al., 2011). But the main influencing factors include:

1. Trust: Trust is one of the key factors affecting the Doctor-Patient Relationship (Zhang, Wei, & Zhang, 2012). Luo and Xiao (2014) pointed out that the doctor-patient trust relationship is mainly based on patients' trust in doctors' ability and professional ethics, while in actual research, there are few studies on patients' trust in medical institutions, medical industry, and doctors' trust in patients. Skirbekk et al.'s (2011) research confirmed that the more patients trust doctors, the more doctors will be able to make decisions, improve the quality of medical services, pay more attention to and take care of patients, and thus improve the quality of Doctor-Patient Relationship.

2. Empathy and communication: Appropriate empathy of medical staff is the foundation of good communication with patients. Wang et al. (2011) found that empathy can make patients feel understanding and respect, promote patients to express themselves and enhance doctor-patient communication. Communication can narrow the differences in understanding, build trust, and make the Doctor-Patient Relationship more harmonious. The communication ability and mode of medical personnel is one of the important factors affecting the Doctor-Patient Relationship (Mast, Hall, & Roter, 2007).

3. Humanistic care: the medical model has changed from the traditional biomedical model to the biological, psychological and social medical model, which requires medical personnel to really care about patients and "people" with diseases, not just diseases. It not only relieves the pain of patients, but also cares more about the quality of life and inner feelings of patients. Therefore, the medical process needs a full range of humanistic services, and these services need medical humanistic care. Berry found that if doctors were indifferent to patients, it would greatly damage the Doctor-Patient Relationship (Berry, 2007).

4. Socio-cultural factors. Zhao believes that patients lack medical knowledge, have high

expectations on treatment effect, and regard medical behavior as consumption behavior is one of the reasons for the tension between doctors and patients (Zhao, 2012).Simmonds pointed out that racial discrimination and cultural differences can affect the Doctor-Patient Relationship (Simonds et al., 2014). Liu (2013) believes that there exists an "acquaintance society" in China, and the common language, culture and emotion are conducive to the trust of Doctor-Patient Relationship.

2.6.4 Outcomes of Doctor-Patient Relationship

Good Doctor-Patient Relationship is conducive to improving patient satisfaction. Benedette (2011) found that a good Doctor-Patient Relationship is conducive to patients' participation in the diagnosis and treatment process, while a poor Doctor-Patient Relationship will lead to doctor-patient conflicts and disputes.

1. Influence on patients: A good Doctor-Patient Relationship is conducive to improving patient satisfaction. Benedette found that a good Doctor-Patient Relationship is conducive to patients' active participation in diagnosis and treatment, while a poor Doctor-Patient Relationship will lead to conflicts between doctors and patients, leading to doctor-patient disputes.

2. Influence on doctors: The Doctor-Patient Relationship has an impact on the physical and mental health, work attitude and work performance of medical staff. Rout and Rout (1996) studies show that patients' high expectations and interference on medical care will cause excessive pressure on medical staff and bring negative effects on mental health. Schaufeli found that the imbalance in Doctor-Patient Relationship perceived by doctors would lead to job burnout (Schaufeli, 2006). Chu (2013) pointed out that the worse the Doctor-Patient Relationship is, the lower the work commitment of medical staff.

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Chapter 3: Research Design, Data Collection and Research Tools

3.1 General description of the research object

The research objects involved in this study are doctors, nurses and medical technicians (collectively referred to as medical personnel) from 10 public 3A hospitals in Zhejiang Province. According to the Statistical Yearbook of Health and Family Planning of China (Ministry of Health, 2019), by December 2018, there were 2,548 3A public hospitals in China, with total medical personnel of more than 2.84 million. About 35 percent of the medical personnel are doctors, about 40 percent nurses and about 25 percent medical technicians. The distribution of medical personnel education is reasonable, the proportion of bachelor degree or above is more than 80%, postgraduate education (master's and doctor's degree) is more than 25%; The gender distribution of medical personnel is relatively stable, basically at the ratio of 45 to 55. The proportion of medical personnel with professional titles is respectively: senior titles (including positive senior titles and deputy senior titles) account for about 20%, intermediate titles account for about 35%, and primary and lower titles account for 45%.

3.2 Sample Description

The research scope of this study is Hangzhou, China, involving a total of 10 public 3A hospitals and the number of medical personnel is 1050. The data samples collected in this study are from Hangzhou, the east city of China, which is a representative city of China's economic development. It has sufficient health resources, reasonable arrangement of medical and health institutions, and a reasonable echelon of medical talents. To some extent, it can reflect the current medical quality and service level in China.

3.2.1 Samples of interviews

In this study, medical personnel (including doctors, nurses and medical technicians) from 10 3A hospitals including the First Affiliated Hospital of Zhejiang University Medical College were interviewed. The information of interviewees is shown in Table e.1 of Annex E.

3.2.2 Samples of open questionnaire

The subjects of the open questionnaire were 82 medical personnel (including doctors, nurses and medical technicians) from 10 3A hospitals, including the First Affiliated Hospital of Zhejiang University Medical College. All of them worked in the front line of medical and health care. The questionnaires were distributed in person and on the Internet. The information of the respondents is shown in Table e.2 of Annex E.

3.2.3 Sample of prediction test

In this study, fixed-point survey and random sampling were used to conduct the prediction test (the first time), and relevant measurement scales were established for the formal investigation (the second time). We selected 50 medical personnel (including doctors, nurses and medical technicians) from 10 hospitals (the First Affiliated Hospital of Zhejiang University School of Medicine) as preliminary samples. Questionnaires were distributed on site by specially-assigned persons, and the survey was introduced through face-to-face communication. A total of 295 questionnaires were issued and 289 were actually collected, among which 289 were valid with an effective recovery rate of 97.9 %. The basic information statistics of predictive test samples are shown in Table e.3 of Annex E.

3.2.4 Samples for formal testing

The data collected for the second formal investigation were collected from 10 hospitals including The First Affiliated Hospital of Zhejiang University Medical College, involving 220 people in total, including doctors, nurses and medical technicians. According to the actual situation, the preset proportion of doctors, nurses and medical technology was sorted out from 35%:45%:20% to 35%:48%:17%. A total of 235 questionnaires were issued and 220 were recovered, of which 220 were valid, with an effective recovery rate of 93.6%. Statistics of basic information of formal test samples are shown in Table e.4 of Annex E.

3.2.5 Samples of verification tests

The data samples for the verification survey (the third time) were from third- grade First-class hospitals in Hangzhou, Zhejiang, China, including 10 hospitals (the First Affiliated Hospital of Zhejiang University School of Medicine). The questionnaire was distributed to medical personnel who signed some labor contract relationship with these hospitals and got salary from them, and were willing to participate in this survey.

During the investigation, a total of 800 verification questionnaires were distributed, including 280 doctors, 384 nurses and 136 medical technicians. The distribution ratio was calculated based on the ratio of 35% to 48% to 17% of the surveyed hospital doctors, nurses and medical technicians. The questionnaire was filled in face to face. 800 copies were distributed, 767 copies were recovered and 767 copies were valid, with an effective recovery rate of 95.9%. The basic information statistics of verification test samples are shown in Table e.5 of Annex E.

3.3 Scale design

3.3.1 Measurement of relevant constructs

The samples were collected from 10 hospitals in Hangzhou, such as the First Affiliated Hospital of Zhejiang University Medical College. Hangzhou, Zhejiang Province, as a relatively developed economic region in China, represents China's economic level and medical technology level to some extent. The subjects were randomly selected from doctors, nurses and medical technicians in various departments and professional titles in these 10 hospitals. There are three main variables involved: One independent variable (Career Calling), two dependent variables (OCB and Doctor-patient Relationship), where OCB is a first-order dependent variable, Patient-doctor Relationship is a secondary dependent variable and three mediational variables (Perceived Organizational Support, Organizational Commitment and Job Engagement). The specific measurement method is as follows:

3.3.1.1 Career Calling

In the field of Career Calling, the definition and composition of its concept are still controversial, and the research is still relatively immature, especially the lack of research on the special group of medical personnel (including doctors, nurses and medical technicians). Grounded Theory emphasizes the construction of theories based on existing experience. It explores core concepts through analysis and induction of data systems without preconceived notions, and establishes connections between concepts to achieve theoretical construction. Based on grounded theory, this study constructed the intrinsic nature of Career Calling of medical personnel in line with Chinese cultural background. Operating procedures refer to Strauss and Corbin (1990), The research process of grounded theory is as follows:

Step1: Theoretical sampling;

Step2: Data collection;

Step3: Encoding generation concept;

Step4: Compare and form theoretical concepts;

Step5: Construct theory and evaluate.

First of all, data collection was conducted through literature review, in-depth interview and open questionnaire. Statements reflecting Career Calling of medical personnel were classified and sorted out, and coding analysis was conducted according to the steps of grounded theory to preliminarily determine the connotation and dimension of Career Calling of medical personnel. Secondly, SPSS was used to process the data, verify the reliability and validity, propose the construct of medical personnel Career Calling, and discuss the research results.

3.3.1.2 Job Engagement

Schaufeli and Bakker's (2003) Job Engagement model based on vitality, dedication and concentration and Rich, Lepine, and Crawfold's (2010) Job Engagement model scale based on physical ability, emotion and cognition. Finally, The UWES-9 scale was adopted. See Table 3.1 for the items in the questionnaire.

Table 3.1 Subscale of medical personnel Job Engagement (to be corrected)

The dimension	Measure the general idea of the item	source
Job Engagement JE	At work, I feel a burst of energy	Schaufeli (2006).
	At work, I feel strong and energetic	
	I'm passionate about my work	
	My work inspired me	
	As soon as I get up in the morning, I want to go to work	
	When work is stressful, I feel happy	
	I'm proud of what I do	
	I immersed myself in my work	
	I reach a state of ecstasy at work	

3.3.1.3 Organizational Commitment

In order to facilitate the implementation of the regulatory effect test, the Organizational Commitment is analyzed as a whole variable. Organizational Commitment scale was developed with reference to Allen and Meyer (1990), Ling, Zhang, and Fang (2001), Shen (2008) and Zhang, Feng, and Li (2014). See Table 3.2 for the items in the questionnaire.

Table 3.2 Subscale of Organizational Commitment of medical personnel (uncorrected)

The dimension	Measure the general idea of the item	source
Organizational Commitment	I have a strong sense of belonging to my employer.	Shen (2008)
	I feel it my duty to work hard for my employer.	
	The employer's environment, working conditions and reputation helped me achieve my ambition.	
	I think my work is something I'm good at.	Zhang, Feng, and Li (2014)
	I'm concerned about my boss's future.	
	If I leave my present work, there will be a major financial loss.	
	I am willing to work for my present employer until retirement.	Shen (2008)

3.3.1.4 Perceived Organizational Support

When developing the Perceived Organizational Support scale, reference was made to Eisenberger et al.'s (1986) Survey of Perceived Organizational Support and Ling, Yang, and Fang (2006) questionnaire. See Table 3.3 for the items in the questionnaire.

Table 3.3 Subscale of Medical personnel Perceived Organizational Support (to be corrected)

The dimension	Measure the general idea of the item	source
Perceived Organizational Support	The organization attaches great importance to my work objectives and values	Ling, Yang, and Fang (2006)
	When you are in trouble, you can get help from the unit	
	The unit really CARES about my happiness	
	The company is willing to help me to do my best	
	If you do your best work, the organization won't notice	
	The organization CARES about my overall satisfaction with my work	Eisenberge et al. (1986).
	The organization rarely CARES about me	
	The organization values my opinion or opinion	
	The organization will be proud of my achievements in my work	

3.3.1.5 Organizational Citizenship Behaviors

Refer to the revised scale of OCB compiled by Podsakoff et al. (1990) by Lv to increase its cultural applicability (Lv, 2013). The scale of OCB for Chinese medical personnel revised by Lu contains 3, 4, 3, 5 and 6 core constructs of altruism, courtesy, conscientiousness, civic morality and athleticism, respectively. The overall internal consistency coefficient of the scale is 0.912, and the internal consistency coefficient of the five subscales is between 0.732 and

0.864. See Table 3.4 for the items in the questionnaire.

Table 3.4 Subscale of OCB of medical personnel (to be corrected)

The dimension	Measure the general idea of the item	source
OCBs	Carry out the function with the team and organization's interests in mind. Volunteer to contribute to the team and organization. Get involved in helping your team and organization. Share your work knowledge with others. Work beyond normal working hours. Do some work in your spare time. Work on holidays. Rearranging or changing personal plans for work reasons.	Podsakoff et al. (1990).

3.3.1.6 Doctor - Patient Relationship

Based on the domestic and foreign scales of Patience-doctor Relationship, Ma et al. (Patience-doctor Relationship (DPR) in China: Managers and clinicians' twofold pathways from commitment HR practices) the Doctor group in China, the application of using Zeng, Ma, and Gou (2018) establishment conforms to China's situation for the development of a Doctor - Patient Relationship scale. See Table 3.5 for the items in the questionnaire.

Table 3.5 Subscale of Doctor-Patient Relationship (to be corrected)

The dimension	Measure the general idea of the item	source
Doctor - Patient Relationship	The patient trusts that you will prioritize his/her needs The patient trusts the decision you have made for him/her The patient is willing to follow your recommended treatment plan The patient believes that the procedure you requested is reasonable You often have patient and repeated communication with the patient and family You are always careful to inform patients of the risks that may arise from their treatment You always take care to help patients and their families You often compare options and provide the best treatment for the patient You are proud of your expertise in helping patients effectively You are more than happy to receive the patient's follow-up visit	Zeng, Ma, and Gou (2018)

3.3.2 Interview: Collect dimensions of Career Calling of medical personnel

In order to understand the content of Career Calling and its performance in work, the researcher conducted interviews with medical personnel (including doctors, nurses and medical technicians) in 10 hospitals in Hangzhou, Zhejiang, China. The interviews were conducted in the form of face-to-face and telephone interviews. A total of 25 medical personnel were interviewed, and each conversation lasted 40 minutes. The questions given to the interviewees during the interview are: "how to understand the concept of" sense of Career Calling "? Second, what kind of emotional experience is the sense of Career Calling in medical work. Third, what impact will the emotional experience of Career Calling have on the behavior of medical work? " The target object is required to combine their own knowledge and ability and use brainstorming to carry out in-depth analysis, so as to collect the research dimensions of medical staff's sense of Career Calling. on this basis, an initial open questionnaire was designed to determine the structural items of medical personnel 's Career Calling.

3.3.3 Questionnaire design

3.3.3.1 Open Questionnaire (collect and determine the dimensions of Career Calling for medical personnel)

The open questionnaire is designed by the questionnaire designer to provide questions, and then conceived and developed freely by the respondents, so as to answer the questions according to their own ideas and wishes. The questions are mainly essay questions. The advantage of using open questionnaire is that a wide range of data can be collected. We can find and explore some special problems in depth and find out the opinions and opinions of special groups.

The main subjects of the open questionnaire were medical personnel (including doctors, nurses and medical technicians) from 10 hospitals, including People's Hospital of Zhejiang Province, Hangzhou, China. A total of 82 questionnaires were distributed (the proportion of doctors, nurses and medical technicians was 35%: 45%: 20%). The questionnaires were distributed in person and immediately collected after filling. The open-ended questionnaire asks the following questions: 1. How to understand the concept of "career mission"? How to explain a person's medical work as a life pursuit, please specify? See medical work as a mission. What is your emotional experience? "In the process of issuing the questionnaire, the applicant should write down 10-20 statements that conform to the connotation of Career Calling of medical personnel. The connotation and dimension of Career Calling of medical personnel were preliminarily determined through questionnaire recovery.

3.3.3.2 Questionnaire 1 (Career Calling)

Based on the preliminary determination of the connotation and dimensions of Career Calling for medical personnel, we prepared a predictive test questionnaire. Experts and scholars were invited to discuss and screen the items in the predictive test questionnaire again, and some unsatisfactory items were deleted after a full consideration of the text expression, content validity and other conditions.

Firstly, pre-survey is carried out to simplify the measurement items and improve the scientific nature and accuracy of the questionnaire. 289 predictive test questionnaires were distributed by E-mail to medical personnel (including doctors, nurses and medical technicians) from 10 hospitals in Hangzhou, China. The questionnaire adopts Likert5 point scale scoring method. After the recovery of the predictive test questionnaire, each measurement item was purified by CITC value (also known as mono-population correlation coefficient method), Cronbach's a coefficient and exploratory factor analysis test, and the formal scale of medical personnel Career Calling was finally determined.

Secondly, a formal survey was conducted. Medical personnel (including doctors, nurses and medical technicians) from 10 hospitals in Hangzhou, China were selected for the formal survey. A total of 220 questionnaires were distributed in person and immediately retrieved after filling. The questionnaire adopts Likert5 point scale scoring method. The reliability and validity of the scale were tested.

3.3.3.3 Questionnaire 2 (Verification of hypothesis)

The questionnaire consists of five parts:

Part1: Personal basic information. The purpose is to investigate the sex, age, working years, highest education level, work position, monthly income, professional title and other basic information of the subjects for demographic analysis.

Part2: The subscale of Career Calling subscale for medical personnel (questionnaire 1).

Part 3: The subscale of Organizational Commitment (questionnaire 2).

Part4: The subscale of Job Engagement (questionnaire 3).

Part 5: The subscale of Perceived Organizational Support (questionnaire 4).

Part6: The subscale of Doctor-Patient Relationship (questionnaire 5).

Part 7: The subscale of Organizational Citizenship Behavior subscale of medical personnel (questionnaire 6).

The whole questionnaire adopts the likerT5-point scale scoring method, and requires the subjects to choose the 5-point scale from "1 is very inconsistent", "2 is relatively inconsistent",

"3 is general", "4 is relatively consistent" and "5 is very consistent" according to their actual situation. The data for the formal survey came from medical personnel (including doctors, nurses and medical technicians) in 10 hospitals in Hangzhou, China. A total of 800 copies were distributed. They were handed out face to face, filled in and immediately recovered. In the analysis of the questionnaire data, the reliability and validity of the questionnaire were first tested, and then the hypothesis model was tested.

3.3.4 Reliability and validity test

Internal consistency analysis, CITC value correlation analysis, exploratory factor analysis, confirmatory factor analysis and other methods were used to test the reliability and validity of the questionnaire. In empirical analysis, SPSS 22.0 data analysis software was also used in this study. The reliability and validity of CITC value >0.5, Cronbach' a>0.7, KMO>0.7, Bartlett's P<0.001. The parameters for verification structure reference are SFL>0.7, AVE>0.5, CR>0.6.

3.3.5 Statistical methods

In this study, the confirmative factor analysis method in structural equation model (SEM) was adopted. AMOS statistical software was used, and the reference parameters for model validation included X/df<5, GFI>0.9, AGFI>0.9, TLI>0.9, CFI>0.9, RMR<0.05, and RMSEA<0.08.[2]Structural equation model (SEM) is a statistical analysis method based on variable covariance matrix to analyze the relationship between variables, which can test whether a theoretical model or hypothesis model is appropriate. Compared with the traditional statistical analysis method, SEM can process the measurement data and the analysis data of the relationship between variables, and estimate the measurement indicators and potential variables in the model at the same time. It can not only estimate the measurement error of the indicator variables in the measurement process, but also estimate the reliability and validity of the measurement. In addition, SEM also focuses on the application of covariance matrix and the overall fitting degree of the model.

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Chapter 4: Research on The Content Structure of Career Calling for Medical Personnel

In recent years, medical personnel have been faced with increasing work pressure from all walks of life and their work satisfaction has been declining. The medical and health industry has become recognized as a high-pressure industry. In the face of work, difficulties and pressures, Career Calling has become a decisive factor affecting the ability of medical personnel to work. From the perspective of hospital human resource management, this study attempts to take medical personnel as a special research group to study and solve the root cause contradictions and problems that have not been solved in previous studies. Due to the lack of research on Career Calling of medical personnel and the lack of in-depth discussion on its conceptual definition and characteristic structure, this study adopts the grounded theory research method to analyze data and obtain the constituent dimensions of Career Calling of medical personnel. Based on relevant literature, a Career Calling scale for medical personnel is developed. Problem items are purified by exploratory factor analysis. Finally, the structure of Career Calling for medical personnel is verified by validating factor analysis.

4.1 Concept remolding of Career Calling

4.1.1 Research purpose

The Chinese government has always attached great importance to the training of medical personnel. At the National Health and Health Conference, President Xi Jinping summed up the professional spirit of medical personnel: "Respecting life, healing the wounded and saving the dying, being willing to make contributions, and loving the world beyond boundaries", thus becoming the mission responsibility and value pursuit of medical personnel. Faced with the sudden outbreak of COVID-19, medical personnel across the country rushed to the front line of epidemic prevention and control without hesitation, demonstrating a high sense of responsibility to the people and a strong Career Calling. The prevention and control of the epidemic is a grim struggle to protect the lives and health of the people. medical personnel are the mainstay of the frontline and the backbone of the fight against the epidemic.

As qualified medical personnel, he should be highly responsible for the patients, and more

importantly, he should have the idea of serving the people heart and soul and the benevolent quality of thinking about the patients. If you have a passion for medicine, you will understand that being medical personnel is not only about learning medical knowledge in order to find a work, but also about working for the cause you love, the health of the people and the duty to save and help the dead. Love can stimulate people's potential, mobilize people's enthusiasm and creativity, even in the work of difficulties and setbacks, but also with a strong Career Calling to stick to the end. For medical personnel, the greatest pleasure, the greatest happiness is to see the patient relieve the pain, this is the mission of medical personnel. It is the virtue and duty of medical personnel to devote themselves to the treatment, regardless of personal gain and loss, and to spare no effort to save people. Medical work is a noble and sacred profession, and respect and respect for life is the supreme god in the hearts of medical personnel. According to the traditional Chinese medical ethics, "medicine is benevolence and morality cannot be established". The core of medical ethics in the book Is the concern and emphasis on the inner quality and value of human life. The duty and moral obligation of medical personnel is to safeguard people's health, and the highest principles are "heal the wounded and rescue the dying, prevent disease and cure disease, and practice humanitarianism". Medical work is a profession with high technology, high pay, high load, high risk and high pressure. In the face of high load, high risk and high pressure, what medical personnel rely on to stick to it depends on the sense of medical mission and responsibility. With a Career Calling, how much difficulty can be overcome, how much grievance can endure. Out of mission and responsibility, most medical personnel adhere to the oath of medical students: I volunteer to devote myself to medicine, love the motherland, be loyal to the people, abide by medical ethics, respect teachers and discipline, study assiduously, strive for perfection and develop in an all-round way. I am determined to do my best to eliminate human diseases, help perfect health, maintain the sanctity and honor of medical skills, heal the wounded and rescue the dying, spare no pains, persistent pursuit, for the development of the motherland's medical and health cause and human physical and mental health struggle for a lifetime.

At present, China is in the stage of medical and health system reform, and medical personnel are the backbone of the reform. However, negative influences such as the unoptimistic medical practice environment, strict moral requirements, Doctor-Patient Relationship tension, and negative public opinion make medical personnel face greater psychological pressure and psychological burden. Under such adverse conditions, it is of great significance to maintain Career Calling for the quality of medical service and the development of medical and health care.

The difference between medical personnel and general enterprise employees lies in the fact that their work itself is of social welfare. Generally speaking, enterprises pay attention to the ability of employees to bring economic benefits to the enterprise, while the medical and health system pays more attention to the ability of medical personnel to create social benefits. Secondly, medical personnel face different groups of people from all walks of life every day, and their work objects are relatively complex, while the general work objects of enterprise employees are specific industry groups and professional behaviors, so the working atmosphere is relatively simple. Last but not least, the Work pressure borne by employees in general enterprises mainly comes from the Work itself, while medical personnel not only have to undertake their own Work, but also shoulder heavy social responsibilities and expectations in various aspects. Under the accumulation of various pressures, Work enthusiasm, work satisfaction and Job Engagement will inevitably be affected.

Therefore, whether medical personnel can keep Career Calling is of great significance for the sustainable development of hospitals. However, the current lack of research on the key issue of Career Calling in the medical industry also leads to the weak Career Calling of medical personnel, and it is difficult for them to have strong spiritual support to maintain their work enthusiasm.

In recent years, more and more scholars in the fields of economics, psychology and management pay more and more attention to the research of Career Calling because it is a kind of belief that can help individuals maintain strong spiritual motivation, improve Work enthusiasm and lofty and positive beliefs related to Job Engagement. However, the research on Career Calling by scholars at home and abroad is still in its initial stage, and there are few in-depth studies on the concept and constituent dimensions of Career Calling. In addition, is Career Calling studied by foreign scholars applicable in Chinese cultural context? For the special group of medical personnel, what dimensions should Career Calling include? Based on this, this study, on the basis of literature analysis, adopts induction method and grounded theory to explore contents that can promote Career Calling of medical personnel in Chinese hospitals. In this study, a variety of methods including interview and open questionnaire were adopted to collect and reflect the composition of Career Calling of medical personnel, and an initial scale was formed by sorting out the contents of literature research. The reliability and validity of the scale and test scale were further refined by analyzing the data obtained from the survey. Finally, the research results are discussed.

4.1.2 Theoretical sampling

The purpose of this study is to find out the specific factors that can improve the work enthusiasm and satisfaction of medical personnel by exploring the internal structure and content of Career Calling of medical personnel. In order to ensure that theoretical sampling is feasible and reasonable, this study mainly conducts interviews with those who are engaged in medical service work in hospitals (doctors, nurses and medical technicians).

4.1.3 Data collection (literature review, interview, open questionnaire)

In this study, data were collected through literature review, interview and open questionnaire.

1. Literature review. Dobrow and TostiKharas (2011) developed a single-dimensional Calling Scale. This scale has also been applied in Chinese culture (Zhang et al., 2013). However, at present, more researchers tend to define missions from a multi-dimensional perspective, believing that Career Calling is a multi-dimensional structure. Elangovan, Pinder, and Mclean (2010) emphasize three components in the definition of mission: Action Orientation, a clear sense of life goals and personal tasks, and pro-social intentions. The early single-dimensional measurement of Career Calling included the Career Calling Oriented Scale (COS) developed by Wrzesniewski et al. (1997). COS contains 18 items. This scale only requires respondents to do right and wrong responses, so it lacks strict reliability and validity test (Wrzesniewski et al., 1997). This is not consistent with what we are studying now: Career Calling. Duffy and Sedlacek (2007) and Dik and Duffy (2009) developed a simplified version of the Career Calling Scale (BCS). The scale has only two entries. The most distinctive feature of BCS is that it does not specify the source of the sense of purpose, allowing respondents to make choices based on their own understanding of the sense of purpose. BCS scale is widely used by researchers because of its high reliability and validity (Duffy & Dik, 2009; Duffy & Sedlacek, 2007). Based on their research on zookeepers, Bunderson and Thompson (2009) developed the Neoclassical Career Calling Scale (NCS), which is a synthesis of the classical and modern Career Calling perspectives and contains 6 items. Dobrow and TostiKharas (2011) developed the calling Scale based on a longitudinal follow-up study of 1,500 respondents from different fields (music, art, business and management) for 7 years. The scale includes 12 items, so it is also known as the CS12 scale (Dobrow & Tostikharas, 2011). If you want to measure Career Calling for another population, change the occupation name in the entry. Through a survey of students, in 2012, developed the Career Calling and Career Questionnaire (CVQ), which is also the most widely used scale to measure Career Calling in foreign studies. CVQ scale consists of two parts,

namely "Career Calling seeking" and "Career Calling existing". On the basis of these two parts, it is further subdivided into three dimensions: transcendental calling, significance of work and prosocial behavior. See the Table 4.1.

Table 4.1 Characteristics of each calling measurement tool

Measuring tool	A typical psychological trait that emphasizes a sense of purpose	The dimension	Field to	A group that has been used
COS	Meaning/purpose, social contribution	single dimensional	general	On-the-work personnel
BCS	--	single dimensional	general	College students, on-the-work personnel
NCS	Destiny, passion, meaning/purpose	single dimensional	specific	On-the-work personnel
12 - CS	Meaning/purpose/passion	single dimensional	specific	College students, on-the-work personnel
CVQ	Sense of calling, meaning/purpose, social contribution	The three dimensional	general	College students, on-the-work personnel
MCM	A sense of perfect match, a sense of innate destiny, social contribution	The three dimensional	general	On-the-work personnel
CCS	Social contribution, meaning/purpose	The three dimensional	general	College students, on-the-work personnel
CCS	Altruistic tendencies, sense of calling, meaning/purpose	The three dimensional	general	College students'

2. In-depth interview. The respondents are required to discuss the contents by brainstorming based on their own experience and understanding, and further collect the indicators of Career Calling of medical personnel. Based on the analysis of these measurement scopes and research indicators, an open questionnaire is designed to assist the determination of Career Calling of medical personnel.

3. Open questionnaire. In the process of issuing the questionnaire, respondents were asked to write down 10-20 statements and statements that conform to the connotation of Career Calling of medical personnel.

4.1.4 Data analysis (open coding, spindle coding and selective coding)

Through literature review, interview and open questionnaire survey, this study collected a total of more than 10,000 words of text data. On this basis, relevant research was carried out according to the three-level coding procedure of grounded theory -- open coding, spindle coding and selective coding.

4.1.4.1 Open coding

In this study, the collected data will be analyzed in detail, combined with literature research, the concepts and categories extracted from the data will be deeply considered, and the organization behavior and human resource management experts and scholars of the unit will be deeply discussed. Finally, through repeated discussions among data, concepts and categories, the data collection, coding, analysis and continuous data collection are carried out in multiple cycles, and 3 concepts and 6 categories are extracted (see Table 4.2).

Table4.2 Open coding analysis of data

Original data record	Open coding	
	conceptualization	Category
1. When I started my work, I knew it was the duty of medical personnel to heal the wounded and rescue the dying. I didn't care whether others could do it or not, but I would certainly do it. 2. I have been interested in the health industry since I was a child, and I look forward to working in the medical field when I grow up. After the result of the college entrance examination, I applied for the major of medicine without hesitation. I think I love medical work very much (A2). 3. It is very meaningful to be engaged in health work. I will take it as my lifelong career (A3) and do it well in the future. 4. We always believe that medical work is a very challenging work (A4), which enables every medical personnel to get full exercise. 5. medical personnel work very hard and often forget themselves once they get busy, so medical work is a profession that benefits society and others (A5). 6. Since I started my work, I think I am a member of the medical industry (A6) and I will work hard for my industry. 7. After years of reflection, compared with other works, I think I am quite suitable for medical work (A7).	a1 Occupational Values a2 Love work a3 strong preference a4 challenging a5 Altruism a6 Role positioning	A1 recognition includes: a1 to a6
8. Medical work day in and day out, while my colleagues often complain about their hard work, I can constantly find fun in medical activities (A8), adjust my attitude, and treat myself in the best state every day. 9. I have held several positions, and medical work is more suitable for me than other works (A9), and I feel I am growing very fast. 10. Medical work is highly demanding and sometimes intensive, which allows me to give full play to my talents. It is a professional and professional work (A10). 11. Whenever I finish a work well, I can feel the satisfaction and sense of achievement brought by medical work (A11), which makes people feel relaxed and full of strength. 12. I am very satisfied with my current work and I am willing to put a lot of effort into it (A12). 13. Medical work is of social value (A13) and I am lucky to be able to do it.	a7 Sense of belonging a8 Professional fun a9 Career comparison a10 Career effectiveness a11 Work achievement a12 work hard	A2 Person work matching includes: a7 to a11

14. I know exactly what I need and I follow my heart (A14) to do medical work because I really like it.	a13 Work counts a14 Follow your heart	A3 Internal drive includes: a12 to a16
15. By nature, I feel I am destined for (A15) the current medical profession.	a15 Be destined for	
Being ready to help others is a traditional virtue. At work, I often help those in need (A16).	a16 Help others	
17. Seeing my colleagues take saving lives and treating patients as their duty every day and serving patients with due diligence promotes me to be more devoted to my work (A17).	a17 Behavioural facilitation efforts	
18. I feel inspired to do what I do in medicine (A18).	a18 the power of inspiration	A4 Eexternal guidance includes: a17 to a21
19. Although I often left work late at night and had to face intense work every day, this work really helped me grow faster (A19).	a19 Work leads to long	
20. Since the beginning of my career, I have been using the norms of medical personnel to consciously demand myself (A20), and trying to make myself good medical personnel. When patients seek medical treatment from medical personnel, they entrust their health and even their lives to medical personnel. medical personnel must be responsible attentively, think what patients think and be anxious for them.	a20 Normatively requires yourself a21 Happy at work	
21. Every work has its own ups and downs, and serving patients is the happiest thing in my life (A21).		
22. The friends around me are particularly understanding and supportive of medical work, and it is estimated that my profession has influenced their views (A22).	a22 Career impact a23 Professional significance	A5 Sense of meaning includes: a22 to a26
23.I have always felt that medical work can make me experience the true meaning of career (A23).	a24 Professional value a25 Achieving meaning in life	
24. I often find value in professional behaviour (A24).	a26 Work contribution	
25. Whenever I put myself into work, I will do every step well and strive to realize my life meaning (A25).	a27 Career goals a28 Social significance	
26. I feel that my work contributes to the wealth of the society (A26).	a29 Working power	A6 Value leadership includes: a27 to a31
27. I have a clear plan for my life, and Set career goals (A27) every year, which will motivate me to move forward.	a30 Work hard a31 Altruistic behaviour	
28. My medical work must be of social significance (A28).		
29. Serving patients well and meeting their needs are my biggest motivation for work (A29).		
30. In order to become better medical personnel, I will make greater efforts (A30) and constantly improve myself.		
31. I want patients to gain more health through medical work (A31).		

4.1.4.2 Axial coding

According to the rooted principle, we carefully analyzed the open code and got 3 concepts and 6 categories. In addition, we also listened to the opinions of a number of hospital human resource experts on the daily work of medical personnel in combination with the hospital situation, and obtained the main category and 3 secondary categories of Career Calling (see Table 4.3).

Table 4.3 Axial coding table of Career Calling for medical personnel

Open coding extraction category	Secondary category	Main categories
A1 identity A2 Work matching	B1 Identification and matching	B Career Calling
A3 intrinsic drive A4 External guidance	The b2 force	
A5 sense of meaning A6 Value driven behaviour	B3 Meaning and value driven	

In this study, the concepts and categories of open coding extraction are compared and analyzed in depth, and these categories are connected according to their similarity, structure and category relations.

4.1.4.3 Selective coding

This study USES selective coding to integrate previously developed categories. We went into the medical personnel many times to understand their work characteristics, and constantly strengthened our familiarity with the study subjects. In addition, we also interviewed a number of hospital administrators and experts and professors of organizational behavior, through multiple coding and discussion, finally identified and named the core category. This operation method, on the one hand, ensures the consistency and coherence of the research process, and on the other hand maintains the characteristics of social process analysis of the grounded theory method.

Through repeated comparison and analysis, this study clarified the story line of the data: in today's social environment, medical personnel's lack of Career Calling at work is caused by the pressure from all sides, which further affects work motivation, work satisfaction, Organizational Behavior, Organizational performance, and even Doctor-Patient Relationship. As for medical personnel, their Work characteristics determine that they need Career Calling to ensure their Job Engagement, thus ensuring their Work performance and easing the Doctor-Patient Relationship.

Finally, Career Calling of medical personnel is selected as the core category. The main

reasons are as follows :(1) Career Calling of medical personnel occupies a central position in these categories and can cover the main and secondary categories extracted above; (2) From the various expressions investigated, Career Calling of medical personnel frequently appears in the interview materials, which is a very important conceptual category; (3) The concept of Career Calling of medical personnel is closely related to other conceptual categories; (4) The structural system of Career Calling for medical personnel is established by connecting the main category, sub-category, category and concept into a whole. See Figure Figure 4.1

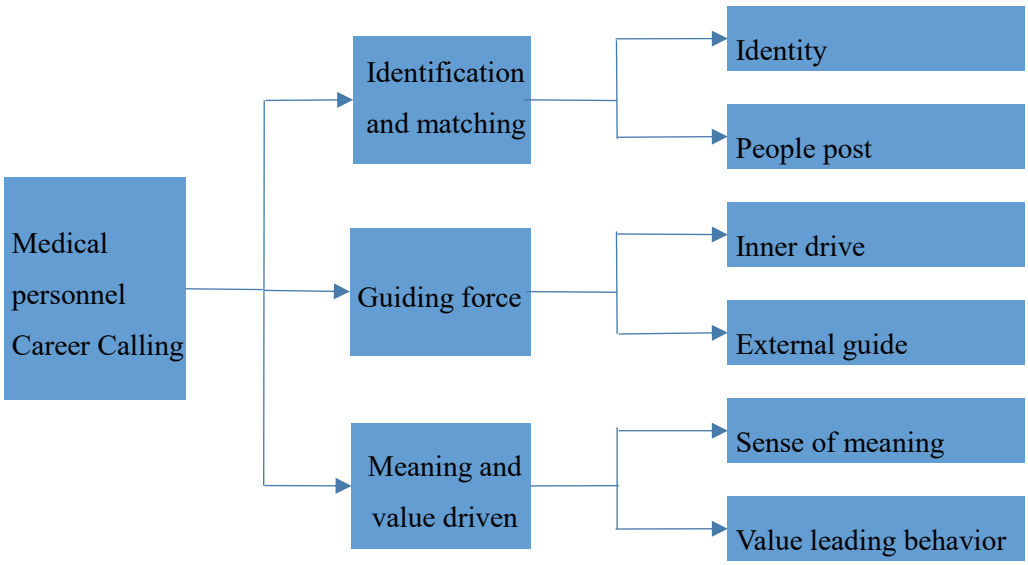


Figure 4.1 Selective coding structure of Career Calling for medical personnel

4.1.5 Form theoretical concepts, construct theories and conduct evaluations

This study adopts the grounded theory method to explore the internal logical structure of Career Calling of medical personnel, and finds that Career Calling of medical personnel is a core category composed of three main categories, namely identity and matching and guiding force, meaning and value driving. This advances the understanding of the concept and structure of Career Calling for medical personnel.

4.1.5.1 Concept and structure of Career Calling for medical personnel

Because the research on Career Calling has not been paid enough attention to, most of them stay at the moral level in daily life to demand and evaluate the behavior of staff. However, empirical studies are rare, and its concept and structure are still under discussion, especially on Career Calling of medical personnel (including doctors, nurses and medical technicians). The results of this study show that in the process of improving the Work enthusiasm and Job Engagement of medical personnel, Career Calling of medical personnel plays a synergistic role

in three aspects: identity and matching, orientation, meaning and value driving. The relevant concepts have the following meanings:

Career Calling refers to an individual who experiences and displays strong passion and strength in a particular field of occupation, and feels the meaning and responsibility of life in the profession. It can increase the satisfaction of medical personnel, improve their enthusiasm and enthusiasm for work, improve OCB and peripheral performance, and reduce doctor-patient disputes. Career Calling mainly includes three elements of identity and matching, guiding force, meaning and value driving, specifically including identity, person-work matching, internal drive, external guidance, sense of meaning and value-leading behavior.

The three dimensions of Career Calling for medical personnel are as follows:

Identity and matching: Refer to the guidance process in which individuals follow the basic laws of the society, make positive evaluation of occupational roles, and find corresponding occupational categories for integration according to their personality, character characteristics and ability characteristics.

Orientation: It refers to the orientation and decomposition of the benefit target value based on medical activities and the benefit target of employees.

Meaning and value drive: Refers to the sense of meaning of the profession and the value generated by the profession.

4.1.5.2 Evaluation of research results

This research is based on the principles and requirements of grounded theory, and accords with the normative requirements of grounded theory.

In this study, the structure of Career Calling of medical personnel was excavated based on the research method of grounded theory strictly. By in-depth analysis of the original data such as interviews and open questionnaires, a series of new concepts were developed, such as OCB for medical personnel, work satisfaction and Doctor-Patient Relationship. At the same time, these concepts have systematic association, hierarchical relationship and parallel relationship. Such as identity and matching and orientation, meaning and value drive are all subordinate to the overall concept of Career Calling for medical personnel. At the same time, identity and matching, orientation, meaning and value drive are in a parallel relationship. Under each concept, there are secondary categories: identity and matching include identity and work matching, while each secondary category contains its own category. Guiding force includes internal driving and external guidance); Meaning and value drive includes sense of meaning and value leading behavior.

In addition, this study produced the concept of Career Calling on the basis of the original data sorting and coding, so that the development of each category has a good conceptual foundation. Through comparative analysis of these concepts, the category 6 times, through the structure of the six times category relation, similarity relation and its properties and dimensions of the main categories, further and in theoretical construction covers the core category of this field, we named it staff Career Calling, the theory conclusion has good explanatory power. The proposal of the structural model of Career Calling for medical personnel has important theoretical and practical value for further understanding of Career Calling that drives medical personnel to improve their work satisfaction and work enthusiasm. Therefore, based on the above analysis, we believe that this conclusion conforms to the evaluation criteria of grounded theory for empirical conclusion.

4.2 Verification of Career Calling structure for medical personnel

4.2.1 Preparation of pre-test questionnaire

On the basis of the above research, we began to prepare the pre-test questionnaire. Item on the choice of a measurement, in order to guarantee the reliability and validity of the questionnaire for root control mentioned institute of medical personnel Career Calling of three dimensions and the dimensions of definition, we refer to the part of the maturity scale of item, most of the root item is based on the interview research compiled by oneself, 31 were assembly item. See the Table 4.4.

Table 4.4 The original items and sources of the Career Calling questionnaire for medical personnel

project	source
It is the duty of medical personnel to heal the wounded and rescue the dying	Written by author
I love medical work very much	(Dik et al., 2012)
I will take medicine as my career	Written by author
Medical work is a very challenging work	Written by author
Health care is a profession that benefits society and others	Written by author
I think of myself as part of the healthcare industry	Written by author
I think I'm quite fit for a medical career	Written by author
I often find pleasure in medical activities	Written by author
Medical work suits me better than other works	Written by author
Medical work allows me to give full play to my personal ability	Written by author
I can often feel the satisfaction and sense of accomplishment brought by medical work	Written by author

I'm willing to put a lot of effort into my current work	Written by author
I'm in a work where I feel worthwhile	Written by author
I follow my heart in my current work	Written by author
I felt I was destined for my current career in medicine	Written by author
I will often help those in need in my work	Written by author
Certain medical behaviors can make me more engaged in my work	Written by author
I feel inspired to do what I do now	(Dik et al., 2012)
Intensive medical work can make me grow up faster	Written by author
I will use the norms of medical personnel to consciously strict with themselves	Written by author
It gives me great pleasure to serve the patients	Written by author
My career has a positive impact on others	Written by author
I can experience the meaning of life in my current career	
I often find value in professional behavior	Written by author
When I put into work, I will try to achieve my life meaning	(Dik et al., 2012)
My work is a contribution to the wealth of society	Written by author
The career goals I set will motivate me to move forward	Written by author
What I do in practice must be something meaningful to society	Written by author
Meeting the needs of others is my greatest motivation at work	(Dik et al., 2012)
In order to become better medical personnel, I will make greater efforts	Written by author
I want to give patients more health through medical work	Written by author

In order to ensure the content validity of the scale and its streamline, we invited several experts in the field of related, according to grounded theory it is concluded that the content of each dimension to the discussion of the above scale and selection, comprehensive consideration in words, content validity, and the medical personnel in the process of questionnaire to fill out the questionnaire to the difficulty of the project to understand, to avoid some topics of ambiguity, and so forth, delete parts of the project is not ideal. After discussion by experts, 23 items were retained, among which 7 items were confirmed to be used to measure identity and matching, 8 items were used to measure guiding force, and 8 items were used to measure meaning and value drive.

4.2.2 Elaboration of pre-survey and measurement items

In order to better perform statistical analysis, and through the use of less accurate data for the medical personnel Career Calling relevant measurement scale reliability and validity of the test, in this study conducted the questionnaire development process, to conduct a preliminary investigation, this data is obtained by preliminary research and carries on the correlation

analysis, this study could to initial each scale to make the necessary corrections, so that you can get rid of a not suitable measurement problem can improve the scientificity and accuracy of measurement questionnaire.

In order to achieve the purpose of pre-survey and improve the scientificness and accuracy of Career Calling measurement scale for medical personnel, this study processed the data obtained from pre-survey through CITC value, Cronbach coefficient and exploratory factor analysis test. First, the Cronbach coefficient was calculated by using SPSS22.0 to identify and match medical personnel and each component dimension of the concepts of guiding force, meaning and value drive. Meanwhile, CITC value was calculated for the corresponding items of each dimension. The corresponding calculation structure is shown in Table 4.5.

Table 4.5 Reliability analysis of Career Calling scale

Measuring item	CITC value	Alpha if Item Delete	Cronbach alpha
P1	0.536	0.766	0.790
P2	0.664	0.707	
P3	0.712	0.679	
P5	0.507	0.779	
P8	0.799	0.860	0.900
P10	0.803	0.857	
P11	0.806	0.851	
P12	0.747	0.909	
P13	0.830	0.881	0.914
P14	0.874	0.865	
P15	0.772	0.901	
P17	0.553	0.813	0.820
P18	0.701	0.747	
P19	0.707	0.744	
P21	0.624	0.783	
P22	0.759	0.915	0.920
P23	0.842	0.887	
P24	0.861	0.880	
P25	0.801	0.901	
P28	0.799	0.900	0.921
P29	0.832	0.891	
P30	0.820	0.894	
P31	0.819	0.895	

From the Table 4.5 can be found in the data of, each item of the calculated CITC value is greater than 0.5, and the recognition and matching the Cronbach alpha coefficient of two dimensions is 0.790, 0.900, guidance force of two dimensions Cronbach alpha coefficient is 0.914, 0.820, meaning and value to drive the two dimensions of Cronbach alpha coefficient is 0.920, 0.921, were significantly higher than that of the general statistical analysis of 0.7. Therefore, it can be considered that this study is accurate and reliable in developing the scale of Career Calling of medical personnel from three dimensions: identity and matching, guiding

force, meaning and value driving.

4.2.3 Exploratory factor analysis (principal component analysis)

In order to purify the items better and make the survey scale more scientific and reliable, exploratory factor analysis and principal component analysis were carried out on each measurement item of identity and matching, guiding force, meaning and value driving, to test whether the measurement scale of these three dimensions has a single dimension.

This method is also used in exploratory factor analysis in this study. Through the analysis and calculation of the pre-survey data, the KMO value of the items identified as related to the work matching is 0.861, Bartlett's sphericity test is passed (P<0.001), and the cumulative variance interpretation ratio of the two factors is 72.881%.The KMO value of the drive related items was 0.925, Bartlett's sphericity test was passed (P<0.001), and the cumulative variance interpretation ratio of the two factors was 72.614%.The KMO value of the meaning-value-driven items was 0.939, and through Bartlett's sphericity test (P<0.001), the cumulative variance interpretation ratio of the two factors was 81.044%.Identification and matching, guiding force, meaning and value drive have good explanatory ability, and the number of each factor is consistent with the initial assumption of dividing them in this study.

In this study, principal component analysis was then applied to maximize the variance of orthogonal rotation, and relevant data were obtained as shown in Table 4.6.

Table 4.6 Results of factor analysis of various dimensions of Career Calling (PCA)

Measuring item	The principal components	
	TP1	TP2
P1	0.725	
P2	0.668	
P3	0.645	
P5	0.838	
P8		0.867
P10		0.903
P11		0.843
P12	0.819	
P13	0.786	
P14	0.840	
P15	0.799	
P17		0.825
P18		0.697
P19		0.657
P21		0.589

P22	0.824	
P23	0.795	
P24	0.758	
P25	0.743	
P28		0.864
P29		0.772
P30		0.738
P31		0.723

The identification and matching exploratory factor analysis results of medical personnel Career Calling (Table 4.6) indicate that there is no cross-factor load problem in each item, and the untitled item needs to be deleted. The identity and matching of medical personnel Career Calling are composed of TP1 (identity) and TP2 (personal work matching).

The results of exploratory factor analysis of guidance force by Career Calling, a medical personnel member (Table 4.6), indicate that there is no cross-factor load problem for each item and that the untied item needs to be deleted. The guiding force of Career Calling of medical personnel consists of IP1 (internal drive) and IP2 (external guide).

The significance and value-driven exploratory factor analysis results of medical personnel Career Calling (Table 4.6) indicate that there is no cross-factor load problem in each item, and the untitled item needs to be deleted. The meaning and value drive of Career Calling of medical personnel consists of IP1 (sense of meaning) and IP2 (value-leading behavior).

The results of qualitative research indicate that the original scale of Dik et al. (2012) do not fully cover the significance of Career Calling for Chinese healthcare professionals. Therefore, we integrate the findings of content analysis and existing literature of Chinese scholars, namely name (year), into a new scale. A total of 23 items were generated for the first version of the scale. The resulting scale consists of 23 items assigned by six factors as follows:

1. Identification (4 items, e.g., I will take medicine as my lifelong career)

2. Work matching (3 items, e.g., medical work can give full play to my personal ability)

3. Internal drive (4 items, e.g., I feel like I'm destined for my current career in medicine)

4. External guidance (4 items, e.g., high intensity medical work can make me grow faster)

5. Sense of meaning (4 items, such as: being engaged in the current career can enable me to experience the meaning of life)

6. Value-oriented behavior (4 items, e.g., meeting the needs of others is my biggest motivation for working)

Is obtained by preliminary research of the related data, this study, through a variety of statistical analysis methods to medical personnel Career Calling identification and matching, guidance force, significance and value driven every measurement item on the purification, finally got about Career Calling identification and matching of seven item, guidance force of

eight item, significance and value driven eight items, such as Table 4.6. The formal questionnaire is as follows:

1. Saving lives is the duty of medical staff
2. I love medical work
3. I'll take medicine as my career
4. Health care is a profession that benefits society and others
5. I often find pleasure in medical activities
6. Medical work makes me more personal
7. I often feel the satisfaction and accomplishment of medical work
8. I am willing to make great efforts for the present work
9. I'm doing a job that makes me feel valuable
10. I follow the true feelings of my heart and do my present job
11. I feel like I'm destined to do my current medical work
12. Some medical practices make me more engaged
13. I feel like I'm being inspired by some kind of power
14. High-intensity medical work can help me grow faster
15. Being able to serve patients makes me feel happy
16. My career can have a positive impact on others
17. Being in my current work allows me to experience the meaning of life
18. I often find value in professional behavior
19. When I get into work, I try to make my life sense
20. What I have done must be socially meaningful
21. Meeting the needs of others is the biggest motivation for my work
22. I will do more to be a better health care worker
23. I want more health care for patients

4.2.4 Confirmatory factor analysis

Through the data obtained from the preliminary survey (the first time) and the statistical analysis, this study obtained the formal scale finally used for the survey. In the formal survey (the second time), in order to make the obtained survey data more scientific and reliable, the sample sources used in the formal survey (the second time) are different from those used in the preliminary survey (the first time). The following is the result of model setting and testing.

4.2.4.1 Content validity

Content Validity refers to the suitability and logical consistency between the measurement Content or index and the measurement target, that is, whether the selected topic conforms to the measurement purpose and requirements.

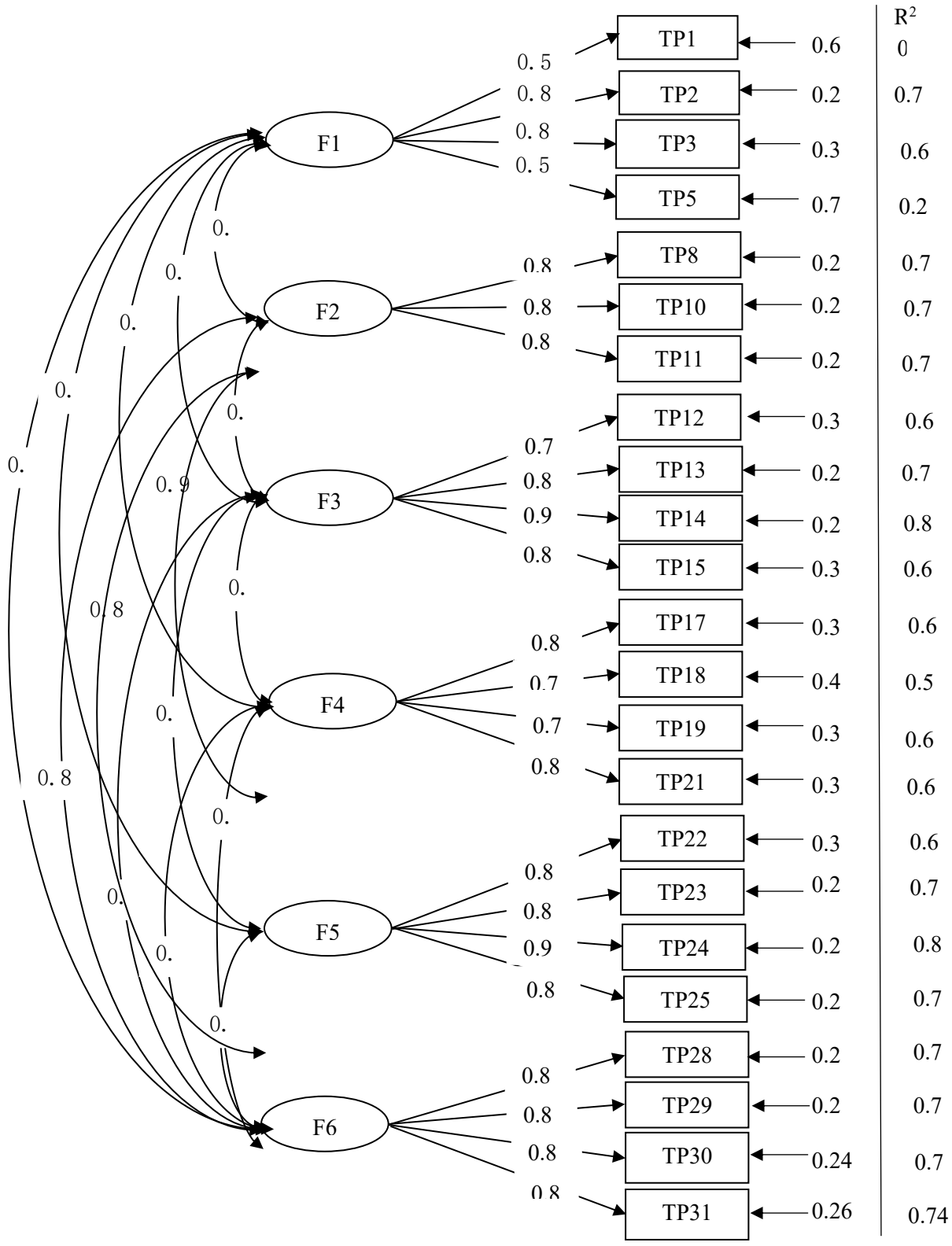
In the research process of this study, the connotation of Career Calling of medical personnel was defined first, and then the questionnaire items were checked one by one according to the definition to check the correlation between the items and the concept of Career Calling of medical personnel. During the investigation, I consulted the opinions of management professors, management graduate students, hospital management experts and scholars from many universities, invited them to review the questions in the questionnaire, and finally reached a consensus after three discussions. Then, a formal questionnaire was formed and measured based on the predictive test and data analysis of medical personnel in ten 3A hospitals in Hangzhou. The results showed that the contents of the questionnaire could reflect the contents of Career Calling of medical personnel. Therefore, it is believed that the content validity of the questionnaire is good.

4.2.4.2 Construct validity

Construct Validity consists of convergent Validity and discriminant Validity. Convergence validity refers to whether different observation variables can be used to measure the same latent variable. Discriminative validity refers to whether there are significant differences among different latent variables. In this study, convergence validity will be tested. In order to test the convergence validity of the Career Calling measurement scale of medical personnel, this study first conducted confirmatory factor analysis using the survey data. AMOS 22.0 was used in the confirmatory factor analysis process. The relevant analysis results are as follows:

CFA with six factor structure showed unacceptable fitting index (X2 (419) = 1238.289, P <0.001;CFI = 0.905, TLI = 0.895, RMSEA = 0.082, SRMR = 0.0448.By using the Lagrange multiplier, we removed the damage model item and the final solution had an acceptable fitting index (X^2(215)=486.800,p <.001; CFI=0.956,TLI=0.948, RMSEA=0.066, SRMR =0.0325) retained six factors but included 23 items as shown below: Identity (4 items, "I regard medical work as my lifelong career"; AVE = 0.502;CR =0.795, Alpha = 789), item matching (3 items, "Medical work enables me to better use my personal talents", AVE =0.750;CR = 0.900; Alpha =0.899), guiding power: internal driving force (4 projects, "I feel I am destined for my current medical profession", AVE =0.735; CR = 0.917; Alpha =0.915), guidance power: external guidance (4 projects, "High-intensity medical work can make me grow faster", AVE =0.635;

CR = 0.874; Alpha =0.871), sense of meaning (4 projects, "I can experience the meaning of life by completing the current work", AVE =0.747;CR = 0.922; Alpha =0.920), value-leading behavior (4 projects, "Meeting the needs of others is my biggest motivation", AVE =0.745; CR = 0.921; Alpha = 0.919). and See Figure 4.2:



χ^2=486.800，df=215，P-value=0.000，RMSEA=0.066

Figure 4.2 Confirmatory factor analysis of Career Calling

4.2.4.3 Convergence validity

Convergence validity is mainly used to measure the correlation between different items in the same dimension, which can be directly reflected by the standardized factor load value and average variance extraction value of the item. In this paper, we rely on confirmatory factor analysis (CAF) to accurately identify and judge the convergence validity of identity and matching and orientation, meaning and value scale. In this study, confirmatory factor analysis (CAF) was used to test the convergence validity of identity and matching and steering force, meaning and sense of value scales. See the Table 4.7.

Table 4.7 Convergence validity analysis table

Name of latent variable	Measurement variable code	Standardized factor load	Error term	Average variance extraction (AVE)	Constituent reliability (CR)
F1	TP1	0.57	0.68	0.502	0.795
	TP2	0.86	0.26		
	TP3	0.81	0.34		
	TP5	0.54	0.71		
F2	TP8	0.87	0.76	0.750	0.900
	TP10	0.85	0.72		
	TP11	0.88	0.77		
F3	TP12	0.79	0.62	0.735	0.917
	TP13	0.89	0.79		
	TP14	0.91	0.83		
	TP15	0.82	0.67		
F4	TP17	0.82	0.67	0.635	0.874
	TP18	0.76	0.58		
	TP19	0.79	0.62		
	TP21	0.82	0.67		
F5	TP22	0.81	0.66	0.747	0.922
	TP23	0.89	0.79		
	TP24	0.90	0.81		
	TP25	0.86	0.74		
F6	TP28	0.84	0.29	0.745	0.921
	TP29	0.88	0.23		
	TP30	0.87	0.24		
	TP31	0.86	0.26		

It can be seen from Table 4.7 that the standardized factor load of each measurement variable is between 0.54 and 0.90, which is mostly higher than the recommended minimum value of 0.7 in the statistical study. Reliability analysis, and comprehensive medical personnel Career Calling of the reliability of six potential variables is 0.795, 0.900, 0.917, 0.874, 0.922 and 0.921, then the general statistical study suggested by the minimum value of 0.6, and the six potential variable variance extraction amount to an average of 0.502, 0.750, 0.735, 0.635, 0.747 and 0.745, and also higher than the required minimum value of 0.5. These results indicate that the measurement model of Career Calling has a good convergence validity.

4.3 Results and Discussion

This study first medical personnel Career by grounded theory put forward the concept of Calling theory model, and then the model test, through two stages of data sampling, for the first stage into the exploratory factor analysis, the second stage of the samples for the confirmatory factor analysis, through secondary data validation, we explore and validate the medical personnel Career Calling structure dimension. This chapter shows that the content structure of Career Calling includes identity and matching, orientation, meaning and value driving. The results of exploratory factor analysis and confirmatory factor analysis both support the three-dimension model of medical personnel, which is consistent with the actual situation of medical personnel, and the measurement scale has good reliability and validity.

The structure of Career Calling for medical personnel constructed and verified in this study is different from the classification of Career Calling dimensions summarized in the previous literature review. The purpose of this study is to construct a scale based on the definition of medical personnel and the characteristics required by their work as well as the completion of work tasks. Compared with other scales, the scale is more targeted.

In this study, a Career Calling scale for medical personnel was finally developed, which included 23 questions. These questions measured Career Calling for medical personnel from 3 dimensions. Through empirical test, this scale has good reliability and validity. Can be used by Chinese healthcare professionals to measure their work intention and professional behavior.

Chapter 5: The Influence Model Construction of Career Calling on The Organizational Citizenship Behavior Of Medical Personnel

5.1 Theoretical basis of this study

The theoretical basis of this study includes social exchange theory, hierarchy of needs theory and behaviorism learning theory. In order to provide some theoretical support for the deduction of research hypothesis, before the construction of research framework and the deduction of research hypothesis, this study briefly explains the relevant theoretical basis. This study takes social exchange theory, hierarchy of needs theory and behaviorism learning theory as the source of constructing ideas and provides important theoretical basis for this study.

5.1.1 Social Exchange theory

Social exchange theory is a kind of sociological theory which emerged in the United States in the 1960s and then spread widely around the world. Because of its emphasis on the psychological elements of human behavior, it is also known as a behaviorist theory of social psychology. This theory holds that all human behaviors are dominated by some kind of exchange activities that can bring rewards and rewards. Therefore, all human social activities can be reduced to a kind of exchange, and the social relations formed in the social exchange are also a kind of exchange relations.

The theory of social exchange was first put forward by The American sociologist George Homans in 1958, and later developed by Blau and others, forming the classic social exchange theory (Blau, 1964). In essence, these exchange behaviors are a kind of "interest exchange". Blau further defined social exchange as: people provide each other with various implicit rewards (such as affection, admiration, trust.) and explicit rewards (such as money, physical labor) out of a mutually beneficial interest or other motive, to maintain the relationship and further shorten the distance between them. In general, this is a kind of mutually beneficial voluntary return behavior. In general, successful social exchanges lead to commitment and recognition (Coyle-Shapiro & Conway, 2005). Based on the theory of social exchange, whether employees can obtain certain social resources (including status and respect) from their work is

an important factor affecting their work involvement. In the process of work, employees can feel the emotional respect of others, which will motivate them to have a higher degree of Job Engagement, and perform better in OCB, sharing behavior and other behaviors beyond expectations. At the same time, according to the theory of social exchange, employment relationship and Organizational Commitment are essentially a kind of social exchange, that is, when employees make contributions to the organization, they also expect the organization to make corresponding commitments and rewards, and vice versa (Konovsky & Pugh, 1994). Therefore, both organizations and employees abide by the principle of reciprocity of social exchange, believing that "one party obtains benefits from the other but cannot do without responsibilities and obligations"(March & Simon, 1958). In addition, employees' positive perception of the organization based on trust will lead to their commitment and recognition to the organization, and they will be willing to invest more energy to complete the work and assume more responsibilities other than the labor contract (Argyris, 1976).

5.1.2 Maslow hierarchy of Needs theory

Maslow, an American psychologist, put forward the hierarchy of needs theory in 1943 -- "Human beings belong to animals with needs, and human behaviors are driven by needs. Therefore, if a person's needs are met, he or she will gradually lose motivation. Only if a need is not met, a person will have motivation to move on. In other words, a need that has been met is not motivating." Maslow also believes that people's needs fall into five different levels from low to high, namely, physiological needs, safety needs, social needs, respect needs and self-actualization needs. Maslow divided the five needs into two categories. The first type of needs includes physiological needs, safety needs and social needs, which are lower-level needs that gradually decline along the direction of biological lineage and are mainly some instinctive needs. The second type of need, which includes the need for respect and the need for self-actualization, is a high-level need. He also believed that the relationship between the five needs was from low to high and realized layer by layer. Only when the lower-level needs were satisfied, the higher-level needs were pursued and realized (Maslow, 1943).

According to Maslow's hierarchy of needs, medical personnel will not pursue higher needs if lower needs cannot be met. That is to say, if the staff is the most basic survival and security needs are not met, then medical staff will not to pursue a higher level of self-actualization needs, must therefore be offered medical staff to meet the need of the survival of the basic material foundation, the medical staff could improve the ability to work in the work, enhance the service

level, the pursuit of self-realization.

5.1.3 Behaviorism learning theory

American psychologist John Watson founded the behaviorist learning theory in the early 20th century, Watson thinks that human behaviour is learned, environment determines a person's behavior pattern, whether it is normal behavior or pathological behaviors are acquired through learning, also can learn and change, add or remove, think to find out the regularity of the relationship between environmental stimuli and behavior reaction, can according to stimulate predict reactions, or according to the reaction inference, to predict and control the behavior of animals and humans. Behavior, he argued, was a combination of the physical responses of organisms to environmental stimuli, some external and some internal, and he saw no difference between humans and animals, all following the same rules.

Under the influence of Thorndike, Skinner and others, behaviorism learning theory has been dominant in the United States for half a century. Skinner pushed behaviorism learning theory to its peak. He put forward the operant conditioning principle and made a systematic study of the reinforcement principle, which made the reinforcement theory develop perfectly. Behaviorists believe that learning is the connection between stimulus and response. Their basic assumption is that behaviour is the learner's response to environmental stimuli. They see the environment as a stimulus, the accompanying organic behavior as a response, and all behavior as learned.

Burrhus Frederic Skinner (1904-1990) argued that psychology was concerned with observable outward behavior, not with internal mechanisms of behavior. He believed that science must be studied within the confines of the natural sciences, and that its task was to determine the functional relationship between the organic responses to experimenter-controlled stimuli (Jones, 1939). The main idea of behaviorism is that psychology should not study consciousness, but only behavior, and put behavior in complete opposition to consciousness. In terms of research methods, behaviorism advocates the use of objective experimental methods rather than introspection.

5.2 Definition of relevant concepts

Before the research hypothesis is deduced and the research framework is constructed, this study needs to define the concepts of organizational commitment, Job Engagement, Perceived Organizational Support, OCB, and Doctor-Patient Relationship, so as to lay a foundation for

the follow-up research.

5.2.1 Organizational commitment

As for the definition of organizational commitment, it was first proposed by American sociologist Becker, who believed that Organizational Commitment is a psychological state that individuals are less and less willing to leave the organization due to their increasing "unilateral investment" in their organization. This "one-sided investment" mainly refers to everything valuable such as time, experience, emotions, skills needed for the work (Becker, 1960). Buchanan (1974) believes that Organizational Commitment is defined as the extent to which an individual identifies with the behavioral goals and values of his organization, as well as the extent to which he is closely associated with his organization. However, Mowday, Poter and Steers classify the concept of organizational commitment, and they believe that Organizational Commitment contains three meanings: First, employees' acceptance of organizational goals and values; Second, employees want to be themselves. The determination and belief to stay in the organization; The third is the strong desire of employees to express themselves and give play to their talents in the organization. (Mowday, Poter, & Steers, 1979) all the above researchers emphasized that commitment is an individual's emotional loyalty to the organization. In 1982, Wiener explained Organizational Commitment from another perspective. He believed that individuals were often "brainwashed" in the work process to strengthen certain values and organizational norms, so it was a gradually normative process (Wiener, 1982). Domestic scholars start the research on Organizational Commitment relatively late, whereas others view Organizational Commitment as an individual's inner feeling toward the organization, and can also explain why the employee stays in the organization. Therefore, it is often used to test the employee's loyalty to the organization (Ling, Yang, & Fang, 2006).

To sum up, there is no consensus on the definition of Organizational Commitment in the academic world so far. But we can generalize about some of the commonalities of organizational commitment, namely commitment is "a state of emotional or intellectual commitment to a certain type of behavior." According to academic circles all data collection, combined with the research needs, medical staff Organizational Commitment is defined as: medical staff recognition and input to the hospital the organization degree, including the acceptance and recognition of the value and target of the hospital, and for the benefit of the hospital, the effort of the will, there is a clear and hope to continue to become a member of the hospital.

5.2.2 Job Engagement

At present, it is believed that Job Engagement refers to a perfect state full of sustained and positive emotional motivation, a positive and satisfying working state, characterized by vitality, dedication and concentration, with persistent and diffuse characteristics (Hu & Wang, 2014). Kahn first proposed the concept of personal engagement in work. As described by Kahn, based on the theory of Goffman (1961), he got a new concept suitable for organization -- personal input (Kahn, 1990). He defines personal involvement as the ability of members of an organization to fully engage in their roles and express themselves freely. Through in-depth interviews and ethnographic studies, Kahn found that the individual experience of Job Engagement is as follows: physically active participation in tasks; Cognitively alert and focused; Emotionally, you can express your thoughts and feelings at work, your creativity, beliefs and values, and develop empathy and good personal relationships with others at work. Kahn's concept of Job Engagement clearly puts forward three dimensions of physiology, cognition and emotion, and believes that this state is greatly affected by three psychological preconditions: sense of meaning, sense of security and accessibility. After Kahn proposed the concept of Job Engagement, it was immediately paid attention to by many fields, especially management psychology and human resource development (Haugen & Davis, 2009; Shuck, 2011). Schaufeli, et al. (2002) believe that Job Engagement is a more complex concept than the opposite of work burnout. An employee without work burnout does not mean an employee with Job Engagement. They believe that Job Engagement is a positive, fulfilling, more lasting and universal emotion-cognitive state. Job Engagement can also be defined as high energy and a strong sense of identity with work. Schaufeli et al. proposed that Job Engagement is different from the opposite of work burnout proposed by Maslach and Leiter (1997), mainly in the dimension of concentration. Schaufeli and Bakker (2004) believe that a state of immersion and happy integration into work can be a special representation of engagement, which is concentration. Schaufeli et al.'s research on Job Engagement is one of the most widely cited paradigms in academic and practical fields.

To sum up, the research on Job Engagement not only deepens in terms of constructs, but also gradually acquires an understanding of its mechanism and path, and its positive and healthy effects on organizations and individuals are also supported by more and more empirical studies, which are expected to provide solid support and guidance for management practice. Based on this theory, this study attempts to define the following work involvement of medical staff: medical staff in the work of a physiological, cognitive, emotional sustained, positive motivation

of a working state.

5.2.3 Organizational Citizenship Behavior

Bateman and Organ (1983) proposed the concept of Organizational Citizenship Behavior (OCB). In their opinion, OCB is a kind of extra-role behavior and attitude that is beneficial to the organization. It is neither emphasized by informal role nor derived from labor remuneration contract, but consists of a series of informal cooperative behaviors. It is the independent behavior related to the work of the organization employees, which has no connection with the formal reward system and is not required by the role, but can effectively improve the organizational efficiency on the whole. Because OCB goes beyond the requirements of a formal role, it is generally difficult for managers to detect whether an employee has committed such behavior, and it is also difficult for managers to use a reward and punishment system to make employees perform such behavior. In 1988, Organ officially defined OCB as "the sum of behaviors that have not been clearly or directly confirmed in the formal compensation system of the organization, but are beneficial to the operation effect of the organization as a whole"(Bies, 1989).

To sum up, we can conclude some commonalities of OCB, namely "informal, autonomous and spontaneous positive behaviors conducive to organizational operation". Based on the above academic concepts and research needs, this study attempts to define the OCB of medical staff as the spontaneous and informal positive behavior of medical staff that is conducive to the better operation of the medical system.

5.2.4 Sense of Perceived Organizational Support

Perceived Organizational Support concept, is the earliest proposed by the American psychologist Eisenberger et al. (1986). The theoretical basis of Perceived Organizational Support is the social exchange theory of social psychology about interpersonal relationship. According to this theory, the relationship between people is essentially a kind of social exchange, which includes both material and non-material exchange. When we receive positive treatment from others, we tend to return the positive treatment. When applied to the organizational environment, employees will give more positive feedback to the organization when they perceive that the organization CARES, appreciates and recognizes them. Eisenberger et al. defined POS as an employee's overall belief in the extent to which the organization values their contribution and CARES about their well-being. Two core points are embedded in this

concept :(1) there is a perception that the organization is paying attention to its happy employees; (2) There will also be some perception and feeling about whether the organization attaches importance to its contributions. McMilin (1997) took the service personnel as the research object and put forward his own opinion. He pointed out the deficiencies of Eisenberger et al. in their study and believed that they only paid attention to the two aspects of respect support and intimate support while neglecting another important aspect -- instrumental support, that is, the information, training, equipment and tools needed by employees to complete their work (McMillan, 1997). Chinese scholar Ling, Yang, and Fang (2006) presented their sense of organization support, namely, employees can feel the organization's support to them, and the support is manifested in three aspects: work help, interest concern and value recognition .Through empirical study, ling study et al. pointed out that enterprise employees' sense of organization support includes three dimensions: work support, value recognition and interest concern (Ling, Yang, & Fang, 2006).

Based on the above concept recognition in the academic circles, this study tries to adopt the concept of ling study based on research needs. The medical staff's sense of organization support is defined as: medical staff can feel the organization's support to them, including work help, interest concern and value recognition.

5.2.5 Doctor-Patient Relationship

Doctor-Patient Relationship refers to the interpersonal relationship formed between the doctor and the patient in the medical process, and the narrow sense of Doctor-Patient Relationship refers to the specific medical relationship formed between the doctor and the patient in the medical process. In a broad sense, Doctor-Patient Relationship refers to the crowd relationship between the doctor-centered physician and patient-centered patient(Fu et al.,2010).

Szasz and Hollander (1956) summarized three models of Doctor-Patient Relationship on the basis of existing studies: 1. Active-passive model. Doctors dominate medical activities and patients are in a passive dependence position. It is mainly found in patients with mental confusion, shock and severe symptoms. 2. The guidance-cooperation model is still a dominant Doctor-Patient Relationship. According to the treatment plan, doctors appropriately mobilize the enthusiasm of patients, guide patients, and enable patients to actively cooperate with medical activities to achieve the goal of curing patients. It is more common in patients with moderate or regular disease. 3. Participation-negotiation mode. The status and relationship between the doctor and the patient are equal. The doctor provides the alternative treatment plan

and explains the advantages and disadvantages. The final decision right rests with the patient (Szasz & Hollender, 1956). The Doctor-Patient Relationship is a cooperative partnership to complete medical activities through joint consultation. There is no good or bad among the three relationship modes. In different times, different national conditions, social and economic environments, and the actual situation of patients, the Doctor-Patient Relationship mode will be different.

Based on the above academic concept recognition and research needs, this study defines the Doctor-Patient Relationship discussed in this study as: from the perspective of medical prescription, that is, it focuses on the perception of the bad degree of doctor-patient interaction among doctors, nurses and medical technicians based on subjective experience and patient objective behavior.

5.3 Research hypotheses

H01: Identity and matching, guiding force, meaning and value drive can be explained by the underlying variable Career Calling.

H02: Identity and entry matching can be explained by potential variable identity and matching

H03: Internal force and external force can be explained by the potential variable guide force

H04: Sense of meaning and value-leading behavior can be explained by meaning and value-driven potential variables

H1: Career Calling storming with Job Engagement

H2: Career Calling positively related with Organizational Commitment

H3: Job Engagement Mediates the positive relation between Career Calling and Organizational Commitment

H4: Organizational Commitment positively relates to OCB

H5: Job Engagement boosts with OCB

H6: Job Engagement boosts with DPR

H7: Organizational Commitment positively relates to DPR

H8: OCB relates with DPR

H8 ': OCBo expressive with DPR

H8 ': OCBi horseback with DPR

H9: Career Calling is positively related with DPR through the Sequential engagement and OCB

H9a: Career Calling is positively related with DPR through the Sequential mediation of Job Engagement and OCBo

H9b: Career Calling is positively related with DPR through the Sequential mediation of Job Engagement and OCBi

H10: Career Calling is positively related with DPR through the sequential mediation of Organizational Commitment and OCB

5.4 Conceptual model

According to the empirical research and hypothesis on the professional Career Calling of Chinese medical personnel, the structure model of Chinese medical personnel 'Career Calling is in Figure 5.1.

The conceptual model stops all the established hypotheses into a global process that ends in DPR. The model is in Figure 5.2.

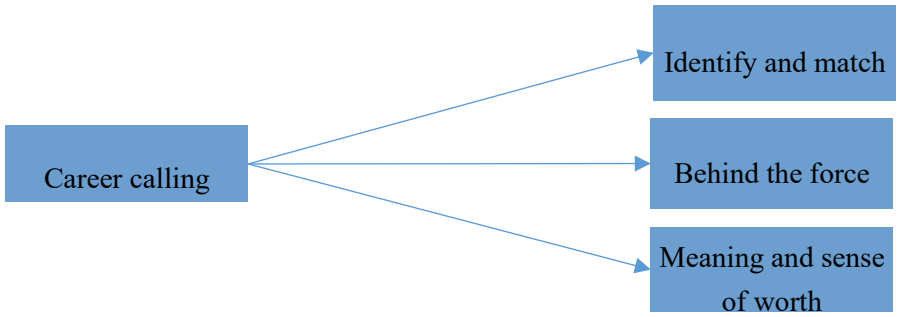


Figure 5.1 The structural model for Career Calling

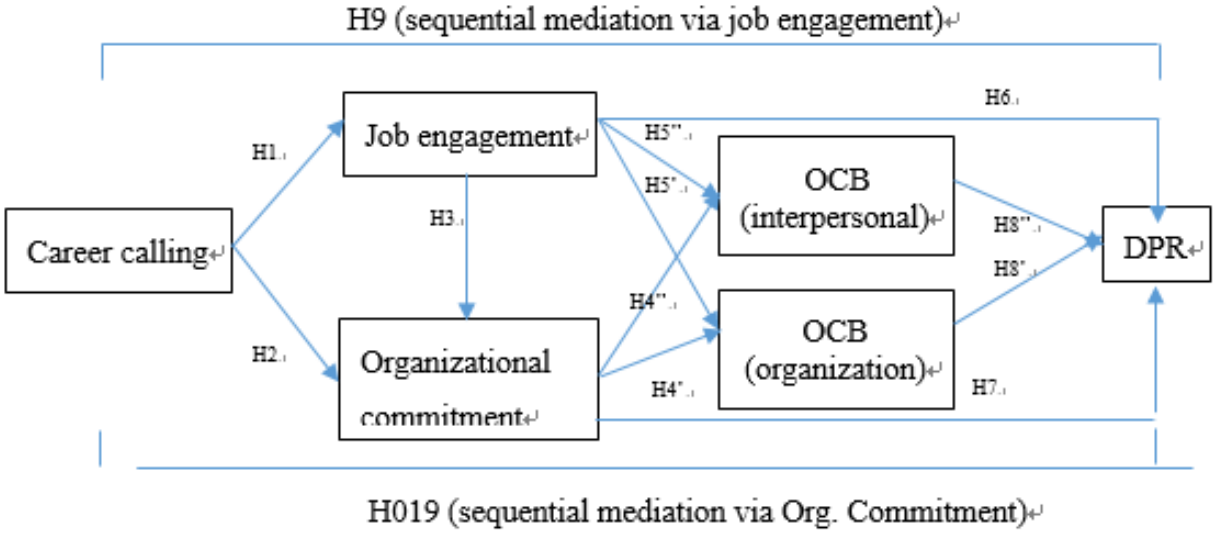


Figure 5.2 Conceptual Model

On the basis of theoretical analysis, this study proposes a total of 14) hypotheses that need to be tested (see Table 5.1). These hypotheses are divided into the confirmatory hypothesis and the pioneering hypothesis. The confirmatory hypothesis is the one that has been studied by some scholars and confirmed by empirical research. The pioneering hypothesis is that no other scholars have put forward, or although there is relevant theoretical research, but not confirmed by empirical research.

Table 5.1 Summary of research hypotheses

Assuming that the serial number	Assuming that the content	Assuming that nature
H01-2	IM, GF and MSW can be explained by the potential variable CC	pioneering
H02	ID and EM can be interpreted by the underlying variable IM	pioneering
H03	IF and EF can be explained by potential variable GF	pioneering
H04	SOM and VIB can be explained by the potential variable MSW	pioneering
H1	CC is positively correlated to JE	pioneering
H2	CC is positively correlated with OC	pioneering
H3	JE mediated the positive correlation between CC and OC	pioneering
H4	OC is positively correlated with OCB	confirmatory
H5	JE are positively correlated with OCB	confirmatory
H6	JE and DPR are negatively correlated	confirmatory
H7	OC and DPR were positively correlated	confirmatory
H8	OCB and DPR are positively correlated	pioneering
H9	CC is positively correlated with DPR through sequential mediation of JE and OCB	pioneering
H10	CC was positively correlated with DPR through sequential mediation of OC and OCB	pioneering

Chapter 6: Model Results and Discussion (Empirical Research)

6.1 Study design

6.1.1 Design of correlation subscales

6.1.1.1 Job Engagement

In order to facilitate the implementation of the adjustment effect test, Job Engagement is analyzed as a whole variable in this study. As a construct of individual positive traits in positive psychology, Job Engagement still has a unified definition of its concept. It is currently considered to be a perfect working state with sustained, positive emotional motivation. Schaufeli and Bakker's (2003) Job Engagement model based on vitality, dedication and concentration and Rich, Lepine, and Crawfold's (2010) Job Engagement model scale based on physical ability, emotion and cognition. Finally, THE UWES-9 scale was adopted as the Job Engagement subscale. See Table f.1 of Annex F.

6.1.1.2 Organizational Commitment

Organizational Commitment refers to the intensity of an individual's Commitment to an organization. It is different from the formal contract in the work task and professional role signed by individuals and organizations, but a "psychological contract" or a "psychological contract" (O'Reilly & Chatmen, 1986). In order to facilitate the implementation of the regulatory effect test, the Organizational Commitment is analyzed as a whole variable. Organizational Commitment scale was developed with reference to Allen and Meyer (1990) 10, Ling, Zhang, and Fang (2001), Shen (2008) and Zhang, Feng, and Li (2014). See Table f.2 of Annex F.

6.1.1.3 Perceived Organizational Support

In order to facilitate the implementation of the adjustment effect test, this study analyzes Perceived Organizational Support as a whole variable. refers to the Support an employee can feel from the organization, which is manifested in three aspects: help on work, concern on interests and recognition of value. Based on empirical study, Ling, Yang, and Fang (2006) point out that employee Perceived Organizational Support includes three dimensions: work Support,

Perceived value and interest concern. When developing the Perceived Organizational Support scale, Reference was made to Eisenberger's (1986) Survey of Perceived Organizational Support and Ling, Yang, and Fang’s (2006) questionnaire. See Table f.3 of Annex F.

6.1.1.4 Organizational Citizenship Behaviors

For the convenience of the implementation of the adjustment effect test, the OCB is analyzed as a whole variable. OCB is an extra-role Behavior and attitude that is beneficial to an organization. It is emphasized by informal roles and not derived from the contract of remuneration, but composed of a series of informal cooperative behaviors. It is the independent behavior related to the work of the organization employees, which has no connection with the formal reward system and is not required by the role, but can effectively improve the organizational efficiency on the whole. Refer to the revised scale of OCB compiled by Podsakoff et al. (1990) by Lu (a study on OCB of medical personnel in Chinese cultural context) to increase its cultural applicability. See Table f.4 of Annex F.

6.1.1.5 Doctor - patient relationship

In order to facilitate the implementation of the regulation effect test, the Patient-Doctor Relationship is analyzed as a whole variable in this study. Doctor-Patient Relationship refers to the interpersonal Relationship formed by doctors and patients in the medical process, and the narrow sense of Doctor-Patient Relationship refers to the specific medical Relationship formed between doctors and patients in the medical process. In a broad sense, Doctor-Patient Relationship refers to the crowd relationship between doctors and patients. Based on the domestic and foreign scales of Patience-doctor Relationship, Ma et al. (Patience-doctor Relationship (DPR) in China: Managers and clinicians' twofold pathways from commitment HR practices) the Doctor group in China, the application of using Ma (2018) establishment conforms to China's situation for the development of a Doctor - Patient Relationship scale. See Table f.5 of Annex F.

6.1.2 Testing and modification of measurement subscales

This study conducted a formal survey (the second time) data analysis, The Job Engagement component (to be corrected), Organizational Commitment component (to be corrected), Perceived Organizational Support component (to be corrected), OCB component (to be corrected), and Doctor-Patient Relationship component (to be corrected) are put together with the measurement items of medical personnel's Career Calling. Therefore, the measurement data

of each component also comes from the formal survey (the second time). The Career Calling of medical personnel has been analyzed in chapter 4. Therefore, reliability and validity tests are only carried out on the Job Engagement component, the Organizational Commitment component, the Perceived Organizational Support component, the OCB component and the Doctor-Patient Relationship component.

6.1.2.1 Internal consistency test

In this study, through formal investigation (the second time) to collect data to calculate the Job Engagement, Organizational Commitment, Perceived Organizational Support and OCBs, the Doctor - Patient Relationship of CITIC value, Cronbach α value, specific as table f.6, f.7, f.8, f.9, f.10 of Annex F.

From table f.6, f.7 can be found that each item CITC values were greater than 0.5, the scale of the overall Cronbach α value is greater than 0.7, shows the two subscales with good internal consistency.

From table f.8 can be found in the item Q51, Q53 CITC value is less than 0.5, delete these two items, the scale of the overall Cronbach α value increased from 0.871 to 0.950.

From table f.9, f.10 can find that each item CITC values were greater than 0.5, the scale of the overall Cronbach α value is greater than 0.7, shows the two subscales with good internal consistency.

6.1.2.2 Exploratory factor analysis

Since the Job Engagement component, the Organizational Commitment component and the Perceived Organizational Support component use single dimensional items, exploratory factor analysis is not performed on them. The OCB subscales and Doctor-Patient Relationship subscales are analyzed as exploratory factors. First, factors whose characteristic roots are greater than 1 are extracted, as shown in Table f.11 of Annex F.

Their KMO is 0.850. Exploratory factor analysis is performed on them, principal component analysis is applied, and orthogonal rotation with maximum variance is adopted. The calculation results are shown in Table f.12 of Annex F. Secondly, factors with characteristic roots greater than 1 in the Doctor-Patient Relationship component table were extracted, as shown in Table f.13 of Annex F, whose KMO was 0.931. Exploratory factor analysis was performed on them, principal component analysis was applied, and orthogonal rotation with maximum variance was adopted. The calculation results were shown in Table f.14 of Annex F.

It can be seen from Table f.12 that each measurement item has a high load on the

corresponding factor, indicating that these measurement items have a good discriminant validity and can be used for subsequent verification investigation.

It can be seen from Table f.14 that each measurement item has a high load on the corresponding factor, indicating that these measurement items have a good discriminant validity and can be used for subsequent verification investigation.

Finally, the Job Engagement component, Organizational Commitment component, Perceived Organizational Support component, OCB component and Doctor-Patient Relationship component are generated, as shown in Tables f.15, f.16, f.17, f.18 and f.19 of Annex F.

Through the reliability and validity test of the above five subscales, combined with the item measurement of the concept of mission of medical personnel in Chapter 4, the final verification measurement questionnaire required in this study is generated. The content of the entire measurement scale is listed in the appendix.

6.2 Data Analysis

6.2.1 Descriptive statistics

6.2.1.1 Descriptive statistics of medical personnel's professional mission identification and matching

Table f.20 of Annex F, according to the medical personnel occupational sense of identity and matching dimension split between 1-2.5, tend to level 5 points of low intensity (including "1" represents "strongly agree", "2" on behalf of the "agree", "3" on behalf of the "general", "4" represents "not agree", "5" representing "strongly disagree"), said item income divide is lower, intention and the higher the esteemed. In terms of the average score of identity and matching dimensions, the average score of medical personnel's identity is generally lower than that of medical personnel's occupation matching dimension, which indicates that the medical personnel's identity of occupation is much higher than that of human occupation matching. In the identity sub-dimension, the lowest score is 1.43, indicating that medical personnel consider medical work to be altruistic, indicating their recognition of their own work.

Item "I often can find pleasure in the medical activity" divided the highest score in one-dimension position matching points, to 2.18, between the "agree" (score 2 points) and the "general" (score of 3 points), lack of professional fun of medical personnel engaged in the work, it needs to be directed from the perspective of hospital administrators, raise people post-match.

In addition, the standard deviation of all questions is less than 1, indicating that the interviewees' opinions are relatively concentrated and there is no polarization. With respect to skewness and kurtosis, the results show that the data are normally distributed.

6.2.1.2 Descriptive statistics of medical personnel's professional mission orientation

Table f.21 of Annex F, according to the medical personnel Career Calling guiding force dimension split between 1-2.5, tend to level 5 points of low intensity (including "1" represents "strongly agree", "2" on behalf of the "agree", "3" on behalf of the "general", "4" represents "not agree", "5" representing "strongly disagree"), said item income divide is lower, the higher the guiding force. In the identity sub-dimension, the lowest score of "I am engaged in a work that makes me feel valuable" is 1.86, indicating that medical personnel consider medical work as a career that makes them feel valuable, indicating the guiding role of their own work for medical personnel.

Item "intensive care work can help me faster to grow" divided the highest score in the guidance force points dimension, is 2.30, between the "agree" (score 2 points) and the "general" (score of 3 points), that the medical personnel to the high strength work can promote the growth of cognitive don't agree with, this needs to be directed from the perspective of hospital administrators, appropriate to reduce the medical work pressure, and that they learn to help medical personnel to provide more convenient. In addition, the standard deviation of all questions is less than 1, indicating that the interviewees' opinions are relatively concentrated and there is no polarization. With respect to skewness and kurtosis, the results show that the data are normally distributed.

6.2.1.3 Descriptive statistics of medical personnel's Career Calling and value-driven status

Table f.22 of Annex F, according to the significance and value in medical personnel Career Calling driven dimension split between based on 1-2.5, tend to level 5 points of low intensity (including "1" represents "strongly agree", "2" on behalf of the "agree", "3" on behalf of the "general", "4" represents "not agree", "5" representing "strongly disagree"), said item income divide is lower, intention and the higher the esteemed. From the perspective of the average score of meaning and value-driven dimensions, the average score of medical personnel's value-led behaviors is generally lower than that of medical personnel's sense of meaning, which indicates that medical personnel's value guided behaviors are much higher than their recognition of sense of meaning. The lowest score in the value-leading behavioral dimension is 1.66, indicating that medical personnel recognize the actions that drive medical work to serve patients' health.

Item "I can often find the value from the professional conduct" in the significance and value driven dimension divided the highest score, 2.13, between the "agree" (score 2 points) and the "general" (score of 3 points), show a lack of sense of worth of medical personnel engaged in the work, it needs to be directed from the perspective of hospital administrators, and improve the medical personnel in the medical profession value feeling and sense of accomplishment. In addition, the standard deviation of all questions is less than 1, indicating that the interviewees' opinions are relatively concentrated and there is no polarization. With respect to skewness and kurtosis, the results show that the data are normally distributed.

6.2.1.4 Descriptive statistics on medical personnel Job Engagement

Table f.23 of Annex F, according to the medical personnel Job Engagement dimension split tend to be between 2-3, tend to be low in level 5 score of intensity (including "1" represents "strongly agree", "2" on behalf of the "agree", "3" on behalf of the "general", "4" represents "not agree", "5" representing "strongly disagree"), said item income divide is lower, intention and the higher the esteemed.

Item "I am enthusiastic about my Work" has the lowest score of 1.94 in the dimension of Job Engagement, indicating that medical personnel are highly enthusiastic about medical Work. Item "when stress at Work, I will feel happy in the Job Engagement dimension equally among the highest score2.97, between the" agree "(score 2 points) and the" general "(score of 3 points), that medical personnel engaged in the Work of the lack of positive emotions, try to guide the needs from the perspective of hospital administrators, happy work in the medical profession. In addition, the standard deviation of all questions is less than 1, indicating that the interviewees' opinions are relatively concentrated and there is no polarization. With respect to skewness and kurtosis, the results show that the data are normally distributed.

6.2.1.5 Descriptive statistics of the Organizational Commitment situation of medical personnel

Table f.24 of Annex F, according to the medical personnel Organizational Commitment dimensions between partitioning based on 1-2.5, tend to level 5 points of low intensity (including "1" represents "strongly agree", "2" on behalf of the "agree", "3" on behalf of the "general", "4" represents "not agree", "5" representing "strongly disagree"), said item income divide is lower, intention and the higher the esteemed. The Organizational Commitment dimension of the item "I think my work is what I am good at" has the lowest score of 2.09, indicating that medical personnel have a relatively high recognition for it. In the Organizational

Commitment dimension, the average score of "employer's environment, working conditions and reputation help me realize my ambition" is the highest, 2.32, which is between "consent" (score 2 points) and "general" (score 3 points), indicating that medical personnel have relatively low recognition for realizing their ambition from the Organizational environment and conditions. In addition, the standard deviation of all questions is less than 1, indicating that the interviewees' opinions are relatively concentrated and there is no polarization. With respect to skewness and kurtosis, the results show that the data are normally distributed.

6.2.1.6 Descriptive statistics of Perceived Organizational Support status of medical personnel

Table f.25 of Annex F, according to the medical personnel Perceived Organizational Support dimension split tends to between 1-2.5, tend to level 5 points of low intensity (including "1" represents "strongly agree", "2" on behalf of the "agree", "3" on behalf of the "general", "4" represents "not agree", "5" representing "strongly disagree"), said item income divide is lower, intention and the higher the esteemed. From the perspective of the average allocation of Perceived Organizational Support dimension, the item "Organizational concern for my overall satisfaction with my work" is the lowest in the Organizational Commitment dimension (2.23), indicating that medical personnel have a relatively high recognition of Organizational care for personal work.

Item "unit value my opinions or views" on the Perceived Organizational Support dimension equally among the highest score of 2.52, between the "agree" (score 2 points) and the "general" (score of 3 points), showed the medical personnel to the organization attaches great importance to the personal opinions and views of recognition is relatively low, it needs to be directed from the point of view of hospital management, to improve hospital management Suggestions and recommendations to the medical personnel's attention and respect. In addition, the standard deviation of all questions is less than 1, indicating that the interviewees' opinions are relatively concentrated and there is no polarization. With respect to skewness and kurtosis, the results show that the data are normally distributed.

6.2.1.7 Descriptive statistics of medical personnel's Organizational Citizenship Behavior

Table f.26 of Annex F, according to medical personnel OCB driven dimension split between based on 1-2.5, tend to level 5 points of low intensity (including "1" represents "strongly agree", "2" on behalf of the "agree", "3" on behalf of the "general", "4" represents "not agree", "5" representing "strongly disagree"), said item income divide is lower, intention and the higher the

esteemed. From the perspective of the average score of meaning and value-driven dimensions, the average score of medical personnel's value-led behaviors is generally lower than that of medical personnel's sense of meaning, which indicates that medical personnel's value guided behaviors are much higher than their recognition of sense of meaning. The lowest score in the value-leading behavioral dimension is 1.66, indicating that medical personnel recognize the actions that drive medical work to serve patients' health.

Item "I can often find the value from the professional conduct" in the significance and value driven dimension divided the highest score, 2.13, between the "agree" (score 2 points) and the "general" (score of 3 points), show a lack of sense of worth of medical personnel engaged in the work, it needs to be directed from the perspective of hospital administrators, and improve the medical personnel in the medical profession value feeling and sense of accomplishment. In addition, the standard deviation of all questions is less than 1, indicating that the interviewees' opinions are relatively concentrated and there is no polarization. With respect to skewness and kurtosis, the results show that the data are normally distributed.

6.2.1.8 Descriptive statistics of the Relationship status between medical personnel and patients

Table f.27of Annex F, according to the significance and value in medical personnel Career Calling driven dimension split between based on 1-2.5, tend to level 5 points of low intensity (including "1" represents "strongly agree", "2" on behalf of the "agree", "3" on behalf of the "general", "4" represents "not agree", "5" representing "strongly disagree"), said item income divide is lower, intention and the higher the esteemed. From the perspective of the average score of meaning and value-driven dimensions, the average score of medical personnel's value-led behaviors is generally lower than that of medical personnel's sense of meaning, which indicates that medical personnel's value guided behaviors are much higher than their recognition of sense of meaning. The lowest score in the value-leading behavioral dimension is 1.66, indicating that medical personnel recognize the actions that drive medical work to serve patients' health.

Item "I can often find the value from the professional conduct" in the significance and value driven dimension divided the highest score, 2.13, between the "agree" (score 2 points) and the "general" (score of 3 points), show a lack of sense of worth of medical personnel engaged in the work, it needs to be directed from the perspective of hospital administrators, and improve the medical personnel in the medical profession value feeling and sense of accomplishment. In addition, the standard deviation of all questions is less than 1, indicating that the interviewees' opinions are relatively concentrated and there is no polarization. With respect to skewness and

kurtosis, the results show that the data are normally distributed.

6.2.2 Reliability and validity test of verification questionnaire

Since the measurement items of some subscales were purified in the second formal survey, the reliability and validity tests of the measurement scales of various concepts were required in the verification questionnaire.

6.2.2.1 Internal consistency test

Items - population (CITC) and Cronbach a coefficient were used to test consistency in the test. The calculated results are shown in Table 6.1 and Table 6.2. CITC value of each item is greater than 0.5, and Cronbach coefficient of each variable is greater than 0.7.

Table 6.1 Reliability analysis of the medical personnel Career Calling scale

A dimension		item	CTIC value	Alpha if Item Delete	The structural surfaces Cronbach a value	Cronbach A value of the overall scale
Identification and matching	identity	Q1	0.634	0.806	0.835	0.894
		Q2	0.709	0.773		
		Q3	0.687	0.783		
		Q4	0.636	0.805		
	People post-match	Q5	0.823	0.879	0.914	
		Q6	0.821	0.882		
		Q7	0.837	0.865		
Guiding force	The internal drive	Q8	0.763	0.872	0.900	0.932
		Q9	0.774	0.872		
		Q10	0.771	0.871		
	External guide	Q11	0.801	0.858	0.896	
		Q12	0.777	0.860		
		Q13	0.808	0.846		
		Q14	0.736	0.876		
		Q15	0.756	0.867		
Meaning and value driven	Sense of meaning	Q16	0.758	0.923	0.924	0.940
		Q17	0.852	0.892		
		Q18	0.859	0.889		
	Value leading behavior	Q19	0.831	0.900	0.893	
		Q20	0.733	0.869		
		Q21	0.744	0.868		
		Q22	0.794	0.846		
		Q23	0.777	0.854		

Table 6.2 Reliability analysis of JE, OC, POS, OCB and DPR measurement

The dimension	item	CITC value	Alpha if Item Delete	Cronbach a value
JE	Q1	0.804	0.939	0.950
	Q2	0.831	0.937	
	Q3	0.796	0.939	
	Q4	0.819	0.938	
	Q5	0.795	0.939	
	Q6	0.730	0.944	
	Q7	0.761	0.940	
	Q8	0.871	0.934	
	Q9	0.788	0.940	
OC	Q1	0.815	0.897	0.918
	Q2	0.809	0.899	
	Q3	0.822	0.897	
	Q4	0.711	0.908	
	Q5	0.760	0.903	
	Q6	0.551	0.925	
	Q7	0.767	0.903	
POS	Q1	0.841	0.944	0.952
	Q2	0.862	0.943	
	Q3	0.874	0.942	
	Q4	0.881	0.941	
	Q5	0.811	0.947	
	Q6	0.803	0.947	
	Q7	0.789	0.948	
OCB	Q1	0.801	0.927	0.871
	Q2	0.853	0.911	
	Q3	0.897	0.896	
	Q4	0.829	0.918	
	Q5	0.788	0.870	
	Q6	0.842	0.850	
	Q7	0.803	0.865	
	Q8	0.696	0.902	
DPR	Q1	0.793	0.928	0.945
	Q2	0.866	0.903	
	Q3	0.862	0.904	
	Q4	0.844	0.910	
	Q5	0.779	0.921	
	Q6	0.745	0.925	
	Q7	0.823	0.916	
	Q8	0.813	0.917	
	Q9	0.821	0.916	
	Q10	0.814	0.917	

6.2.2.2 Exploratory factor analysis (principal component analysis)

In order to ensure the single dimension of each variable and the discriminative validity of each variable, this study conducts principal component analysis on eight items: identity and matching, orientation, meaning and value drive, Job Engagement, Organizational Commitment, Perceived Organizational Support, OCB and Doctor-Patient Relationship. In order to guarantee the single dimensional nature of each variable and the discriminative validity among variables, this study

conducts principal component analysis on eight items: identity and matching, orientation, meaning and value drive, Organizational Engagement, Organizational Commitment, Organizational Support, OCB and Doctor-Patient Relationship (See Table 6.3).

Table 6.3 Dimension tests of variables

variable	Number of factors	Explain variance ratio (%)	KMO value	P values
Identification and matching	2	75.557	0.871	0.000
Guiding force	2	77.173	0.927	0.000
Sense of meaning and value	2	79.022	0.930	0.000
Job Engagement	1	71.500	0.941	0.000
Organizational Commitment	1	67.564	0.923	0.000
Perceived Organizational Support	1	77.861	0.946	0.000
Organizational Citizenship Behaviors	2	80.597	0.851	0.000
Doctor - Patient Relationship	2	78.140	0.930	0.000

Table f.3 of Annex F shows the number of principal components in each group, the ratio of interpretation variance, the KMO value and P value of the spherical test. It is acceptable that the variance ratio varies between 67.564-80.597.KMO value was greater than 0.8, and P value of spherical experiment was less than 0.01, which basically met the requirements of analysis. The application of Varimax rotation makes the interpretation of component analysis clearer. Varimax's rotational discretion is shown in 8 tables, including Table 6.4.

Table 6.4 Three-dimensional exploratory factor analysis (principal component) table of medical personnel's Career Calling

Project	The principal components	
	Subdimension 1	Subdimension 2
Q1	0.816	
Q2	0.679	
Q3	0.661	
Q4	0.829	
Q5		0.875
Q6		0.860
Q7		0.890
Q8	0.816	
Q9	0.799	

Q10	0.780	
Q11	0.818	
Q12		0.715
Q13		0.785
Q14		0.880
Q15		0.699
Q16	0.699	
Q17	0.834	
Q18	0.872	
Q19	0.829	
Q20		0.736
Q21		0.705
Q22		0.772
Q23		0.874

It can be seen from the Table 6.4 of text and Tables f.28, f.29, f 30, f.31, f.32 of Annex F, that the factor load (SFL) of relevant items is all greater than 0.5, and no cross-factor occurs, meeting the standard requirements of statistical analysis.

6.2.2.3 Confirmatory factor analysis

In order to test the convergent validity and discriminant validity of the measurement subscales of each variable, this study firstly conducts confirmatory factor analysis. AMOS20.0 software was used for verification analysis, and the results were shown in Figure 6.1.

According to the confirmatory factor analysis results in the figure, the ratio of chi-square and DOF of the measurement model is 3.881, and the overall fitting effect is good. GFI, AGFI, TLI, CFI, RMR and RMSEA were 0.838, 0.815, 0.931, 0.937, 0.031 and 0.061 respectively. These indicators show that the confirmatory factor analysis model fits well with the collected data. As shown in the following Figure 6.1 (X=2384.717, DF =614, P-value=0.000, RMSEA=0.0612):

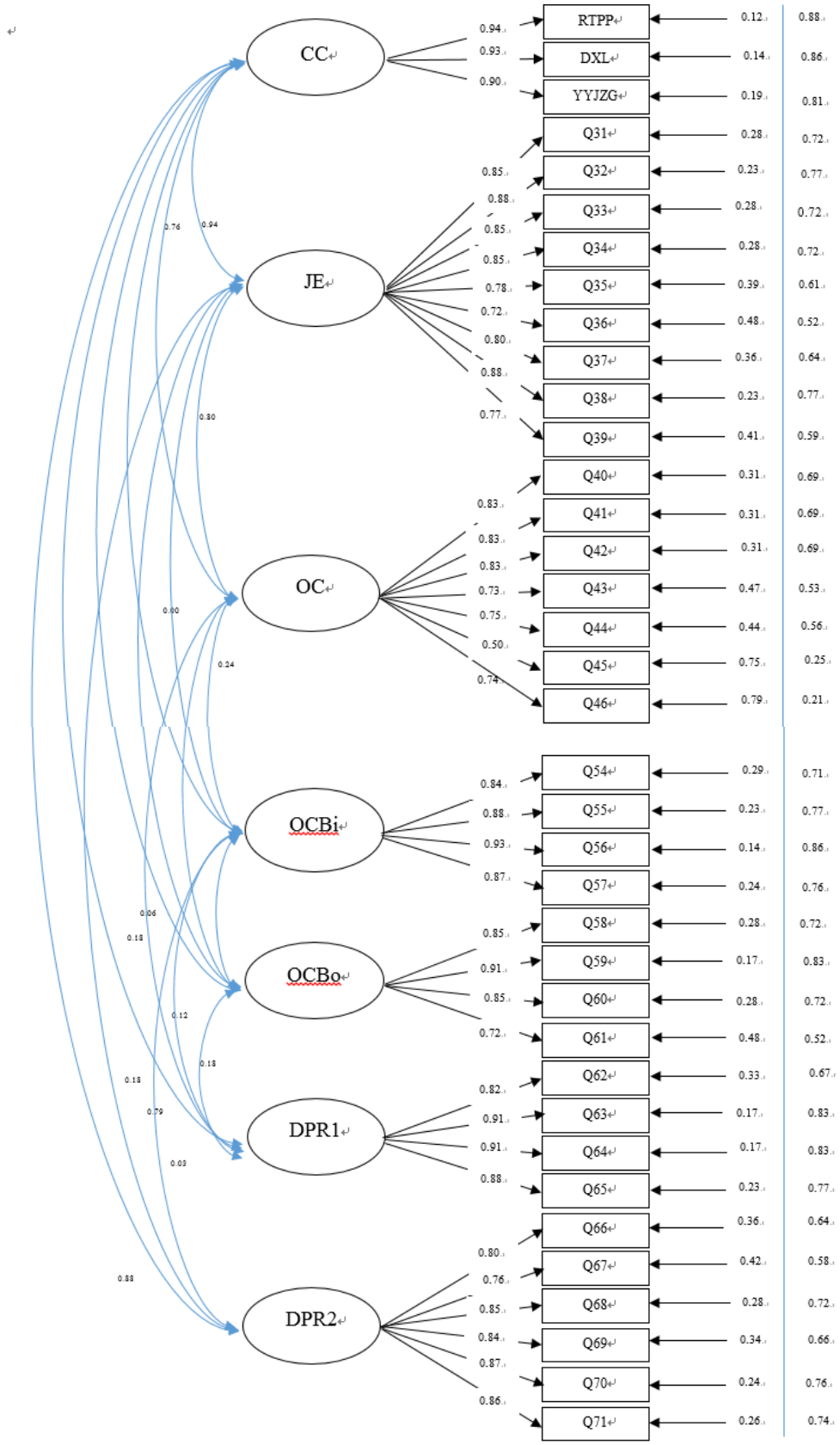


Figure 6.1 Confirmatory factor analysis of the career mission model

Table 6.5 Convergence validity analysis of theoretical model variables

Latent variables	Observed variables	Standardized factor load R	Error term	Average variance extract AVE	Constitute the reliability CR
Career Calling	Identity and matching	0.94	0.12	0.85	0.94
	Guiding force	0.93	0.14		
	Meaning and value guidance	0.90	0.19		
Job Engagement	Q31	0.85	0.28	0.61	0.86
	Q32	0.88	0.26		
	Q33	0.85	0.28		
	Q34	0.85	0.28		
	Q35	0.78	0.39		
	Q36	0.72	0.48		
	Q37	0.80	0.36		
	Q38	0.88	0.23		
	Q39	0.77	0.40		
	Q40	0.83	0.31		
Organizational commitment	Q41	0.83	O. 31	0.59	0.91
	Q42	0.83	0.31		
	Q43	0.73	0.47		
	Q44	0.75	0.44		
	Q45	0.50	0.75		
	Q46	0.74	0.45		
Organizational Citizenship Behavior 1	Q54	0.84	0.29	0.78	0.93
	Q55	0.88	0.23		
	Q56	0.93	0.14		
	Q57	0.87	0.24		
Organizational Citizenship Behavior ii	Q58	0.85	0.28	0.70	0.90
	Q59	0.91	0.17		
	Q60	0.85	0.28		
	Q61	0.72	0.48		
Doctor-Patient Relationship 1	Q62	0.82	0.33	0.78	0.93
	Q63	0.91	0.17		
	Q64	0.91	0.17		
	Q65	0.88	0.23		
Doctor-Patient Relationship 2	Q66	0.80	0.36	0.69	0.93
	Q67	0.76	0.42		
	Q68	0.85	0.28		
	Q69	0.84	0.29		
	Q70	0.87	0.24		
	Q71	0.86	0.26		

The convergence validity of each subscale was measured by their standardized factor load (SFL) and average variance extraction (AVE). Table 6.5 shows that the SFL for each observed variable is between 0.72 and 0.94, most of which are above the statistically acceptable minimum of 0.7 and only one variable shows a value below 0.7 but equal to 0.5. In addition, the constituent reliability indexes of the five potential variables are 0.847, 0.805, 0.677, 0.909 and

0.899 respectively, which are all higher than or close to the statistically acceptable minimum value of 0.7. Their AVE values were 0.527, 0.512, 0.511, 0.588 and 0.533, all greater than the statistically acceptable minimum value of 0.5. These data show that each concept of the theoretical model has a satisfactory convergence validity.

6.3 Crosstab analysis

Different demographic variables of medical personnel in the Career Calling (CC) may be some differences and the CC includes identity and matching, orientation, sense of meaning and value drive), Job Engagement (JE), Organizational Commitment (OC), Organizational Citizenship Behavior (OCB), and Doctor-Patient Relationship (abbreviated as D PR). The demographic variables in this study included gender, age, education, years of work, title, work position, monthly income. The survey data of 767 valid samples are tested F independent samples, ANOVA (ANOVA), SPSS20.0statistical software used.

6.3.1 Medical personnel of different genders

The independent sample T tests conducted using SPSS produced the following results:

1.There is no gender difference in Identity and Matching (t=0.714, P=0.475); there is no gender difference in Orientation (t=262, P=0.207); and there is no gender difference in Meaning and Sense of Value (t=-0.319,0.750), as detailed in Table f.33 of Annex F.

2.There is no gender difference in the Q31-Q39 items of Job Engagement (JE), as detailed in Table f.34of Annex F.

3.There are gender differences in Q40、Q45 and Q46 in 3. Organizational Commitment (OC) Q40-items, as detailed in the table below. Q40(sense of belonging) varies by sex (t =2.319, P=0.021); Q45(separation costs) differ by sex (t =3.179, P=0.002); Q46(loyalty) varies by sex (t =3.635, P=0.000). See Table f.35 of Annex F for details.

4.There is no gender difference in Q54-Q61 of 4. organizational citizenship acts, as shown in Table f.36 of Annex F.

5.Doctor-Patient Relationship (abbreviated as D PR) Q62-Q71 items have no difference in gender, as shown in Table f.37 of Annex F.

6.3.2 Medical personnel of different ages

Single-variable analysis of variance (ANOVA) using SPSS produced the following results, analyzing the mean values of medical personnel of different ages across all dimensions.

There are significant differences among medical personnel of different ages (F=4.931, Q8) in life-saving (life-saving) in the topic of Career Calling. P=0.000), There are significant differences in love of work (Q9) (F=4.041, P=0.001). There are significant differences in lifetime medical care (Q10) (F=7.239, P=0.000). There are significant differences in altruistic occupations (Q11) (F=4.385, P=0.001), There are significant differences in work fun (Q12) (F=3.470, P=0.004), significant differences in exertion (Q13) (F=5.136, P=0.000). There are significant differences in achievement (Q14) (F=3.099, P=0.009), significant differences in effort (Q15) (F=4.109, P=0.001). There are significant differences in sense of value (Q16) (F=4.069, P=0.001), significant differences in intrinsic drive (Q17) (F=3.902, P=0.002). There is a significant difference between destined (Q18) (F=3.926, P=0.002). There are significant differences in helping others (Q23) (F=3.086, P=0.009), significant differences in occupational values (Q25) (F=3.378, P=0.005), significant differences in motivation (Q28) (F=4.778, P=0.000), significant differences in growth dynamics (Q29) (F=2.984, P=0.011), significant differences in health mission (Q30) (F=4.723, P=0.000). Among other items, there is no significant difference among medical personnel of different ages (p >0.05). It can be seen that there are many differences in the Career Calling of medical personnel at different ages, and older medical personnel have a stronger Career Calling.

In terms of input, there are significant differences in work enthusiasm (Q33) between ages (F=4.996, P=0.000), significant differences in work inspiration (Q34) (F=3.233, P=0.007), Significant differences in motivation (Q35) (F=4.131, P=0.001). Work immersion (Q38) is significantly different (F=3.823, P=0.002), and no significant differences between different ages on other topics (p >0.05).

There are significant differences in work matching (Q43) between different ages (F=3.018, P=0.010), loyalty (Q46) between different ages (F=7.522, P=0.000), and no significant differences between different ages on other topics (p >0.05).

There are significant differences in voluntary contributions (Q55) between different ages (F=3.406, P=0.005) on the topic of Organizational Citizenship Behavior 1 (OCBi), and no significant differences between different working years on other topics (p >0.05).

There are significant differences (F=3.367, P=0.005) between different ages in the topic of Organizational Citizenship Behavior 2 (OCBo), significant differences in time fit (Q61)

(F=3.222, P=0.007), and no significant differences between different ages in other items (p >0.05).

There is no significant difference between different ages on all subject items in Doctor-Patient Relationship 1(DPR1) (p >0.05). Obviously, there is no significant difference in the medical personnel Doctor-Patient Relationship 1(DPR1) at different ages (p >0.05).

For the doctor - patient relationship 2(DPR2), There are significant differences between ages in informing risk (Q68) (F=2.394, P=0.036), Significant differences in reasonable programs(Q69) (F=4.348, P=0.001), There are significant differences in pride (Q70) (F=3.214, P=0.007), There are significant differences in willingness to return (Q71) (F=3.062, P=0.10) and no significant differences between different ages in other items (p >0.05).

6.3.3 Medical personnel with different educational background

Single-variable analysis of variance (ANOVA) using SPSS produced the following results to analyze the mean values of medical personnel with different degrees in all dimensions.

There are significant differences in work-loving (Q9) topics in the Career Calling (F=3.3552, P=0.029). There are significant differences in work fun (Q12) (F=4.618, P=0.010), significant differences in exertion (Q13) (F=3.156, P=0.043). There are significant differences in achievement (Q14) (F=3.195, P=0.042), Significant differences in intrinsic drive (Q17) (F=3.702, P=0.025), (Q21) Significant differences (F=3.993, P=0.019), (Q22) Significant differences (F=4.080, P=0.017). A significant difference is found among medical personnel with different academic qualifications (p >0.05). It can be seen that there are many differences in the Career Calling of medical personnel in different academic qualifications, and medical personnel with high academic qualifications have a stronger Career Calling.

In terms of input, there are significant differences in work enthusiasm (Q33) between different academic qualifications (F=4.996, P=0.000), significant differences in work inspiration (Q34) (F=3.233, P=0.007), significant differences in motivation (Q35) (F=4.131, P=0.001). Work immersion (Q38) is significantly different (F=3.823, P=0.002), and no significant differences between different ages in other items (p >0.05).

There are significant differences in work matching (Q43) between different academic qualifications (F=3.018, P=0.010), loyalty (Q46) between different academic qualifications (F=7.522, P=0.000), and no significant differences between different academic qualifications on other topics (p >0.05).

There are significant differences in voluntary contributions (Q55) between different

academic qualifications (F=3.406, P=0.005) and no significant differences between different academic qualifications (p >0.05).

There are significant differences in overtime work (Q58) between different academic qualifications (F=3.367, P=0.005), time fit (Q61) (F=3.222, P=0.007), and no significant differences between different academic qualifications on other subjects (p >0.05).

There is no significant difference between different academic qualifications (p >0.05) in the Doctor-Patient Relationship 1(DPR1). Obviously, there is no significant difference in Doctor-Patient Relationship 1(DPR1) among medical personnel in different academic qualifications (p >0.05).

For the doctor - patient relationship 2(DPR2), there are significant differences between different degrees in informing the risk (Q68) (F=2.394, P=0.036), significant differences in reasonable programs (Q69) (F=4.348, P=0.001). There are significant differences in pride (Q70) (F=3.214, P=0.007). There are significant differences in willingness to return (Q71) (F=3.062, P=0.10).and no significant differences between different ages in other items (p >0.05).

6.3.4 Medical personnel with different working years

Single-variable analysis of variance (ANOVA) using SPSS produced the following results, analyzing the mean values of medical personnel with different working years across all dimensions.

In the title of Career Calling, there are significant differences in life-saving (Q8) among medical personnel with different working years (F=7.547, P=0.000), there are significant differences in love of work (Q9)(F=4.292, P=0.002), there are significant differences in lifetime medical care (Q10)(F=5.606, P=0.000), there are significant differences in altruistic occupations (Q11)(F=7.922, P=0.000), there are significant differences in sense of value (Q16)(F=3.675, P=0.006), Significant differences in intrinsic drive (Q17)(F=2.901, P=0.021), (Q21) Significant differences (F=2.392, P=0.049). There are significant differences in helping others (Q23) (F=4.559, P=0.001). There are significant differences in the meaning of life (Q24) (F=2.843, P=0.023). There is a significant difference in favorable society (Q27) (F=4.047, P=0.003). There is a significant difference in motivation (Q28) (F=3.804, P=0.005). Significant differences in growth dynamics (Q29) (F=3.512, P=0.007). There are significant differences in health mission (Q30) (F=6.008, P=0.000). A significant difference is found in the number of medical personnel with different working years (p >0.05). It can be seen that there are many differences in the Career Calling of medical personnel in different working years, and the

medical personnel with long working years have a stronger Career Calling.

In terms of input, there are significant differences in work enthusiasm (Q33) between working years (F=2.845, P=0.023). Significant differences in motivation (Q35) (F=3.167, P=0.014), work immersion (Q38) is significantly different (F=2.702, P=0.030). There are significant differences (F=5.478) in selfless work (Q39), P=0.000) There is no significant difference between different years of work on other items (P=0.05).

There are significant differences in loyalty (Q46) between different working years in terms of Organizational Commitment (F=6.061, P=0.000), and no significant differences between different working years on other topics (p=0.05).

There are significant differences in voluntary contributions (Q55) between different working years (F=3.630, P=0.006) on the topic item of Organizational Citizenship Behavior 1(OCB1), and no significant differences between different working years on other topics (p F=0.05).

On the item of Organizational Citizenship Behavior 2 (OCB2), there were significant differences among different working years in overtime work (Q58) and in time coordination (Q61). There were no significant differences among different working years in other items (p > 0.05). In the item of organizational Citizenship behavior 2 (Q58), there were significant differences in overtime work (Q58) and time coordination (Q61) in organizational Citizenship behavior 2 (Q58) and time coordination (Q61), but there were no significant differences among other items (p > 0.05).

There is no significant difference between different working years on all subject items in Doctor-Patient Relationship 1(DPR1) (p >0.05). Obviously, there is no significant difference in the medical personnel Doctor-Patient Relationship 1(DPR1) in different working years (p >0.05).

For the doctor - patient relationship 2(DPR2), Significant differences between years of service in reasonable programs (Q69) (F=4.962, P=0.001). There are significant differences in pride (Q70) (F=3.972, P=0.004). Significant differences in willingness to return (Q71) (F=4.190, P=0.002). but there were no significant differences among other items (p > 0.05).

6.3.5 Medical personnel with different titles

Single-variable analysis of variance (ANOVA) using SPSS produced the following results to analyze the average of medical personnel with different titles in all dimensions.

There are significant differences in life-saving (Q8) among medical personnel with

different working years in the topic of Career Calling (F=7.023, P=0.000), There are significant differences in love of work (Q9) (F=4.582, P=0.003). There are significant differences in lifetime medical care (Q10) (F=6.543, P=0.000). There are significant differences in altruistic occupations (Q11) (F=7.573, P=0.000). There are significant differences in work fun (Q12) (F=2.826, P=0.038), significant differences in exertion (Q13) (F=2.960, P=0.032). There are significant differences in sense of value (Q16) (F=4.069, P=0.001), There is a significant difference between destined (Q18) (F=3.251, P=0.021). There are significant differences in favorable societies (Q27) (F=5.359, P=0.001), significant differences in motivation (Q28) (F=3.707, P=0.011). There are significant differences in health calling (Q30) (F=5.804, P=0.001). However, there is no significant difference between the medical personnel with different titles in other items of Career Calling ($p > 0.05$). It can be seen that there are many differences in the professional Career Calling of medical personnel in different titles.

In terms of job input, there were significant differences among different professional titles in selfless work (Q39) (F=3.815, p=0.010), but there was no significant difference among different titles in other items ($p > 0.05$).

There are significant differences in loyalty (Q46) between different titles (F=5.172, P=0.002) and no significant differences between different titles on other titles ($P > 0.05$).

There are significant differences in voluntary contribution (Q55) between different titles (F=3.121, P=0.025) and no significant differences between different titles ($p > 0.05$).

there are significant differences in overtime work (Q58) between different titles (F=5.832, P=0.001) and time cooperation (Q61) in item 2(Organizational Citizenship Behavior) (F=3.346, P=0.019). There is no significant difference between different titles in other items ($p > 0.05$).

there is no significant difference between different titles on all subject items in Doctor-Patient Relationship 1(DPR1) ($P>0.05$). Visible, medical personnel Doctor-Patient Relationship 1(DPR1) in different titles do not have significant differences ($p >0.05$).

For the doctor - patient relationship 2(DPR2), there are significant differences in informing risks (Q68) between different titles (F=3.323, P=0.019), significant differences in reasonable programs (Q69) (F=6.418, P=0.000). There are significant differences in pride (Q70) (F=4.698, P=0.003), significant differences in willingness to return (Q71) (F=4.289, P=0.005). There is no significant difference between different titles in other items ($p > 0.05$) .

6.3.6 medical personnel in different works

Single-variable analysis of variance (ANOVA) using SPSS produced the following results to analyze the mean values of medical personnel at different works across all dimensions.

On the subject of a Career Calling, medical personnel in different works have significant differences in their love of work (Q9) (F=5.111, P=0.006). There are significant differences in lifetime medical care (Q10) (F=5.177, P=0.006). There are significant differences in work fun (Q12) (F=5.158, P=0.006), significant differences in exertion (Q13) (F=12.940, P=0.000). There are significant differences in achievement (Q14) (F=5.939, P=0.003), significant differences in effort (Q15) (F=3.355, P=0.035). There are significant differences in sense of value (Q16) (F=3.316, P=0.037), significant differences in intrinsic drive (Q17) (F=4.016, P=0.017). There is a significant difference in destined occupations (Q18) (F=4.505, P=0.011). There are significant differences in career appeal (Q20) (F=3.523, *P*=0.030), (Q21) Significant differences (F=3.361, P=0.035). There are significant differences in the meaning of life (Q24) (F=2.843, P=0.023), significant differences in occupational values (Q25) (F=3.378, P=0.005). There are significant differences in the meaning of life (Q26) (F=4.892, P=0.008), significant differences in growth dynamics (Q29) (F=5.347, P=0.005). A significant difference is found in the number of medical personnel in different works in other subjects (p >0.05). As can be seen, there are many differences in the Career Calling (CC) of medical personnel in different works.

In terms of input, there are significant differences in enthusiasm (Q33) among different works (F=5.116, P=0.006), significant differences in work inspiration (Q34) (F=5784, P=0.003). There is a significant difference in tension and happiness (Q36) (F=4.554, P=0.011), There is no significant difference between different titles in other items (p > 0.05).

There are significant differences in work matching (Q43) between different works (F=3.148, P=0.043), in the cost of leaving (Q45) between different works (F=8.412, P=0.000), and no significant differences between different works on other topics (p >0.05).

There is no significant difference between different works on the topic of Organizational Citizenship Behavior 1(OCB1) (p >0.05).

There is no significant difference in the item of Organizational Citizenship Behavior 2(OCB2) in different works (*P*>0.05).

There is no significant difference between different works on all subject items in Doctor-Patient Relationship 1(DPR1) (*P*>0.05).

On the topic of Doctor-Patient Relationship 2(DPR2), there are significant differences between different works in informing risk in reasonable scheme (Q69) (F=8.124, P=0.000), and

in happy return (Q71) (3.803,0.023). There is no significant difference between different titles in other items (P>0.05).

6.3.7 Comparison of medical personnel different monthly income

Single-variable analysis of variance (ANOVA) using SPSS produced the following results, analyzing the mean values of different monthly income medical personnel across all dimensions.

In the title of Career Calling, there are significant differences in life-saving (Q8) among medical personnel (F=5.108, P=0.000). There are significant differences in love of work (Q9) (F=3.407, P=0.009). There are significant differences in altruistic occupations (Q11) (F=4.379, P=0.002). There are significant differences in work fun (Q12) (F=2.072, P=0.083), significant differences in occupational values (Q25) (F=2.3928, P=0.049). A significant difference is found between the medical personnel with different monthly income (p >0.05).

There are significant differences in work enthusiasm (Q33) between different months of income (F=3.379, p F=0.009) and work inspiration (Q34) among work input items (F=2.633, p F=0.033). There was no significant difference in monthly income among other items (p > 0.05).

There are significant differences in work matching (Q43) between different monthly income on the topic of Organizational Commitment (F=5.188, p F=0.000). There was no significant difference in monthly income among other items (p > 0.05).

As to the title of Organizational Citizenship Behaviour1(OCB1), there are significant differences in team benefits (Q54) between different months (F=5.044, P=0.001), significant differences in voluntary contributions (Q55) (F=3.406, P=0.005). There are significant differences between the help teams (Q56) (F=7.564, P=0.000), significant differences in knowledge sharing (Q57) (F=6.320, P=0.000). There was no significant difference in monthly income among other items (p > 0.05). (p >0.05). Visible, OCB1 of medical personnel with different monthly income has significant difference in different monthly income.

As to the title of Organizational Citizenship Behaviour2(OCB2), there are significant differences between monthly earnings in overtime (Q58) (F=3.367, P=0.005). There is a significant difference in extra-long hours (Q59) (F=4.663, P=0.001), There is a significant difference in time coordination (Q61) (F=3.222, P=0.007). There was no significant difference in monthly income among other items (p >0.05). Visible, OCB2 of medical personnel with different monthly income has significant difference in different monthly income.

For the first (DPR1) question of the Doctor-Patient Relationship, medical personnel with different monthly incomes differ significantly in patient first (Q62) (F=2.547, P=0.038),

significant differences in mutual trust (Q63) (F=3.861, P=0.004). There are significant differences in compliance (Q64) (F=4.016, P=0.003), There is a significant difference in patient trust (Q65) (F=3.684, P=0.006). Visible, medical personnel with different monthly income have significant differences in Doctor-Patient Relationship 1(DPR1).

For the doctor - patient relationship 2(DPR2), there are significant differences in patient communication (Q66) between monthly income F=2.758, P=0.027). There is a significant difference in informing risk (Q67) (F=2.721, P=0.029). There is a significant difference in helping patients (Q68) (F=3.268, P=0.011), significant differences in reasonable programs (Q69) (F=4.140, P=0.003). There are significant differences in pride (Q70) (F=4.877, P=0.001), significant differences in willingness to return (Q71) (F=3.417, P=0.009). As can be seen, there are significant differences in Doctor-Patient Relationship 2(DPR2) among medical personnel with different monthly income.

6.4 Hypothesis testing and model testing

6.4.1 Data analysis strategy

The Data analysis starts by clearing all invalid cases due either to missing values or monotonous answers. It then proceeds with testing the quality of measures in the study, namely, Validity can be analyzed by means of the measurement model as well as convergent and validity (AVE validity) (Fornell & Larcker, 1981).

The measurement model is tested with a confirmatory factor analysis which is textile by its fit to the data. Goodness of fit can be determined based on a group of indicators proposed by Hair et al. (2019). The fit indices and respective threshold criteria set for samples higher than 250 and with more than 30 observed variables in the full model are: Chi-square ratio to degrees of freedom below 3.0 but significant P-values are Expectable, Confirmatory Fit Index (CFI) above.92 or Tuck-Lewis Index (TLI) above. Additionally, plus Root Mean Square Error of Approximation (RMSEA) below.07. Hair et al. (2019) State that RMSEA<.07 is only valid as long as CFI or TLI and simultaneous higher than. A given measure is considered to have convergent validity when AVE is equal or higher than.500, And discriminant validity when the square root AVE of any two variables is higher than their inter-correlation.

Similarly, in the study of cross-sectional design, it is usually necessary to compare the measurement model with the alternative measurement model. In the alternative measurement model, the most closely related structures are integrated in turn until a single factor is reached.

If the conceptual model is the best, then it should be more suitable for data than any alternative model. This can be judged by the chi-square difference and the CFI difference. Reliability refers to the degree of internal consistency between the same concept items, which can be judged by compound reliability, which is 0.700, indicating that the reliability is good. This is the same as the more popular Cronbach alpha, but corrects the bias in its formula.

Finally, once the measurement model is verified, the structural model can be tested. The structural model represents all the hypotheses understood in the theory and is judged according to the p value of each path. Since the probability result of a specific sample distribution deviation is 5000, the repetitive guidance process deviation correction interval is set to 95% and a number of possibility methods provide greater assurance for the results.

When the p value is less than 0.01, all statistical coefficients are interpreted as significant. For the p value above this threshold, we give the exact value. The 95% confidence interval after deviation correction is also used to judge the meaning of the relationship, which means that when the zero value is not included in the interval of the lower and upper bounds, the estimate is considered meaningful (equivalent to statistical significance).

6.4.2 Structural equation model analysis

According to the operation requirements of the structural equation model analysis method, this study transforms the proposed theoretical model into the expression of the structural equation model shown in Figure 6.2. The theoretical model proposed in this study has five variables, including Career Calling (CC), Job Engagement (JE), Organizational Commitment (OC), Organizational Citizenship Behavior (OCB: OCBi and OCBo) and doctor-patient relationship (DPR: DPR1 and DPR2). Except that the sense of professional mission is a hypothetical independent variable, the other variables are hypothetical dependent variables.

The measurement model has a good fitting index (X2 (874) = 2899.279, $p < 0.001$ × X2Accord, 874bot 3.317). The measurement model has a good fitting index (X2 (874) = 2899.279, $p < 0.001$; X2: 3.317; CFIX2: 3.317; TLIQ0.936; TLIX0.936; 055CI90 [0.053: 0.057] PClose=0.000). Measured by chi-square difference and CFI difference, the fitness of alternative measurement models representing closely related structure fusion is poor, see the Table 6.6. Similarly, the single-factor Harman test shows the worst fitting index, which shows that the common method deviation is not a problem in the model.

Table 6.6 Measurement Models Comparison

The Model	X (df) p value[2]	CFI	TLI	RMSEA	Δ X^2	Δ CFI
The Base model	χ (874) = 2899.279, p <. 001[2]	941.	936.	055.	-	-
Model 1 CC + JE	χ (881) = 3159.696, p <. 001[2]	933.	928.	058.	Δ (7) = 260.417[2*]	008.
Model 2 CC + JE + OC	χ (887) = 4055.003, p <. 001[2]	907.	901.	068.	Δ (13) = 1155.724[2*]	024.
Model 3 CC + JE, OC and OCB	χ (896) = 7481.842, p <. 001[2]	807.	797.	098.	Δ (22) = 4582563[2*]	134.
Model 4 CC + JE + OC + OCB + DPR	χ (901) = 10269.773, p <. 001[2]	726.	712.	117.	Δ (27) = 7370.494[2*]	215.
Model 5 Single Harman Factor	χ (902) = 12255.906, p <. 001[2]	668.	652.	128.	Δ (28) = 9356.627[2*]	273.
Independence model	(902) = 7955.590, P <.001[2]	794.	784.	101.	Δ (6) = 5056.311[2*]	147.

Note: **P<.001, Base mode = conceptual model with POS as control variable, Model 1 = fusion of Career Calling and Job Engagement, Model 2 = Model 1 fused with organizational commitment, Model 3 = Model 2 fused with OCB, Model 4 = Model 3 fused with DPR, Model 5 = Single factor (Harman test).

Table 6.7 Reliability Convergent and discriminate validity

	CR	**AVE**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
JE	0.950	0.679	0.824							
OC	0.920	0.627	0.864*	0.792						
DPR2	0.932	0.695	0.699*	0.674*	0.834					
POS	0.953	0.743	0.758*	0.857*	0.588*	0.862				
CC	0.944	0.849	0.939*	0.830*	0.727*	0.723*	0.921			
OCBi	0.936	0.785	0.687*	0.708*	0.827*	0.616*	0.720*	0.886		
OCBo	0.903	0.702	0.338*	0.343*	0.332*	0.255*	0.294*	0.316*	0.838	
DPR1	0.933	0.778	0.717*	0.670*	0.755*	0.639*	0.725*	0.657*	0.245*	0.882

Note: CR=Composite Reliability, AVE=Average variance extracted. Cells show correlations. Diagonals show square root AVE for each variable.

All variables' reliability, as indicated by CR 0.903 to 0.953. All measures have good convergent reliability as indicated by AVE which ranges from 0.627 to 0.849Overall good with some scrambled cases between Job Engagement, Organizational Commitment and Career Calling, which is also expected given its strong theoretical relations. Overall, the measures have

good validity and reliability.

6.4.3 Research hypothesis testing

6.4.3.1 Measurement model hypothesis testing

Considering the DPR into two components, some desirability to separate into sub-desirability or also expand those already established, so to comprehend these new DPR dimensions. The full set of hypotheses and sub-hypotheses is now the following:

H1: Career Calling storming with Job Engagement

H2: Career Calling positively related with Organizational commitment

H3: Job Engagement Mediates the positive relation between Career Calling and Organizational commitment

H4: Organizational Commitment positively relates to OCB

H4a: Organizational Commitment positively relates to OCBo

H4b: Organizational Commitment positively relates to OCBi

H5: Job Engagement boosts with OCB

H5: Job Engagement boosts with OCBo

H5: Job Engagement boosts with OCBi

H6: Job Engagement boosts with DPR

H6a: Job Engagement equilibriums with DPR1 (Trust)

H6b: Job Engagement equilibriums with DPR2 (behavior)

H7: Organizational Commitment positively relates to DPR

H7a: Organizational Commitment positively to DPR-Trust

H7 b: Organizational Commitment positively to behavior

H8: OCB is positively related with DPR

H8a: OCBo is positively related with DPR-Trust

H8b: OCBi is positively related with Trust

H8c: OCBo is positively related with DPR-behavior

H8d: OCBi is positively related with DPR-behavior

H9: Career Calling is positively related with DPR through the Sequential engagement and OCB

H9a: Career Calling is positively related with DPR-trust through the Sequential mediation of Job Engagement and OCBo

H9b: Career Calling is positively related with DPR-trust through the Sequential mediation

of Job Engagement and OCBi

H9c: Career Calling is positively related with DPR-behavior through the Sequential mediation of Job Engagement and OCBo

H9d: Career Calling is positively related with DPR-behavior through the Sequential mediation of Job Engagement and OCBi

H10: Career Calling is positively related with DPR through the sequential mediation of Organizational Commitment and OCB

H10a: Career Calling is positively related with DPR-trust through the Sequential mediation of Organizational Commitment and OCBo

H10b: Career Calling is positively related with DPR-trust through the sequential mediation of Organizational Commitment and OCBi

H10c: Career Calling is positively related with DPR-behavior through the sequential mediation of Organizational Commitment and OCBo

H10d: Career Calling is positively related with DPR-behavior through the sequential mediation of Organizational Commitment and OCBi

Corresponding results are shown in this precise sequence. The exact conceptual model is now the following Figure 6.2.

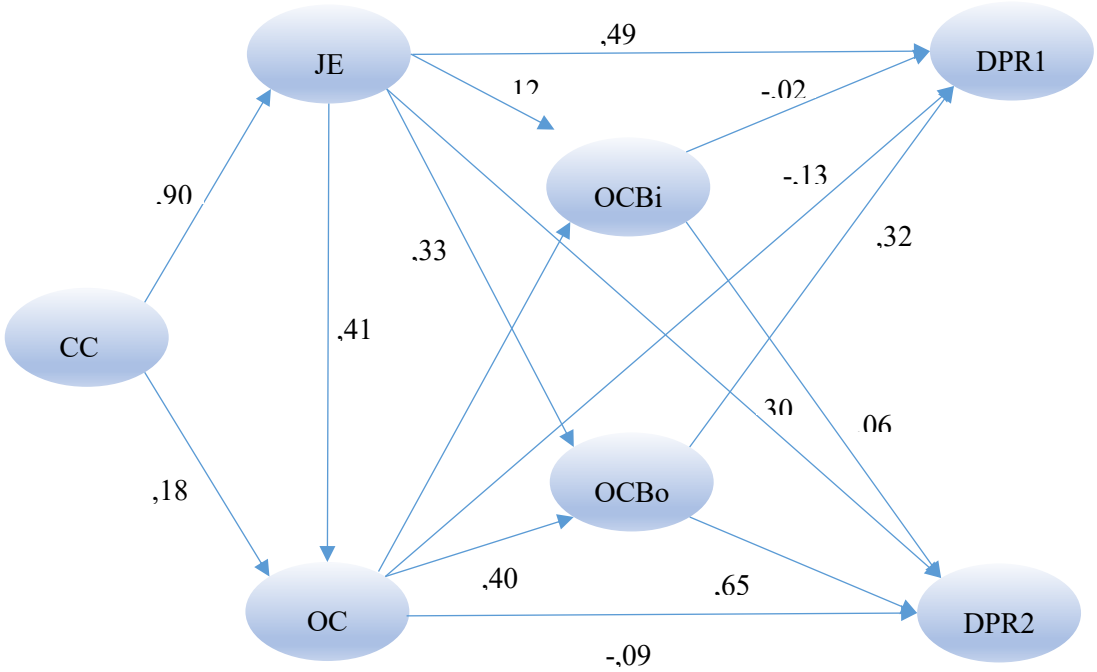


Figure 6.2 Conceptual Model for Empirical Test

6.4.4 Results and discussion

The structural model has good fit indices (X2 (881) =3531.708, P<.001; CFI=.922; TLI=.917, RMSEA=.063 CI90 [.061;.065] PClose=.000) which means estimates can be interpreted to test the hypotheses, estimates are shown in Table 6.8.

Table 6.8 Structural Model Estimates

			Standardized estimate	Estimate	SE	CR	P - value
JE1	<---	CC	901.	850.	028.	30.047	* * *
JE1	<---	POS1	244.	208.	017.	12.189	* * *
OC1	<---	CC	182.	187.	082.	2.293	022.
OC1	<---	POS1	563.	524.	036.	14.505	* * *
OC1	<---	JE1	413.	450.	091.	4.934	* * *
OCBi	<---	OC1	399.	333.	065.	5.089	* * *
OCBo	<---	OC1	292.	428.	139.	3.093	002.
OCBo	<---	POS1	- 151.	- 206.	086.	2.408	016.
OCBi	<---	POS1	- 020.	- 016.	040.	- 400.	689.
OCBi	<---	JE1	325.	295.	052.	5.709	* * *
OCBo	<---	JE1	124.	198.	109.	1.810	070.
DPR2	<---	JE1	296.	254.	041.	6.214	* * *
DPR2	<---	OC1	- 085.	- 067.	052.	1.300	194.
DPR2	<---	OCBi	650.	616.	040.	15.225	* * *
DPR2	<---	OCBo	058.	031.	014.	2.167	030.
DPR1	<---	OCBo	- 016.	- 011.	020.	- 525.	600.
DPR1	<---	OCBi	318.	361.	048.	7.564	* * *
DPR1	<---	OC1	- 133.	- 126.	073.	1.718	086.
DPR1	<---	JE1	490.	504.	059.	8.529	* * *
DPR2	<---	POS1	020.	015.	031.	482.	630.
DPR1	<---	POS1	216.	190.	044.	4.302	* * *

Results Show Career Calling has a positive relation with Job Engagement (B=.901, P <.001, CI95 [.868;.926]).Although it is not able to explain Organizational Commitment (B=.182, P =.022, CI95 [-.021;.379]), this offers support to hypotheses 1 and 2. Job Engagement is also positively related to Organizational Commitment (B=.413, P <.001, CI95 [.214;.619]) and the indirect effect of Job Engagement on Organizational Commitment via Job Engagement is.372 for a significant 95% bootstrapped bias corrected Interval [.191;.562], Which supports hypotheses 3.

Organizational Commitment is positively related both to OCBo (B=.399, P <.001, CI95 [.203;.610]) and OCBi (B=.292, P =.002, CI95 [.095;.497]). Job Engagement is also positively related to OCBo (B=.325, P <.001, CI95 [.159;.474]) Although OCBi is not (B=.124, P =.07, CI95 [-.043; 284]. This fully supports hypothesis 4 and partially supports hypothesis 5.

As regards the relation between DPR with both Job Engagement and organizational commitment, the hypotheses 6 and 7 are divided in two sub-hypotheses each: One concerning the effects on PR-trust and the other on PR-behavior. Findings Show, PR-trust (DPR1) is Predicted by Job Engagement (B=.490, P<.001, CI95 [.331;.658]) but not by Organizational Commitment (B= -133, P =.086, CI95 [-376;.074]) thus supporting Hypothesis 6a but not supporting Hypothesis 7a. DPR-behavior (DPR2) is also predicted by Job Engagement (B=.296, P <.001, CI95 [.168; 432]) and not Predicted by Organizational Commitment (B= -085, P =194, CI95 [-.291;.105]). Thus, supporting Hypothesis 6 but not supporting Hypothesis 7.

With regard to the hypothetical relationship between organizational citizenship behavior and DPR, since both constructions contain two components (OCBo and OCBi plus DPR-trust and DPR-behavior), we establish four sub-hypotheses. Findings show that OCBi expressive to DSPR -trust (B=.318, P <.001, CI95 [.203;.435]) as well as with significant relationship (B=.650, P <.001, CI95 [.560;.732]) while OCBo is not significantly related neither with relationship (B=.016, P =.60.) CI95 [-.376;.056]) nor with BEHAVIOR (B=.058, P =.03, CI95 [-.291;.117]. This supports hypotheses 8b and 8d but stumped 8a and 8C meaning OCBi trust but OCBo is not related at all with better DPR.

The overall model can be understood as an integrated flow of variables that indirectly connect Career Calling to DPR via all the implied constructs. In detail, we expect that Career Calling quality engagement and organizational commitment, which both contribute to better OCB, and then OCB contributes to a better DPR. This chain effect is named as a sequential mediation and because it comprehends two pathways (Career call->Job Engagement -> OCB-> DPR, And Career Calling - > Organizational Commitment - > OCB - > DPR) it was depicted

as two hypotheses (H9 and H10). Because OCB and DPR comprehend two components each,18. The same procedure of 180 sub-hypotheses was done corresponded to a set of four.H9a (Career Calling->Job Engagement- OCBo-> DPR trust), H9b (Career Calling->Job Engagement- OCBo-> DPR behavior), And H9d (Career Calling->Job Engagement- OCBi-> DPR behavior).

Indeed, Findings Show the indirect effect of Career Calling on DCS -trust via Job Engagement and OCBo is very weak and non-significant (.001 CI95 [-.008;.026]) which is also observed in the case of the indirect effect of career calling on DPR-behavior via the same pathway (indirect effect = .012 CI95 [-.012;.049]). This rejects H9a and H9c. However,

Findings show meaningful indirect effects connecting Career Calling to both DPR - trust and BRP - behaviors via Job Engagement and OCBi (an indirect effect on DPR - trust =. 159 CI95 [, 080; 251] and indirect effect on DPR-behavior = 283 CI95 [.175;.395]. This supports H9b and H9d. Overall, Hypothesis 9 Received partial support where all indirect effects are visible only via OCBi but not via OCBo.

As regards the same sequential mediation via organizational commitment, findings show a similar scenario to the previous hypothesis. All the effects that go through OCBi are significant, meaning there is an indirect effect of Career Calling via Organizational Commitment and OCBi both on (indirect effect =.033 CI95 [.014;.070]) and on (indirect effect =.072) behaviorCI95 [.028;.143]. This supports H10b and H10 D. Additionally, Indirect intransitive effect of a very modest magnitude was found for the "Career call-> Org. Commitment->OCBo-> DPR-behavior" path (indirect effect =.006 CI95 [.001;.017]) but not for the "Career call-> Org. Commitment->OCBo-> DPR trust" path (indirect effect =.000 CI95 [-.004;.004]). Overall Hypothesis 10 is largely supported with sub-hypotheses H10b, C, and d receiving empirical support and H10a being empirical rejected. See the Table 6.9 summarizes the findings for all hypotheses and sub - hypotheses.

Table 6.9 Hypotheses Testing Results

hypothesis	Sub-hypotheses	The Support	The Result for content
H1: Career call->Job Engagement	-	Yes	Supported
H2: Career call-> Org. Commitment	-	Yes	Supported
H3: Career call-> Job Eng. -> org. comm.	-	Yes	Supported
H4: Org. Commitment -> OCB	H4a: OCBo H4b: OCBi	Yes Yes	Supported

H5: Job Engagement -> OCB	H5a: OCBo H5b: OCBi	No Yes	Partially supported
H6: Job Engagement -> DPR	H6a: DPR1 (trust) H6b: DPR2 (behaviors)	Yes Yes	Supported
H7: Org. Commitment -> DPR	H7a: DPR - trust H7b, DPR - behaviors	No No	Rejected
H8: OCB - > the DPR	H8a: OCBo - > DPR - trust H8b: OCBi - > DPR - trust H8c: OCBo - > DPR -; H8d: OCBi - > DPR -;	No Yes No Yes	Partially supported
H9: Career Calling - > JE - > OCB - the DPR	H9a: OCBo - > DPR - trust The H9b: OCBi - > DPR - trust H9c: OCBo - > DPR -; H9d: OCBi - > DPR -;	No Yes No Yes	Partially supported
H10: Career Calling - m - >> Org.Com OCB - > the DPR	H10a: OCBo - > DPRtrust H10b: OCBi - > DPRtrust H10c: OCBo - > DPRbeh H10d: OCBi - > DPRbeh	No Yes Yes Yes	Partially supported

Table 6.9 Hypotheses Testing Results 1

Table 6.9 Hypotheses Testing Results 2

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Chapter 7: Discussion and Conclusion

7.1 Summarize

The research object of this study is medical personnel (doctors, nurses, medical technicians) in Hangzhou. The main contents include:

On the basis of the literature review and the theoretical methods adopted at home and abroad, the theoretical model of the Career Calling of medical personnel is established.

To define and observe the multiple dimensions of medical personnel' Career Calling, a scale was designed based on in-depth interview and open questionnaire.

Taking Organizational Commitment and Job Engagement as mediating variables, the theoretical model framework of the impact of medical personnel's Career Calling on OCB was established.

Ten public 3A hospital in Hangzhou city, Zhejiang province (1050) of the doctors, nurses and medical technician (collectively called three medical personnel) as the research sample for the interview and questionnaire survey, in order to debug and test effectiveness and accuracy of the model, at the same time with multiple dimensions of medical personnel Career Calling as independent variable, Organizational Commitment and Job Engagement as intermediary variables, with OCB as the dependent variable, the Doctor-Patient Relationship is secondary to the dependent variable.

Finally, the research goal set at the beginning of the research is realized.

7.1.1 Theoretical contribution

Contribution 1: medical personnel's Career Calling includes three dimensions and six sub-dimensions.

This study situation of China's 3 a hospital medical personnel, including doctors, nurses and medical personnel) as the research on like, through literature review, depth interview, open questionnaire investigation, preliminary questionnaire, a formal investigation, verification methods such as questionnaire survey, using exploratory factor analysis and confirmatory factor analysis, defined the concept of Chinese medical personnel Career Calling, to determine the three-dimensional model of the Chinese medical personnel Career Calling: Identity and

matching (two sub-dimensions include identity and entry matching), guiding force (two sub-dimensions include internal force and external force) and meaning and value driving (two sub-dimensions include sense of meaning and value-leading behavior).

Contribution 2: The effectiveness and accuracy of the measurement model are guaranteed.

The measurement model includes eight subscales: Career Calling identification and matching, Career Calling orientation, Career Calling meaning and value driving, Job Engagement, organizational commitment, organizational support, OCB, and Doctor-Patient Relationship. Seven items were assigned to identification and matching with a Cronbach value of 0.894.The eight items are the steering forces assigned, with a Cronbach value of 0.932.Eight items were assigned meaning and value driven, Cronbach value 0.940.The Job Engagement subscale had 9 items with Cronbach value of 0.950.The sub-scale of Organizational Commitment had 7 items, with Cronbach value 0.9180.The tissue support subscale had 7 items, Cronbach value was 0.952.The subscale of OCB had 8 items, with Cronbach value of 0.871.The doctor-patient subscale had 10 items with Cronbach value of 0.945.Cronbach value of all subscales above 0.7 indicates that all subscales have good internal consistency.

In terms of the subscales of convergent validity, the standardized measurement variable factor load in 0. 0. Between, for the most part is higher than in the statistical research suggested that the minimum value of 0.7, and the average variance extraction volume of 0.527, 0.512, 0.511, 0.588 and 0.533, the value of 0.5 is higher than the specified requirements, these Numbers are used to explain the medical personnel Career Calling of measurement model has good convergent validity.

In terms of the difference between each subscale's validity, extracting the square root of the amount of each table's average variance between 0.72 to 0.77, and between different dimensions of the absolute value of correlation coefficient between 0.26 to 0.68, the square root of the average variance extraction quantity is greater than its correlation coefficient with other dimensions, so that, the research and development of each component of the table has a good validity.

Contribution 3: medical personnel's Career Calling has a significant positive impact on Organizational Commitment and Job Engagement.

The results show that Career Calling has a positive impact on Organizational Commitment and Job Engagement.

Contribution 4: Organizational Commitment and Job Engagement play a mediating role in the influence of medical personnel's OCB.

Through the analysis of the collected data, we find that Organizational Commitment and

Job Engagement play a significant positive role in the impact of medical personnel's Career Calling on OCB.

Contribution 5: medical personnel's Career Calling has a significant positive impact on OCB.

Through data analysis, we found that medical personnel's sense of Career Calling has a significant positive impact on OCB. But it has different effects on different dimensions of OCB.

Contribution 6: medical personnel's sense of Career Calling has a significant positive effect on improving Doctor-Patient Relationship

The positive influence of Career Calling on Doctor-Patient Relationship is realized through two ways: one is the positive correlation between Doctor-Patient Relationship through sequential mediators of Job Engagement and civic organization behavior; the other is the positive correlation between Doctor-Patient Relationship through sequential mediators of Organizational Commitment and OCB. Data analysis shows that Career Calling has a positive impact on the Doctor-Patient Relationship.

Contribution 7: Build a model of the impact of medical personnel's sense of Career Calling on OCB, and ensure its effectiveness and accuracy.

The whole model can be understood as a comprehensive flow of variables that indirectly relate Career Calling to the Doctor-Patient Relationship through all the implied constructs. As I expected, a sense of Career Calling would increase Job Engagement and organizational commitment, both of which would contribute to better organizational citizenship, which in turn would contribute to better Doctor-Patient Relationships. This chain effect is called sequential mediation.

7.1.2 Innovations

Innovation 1: Define and construct the Scale for measuring the Career Calling of medical personnel in China, and put forward the three-dimension structure theory of the Career Calling of medical personnel, which provides a tool for the quantitative research of the Career Calling of medical personnel. It has theoretical and practical significance for medical personnel's Career Calling in hospital human resource management, performance management and doctor-patient management.

Innovation 2: Empirical research based on data analysis concluded that Career Calling is the core of becoming dedicated medical personnel.

Innovation 3: To build a measurement model of how the Career Calling of Chinese medical

personnel affects OCB and thus improves Doctor-Patient Relationship. It also verifies that two variable flow paths are proposed to improve OCB through sequential mediation and Doctor-Patient Relationship.

Innovation 4: Discovering that OCB does not always improve Doctor-Patient Relationships. The OCB-interpersonal dimension of OCB is not always conducive to improving Doctor-Patient Relationship.

7.1.3 Inspiration for medical management industry

Inspiration 1: Career Calling is the core element of professional medical personnel. It is not only the on-the-work medical personnel who should strengthen the education and cultivation of Career Calling, but also the orientation training of medical students and new medical personnel should focus on Career Calling.

Inspired2: Through the Job Engagement (attachment) for professional and Organizational Commitment (commitment to the organization) analysis, can find together to create the work and the organization of the highest degree of attachment and sense of dedication, can produce a positive identity (professional identity dimensions) of the Career Calling, let the medical personnel go beyond the minimum and the work contract obligations and role within the behavior. By doing so, it gives back to hospitals and patients by going beyond its role as an organizational citizen. This would be an implicit but very effective management path.

Inspiration 3: OCB has two qualitative dimensions: one is to go beyond one's role and help the team (OCB interpersonal); Second, sacrifice personal life to invest more time for the hospital (OCB organizational). According to the data analysis, organizational citizenship for teams can establish positive and better Doctor-Patient Relationship with patients, but organizational citizenship cannot achieve this result. One possible explanation is OCBo's fatigue and even work burnout over time. And the extra work is an intrinsic reward for the team, for the team to be more successful, as a member of the team, as an individual.

Inspiration 4: Chinese medical personnel invest more in their work than in their organization, but Organizational Commitment is also higher due to their work involvement (H3). Its important function is to produce higher OCB. On its own, organized citizenship leads to better Doctor-Patient Relationships. But only OCBi. OCBo does not translate into better Doctor-Patient Relationships. The reason is that the longer you work, the more tired you are likely to be and the less able you are to focus on the patient.

Inspiration 5: OCB can positively affect Doctor-Patient Relationship, but only OCBI should

be noted. The data analysis found that OCBI and DPR2(patient-centered diagnosis and treatment center) had low scores, which also indicated that for DPR1(doctor-patient trust) involved objective diagnosis and treatment, more of which was the internal behavior of medical personnel. However, DPR2 needs more civic organization, which needs to be considered from the perspective of Career Calling and other factors.

7.2 Limitations and defects

1. Accuracy of data. Due to the limitations of respondents, interview channels and data analysis level, there may be some deficiencies in data collection and statistical score, which affects the accuracy of data.

2. Due to the limited sample size and the economic level and medical level of the regions represented by Hangzhou city, Zhejiang Province, the situation of most regions in China cannot be represented.

3.The differences between Chinese and Western culture result in different concept cognition. Related to this study, the first main reason is that cultural differences lead to the difference in the definition of Career Calling and work mission. This study did not further study these two concepts and put them into one concept without distinction. Second, as for the definition and cognition of Doctor-Patient Relationship, there are great differences between Chinese and Western situations. For example, the "injured doctor" and "medical trouble" frequently seen in China are not common in foreign countries. So the content and the definition of research are very different. Thirdly, the definition and cognition of OCB also have the same problem. In terms of interpersonal relationship and organizational relationship dimensions of OCB, Chinese and Western understanding and behavior responses to sacrifice personal time are different. Therefore, it can also lead to differences in research results.

4. In this study, the definition and structure of Chinese medical personnel's sense of Career Calling are proposed, and the three-dimension structure is still to be further studied and refined.

5. The correlation between Organizational Commitment (OC) and Doctor-Patient Relationship (DPR) in the Career Calling measurement model proposed in this study is close to zero.

7.3 Future research prospects

1. Further improve statistical analysis and data collection, and conduct large sample studies on medical personnel from different groups and regions.

2. Further define the relevant concepts and develop the measurement of the corresponding variables for the Chinese context.

3. Further study and improve the concept and structure of Chinese medical personnel's Career Calling.

4. Further improve the measurement model of Chinese medical personnel's Career Calling.

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Annex A

An Open Questionnaire on Health Professional's Career Calling

Distinguished ladies / gentlemen:

Thank you very much for spending your time on filling out this questionnaire. We are conducting an academic study on the career calling of the health professional, and your real thoughts and actual situation will be of great help to our research. Please answer the following questions according to your understanding. Thank you again for your support!

Personal Information

Gender: _____ Age: _____

Operating Post: _____

Questions (Answer by declarative sentences one by one, please list as many examples as possible)

Ⅰ. How to understand the concept of "Career calling"?

①

②

③

④

⑤

⑥

Ⅱ. How to explain a person who takes the medical work as his lifelong pursuit, please state concretely?

①

②

③

④

⑤

⑥

Ⅲ. What's your emotional experience regarding medical work as your calling?

①

②

③

④

⑤

⑥

Annex B

Dimensions and items of the preliminary questionnaire on medical personnel's Career Calling

Identify and match	Identify	1. It is the duty of medical workers to save lives and heal the wounded
		2. I love the job as medical workers
		3. I will take medicine as my lifelong career
		4. Health care is a very challenging job
		5. Health care is a profession that benefits society and others
		6. I think I'm a part of the health care industry
	Entry matching	7. I think I'm very suitable for medical work
		8. I often find pleasure in medical activities
		9. Compared with other jobs, medical work is more suitable for me
		10. Medical work allows me to better play my individual talents
		11. I often feel the satisfaction and achievement brought by medical work
Guiding force	Internal drive	12. I am willing to make great efforts for the current work
		13. I'm in a job that makes me feel valuable
		14. I follow the inner true feelings in my current work
		15. I feel like I am destined for my current medical career
		16. I will often help those in need at my work
	External guidance	17. Some medical behaviors can make me more engaged in my work
		18. I feel that I am inspired by some kind of force to do my current medical work
		19. High intensity medical work can make me grow faster
		20. I will use the norms of medical staff to consciously and strictly require myself
		21. I feel very glad to be able to serve for patients
Meaning and value driving	Sense of meaning	22. My career can have a positive impact on others
		23. I can experience the meaning of life by doing my current job
		24. I often find value in professional behavior
		25. When I put into work, I will try to realize the meaning of my life
		26. My job is contributory to social wealth

	Value-leading behavior	27. My career goals will motivate me to move forward
		28. What I do in practice must be something of social significance
		29. Meeting the needs of others is my biggest motivation
		30. I will work harder to become a better health care worker
		31. I desire to make patients get more health through medical work

Annex C

Questionnaire on the influence of Career Calling on medical personnel

Dear madam/Sir,

Thank you very much for taking the time to fill out this questionnaire. We are conducting a study on the influence of medical personnel's Career Calling. Your true thoughts and actual situations will be of great help to our study. Please answer the following questions according to your understanding. Thanks again for your support!

I Demographic variables

Gender: a. male; B. female

2. Age: A. 23 years old and below; B. 23 to 30 years old; C. 31-40 years old; D. 41-50; E. 51-55 years old; F.56 years of age and above

3. Education background: a. junior college or below; B. bachelor's degree; C. master's degree

4. Working years: A. 3 years or less; B. 4-7 years; C. 8-11 years; D. 12-15 years; E.16 years and above

5. Professional title: a. junior; B. the intermediate; C. deputy senior; D. up senior

6. Position: A. Doctor; B. a nurse; C: medical technicians

7. Monthly income (after tax): a. 5000 yuan or less. 5001-10000 yuan. 10001-15000 yuan. 15001-20000 yuan.E.20001 yuan and above

II Calling of Career

8.It is the duty of medical personnel to save lives and heal the wounded

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

9. I love my work as a doctor

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

10. I will make medicine my lifelong career

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

11. Medical care is a career that benefits society and others

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

12. I often find pleasure in medical activities

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

13. The medical work enables me to give full play to my talents

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

14. I often feel the sense of satisfaction and achievement brought by medical work

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

15. I am willing to make a great effort for my present work

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

16. I'm doing a work that makes me feel worthwhile

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

17. I follow my true feelings in my current work

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

18. I feel that I am destined for my current work in medicine

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

19. Certain medical practices motivate me to work harder

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

20. I feel that I have been called by some force to do what I do now

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

21. The intensive medical work can help me grow faster

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

22. I feel very happy to serve the patients

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

23. My career can have a positive impact on others

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

24. Being in my current work allows me to experience the meaning of life

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

25. I often find value in professional behavior

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

26. When I put myself to work, I try to achieve the meaning of my life

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

27. What I do in practice must be something of social significance

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

28. Meeting the needs of others is the biggest motivation for my work

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

29. I will make greater efforts to become better medical personnel

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

30. I want to help patients get more health through medical work

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

III Job Engagement

31. I feel like I'm bursting with energy at work

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

32. When I work, I feel strong and energetic

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

33. I'm passionate about my work

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

34. My work inspired me

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

35. As soon as I got up in the morning, I wanted to go to work

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

36. When work is tight, I feel happy

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

37. I take pride in what I do

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

38. I am immersed in my work

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

39. I forget myself at work

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

IV Organizational Commitment

40. I have a strong sense of belonging for my employer.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

41. I feel that I have the responsibility to work hard for my employer.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

42. The environment, the work condition and reputation of me during a help to realize my ambitions.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

43. I feel that my work is where I am good at.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

44. I care a lot about the future of my employer.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

45. If I leave my current work, there will be significant financial losses.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

46. I am content to work for my current employer until I retire.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

V Perceived Organizational Support

47.The organization attaches great importance to my work objectives and values

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

48. When in trouble, you can get help from your employer

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

49. Unit really CARES about my happiness

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

50. In order to give full play to my ability to complete the work, the unit is willing to do its best to help me

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

51. The company CARES about my overall satisfaction with my work

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

52. The company values my opinions or opinions

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

53. The organization will be proud of what I have accomplished at work

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

VI Organizational Citizenship Behavior

To perform functions keeping in mind the benefit of teams and the organization.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

55. Volunteer to do tasks for the teams and the organization.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

56. Get involved to help their team and the organization.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

57. Share knowledge about work with others.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

58. To work beyond their normal working hours

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

59. To deal with work in their leisure time.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

60. To work during their vacation.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

61. To reschedule or change personal plans due to work.

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

VII Doctor-Patient Relationship

62. The patient trusts you to give priority to his/her treatment needs

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

63. The patient trusts the treatment plan you have made for him/her

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

64. The patient is willing to follow the treatment plan you suggest

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

65. The patient believes that the investigation you requested is reasonable

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

66. You often communicate with patients and their families patiently

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

67. You always inform the patient of the risks that may occur in the diagnosis and treatment

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

68. You always take care to help patients and their families

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

69. You often compare multiple plans to provide the most reasonable treatment plan for patients

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

70. You are proud of your expertise in helping patients effectively

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

71.You are always willing to receive a patient's return visit

A. strongly agree; B. agree; C. generally; D. disagree; E. Strongly disagree

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Annex D

Table d.1 Study on Structure of Career Calling

Measuring tools	The typical psychological characteristics of calling	Dimensions	Field orientation	The research object
COS	Meaning/purpose, social contribution	Single dimension	General	Active staff
BCS	--	Single dimension	General	University students, on-the-work staff
NCS	Nature, passion, meaning/purpose	Single dimension	Specific	Active staff
12- CS	Meaning/purpose, passion	Single dimension	Specific	University students, staff
CVQ	Sense of call, meaning/purpose, social contribution	Three dimensions	General	University students, on-the-work staff
MCM	Perfect match, natural destiny, social contribution	Three dimensions	General	Active staff
CCS	Social contribution, meaning/purpose	Three dimensions	General	University students, on-the-work staff
CCS	Altruism, summoning, meaning/purpose	Three dimensions	General	College students

Source: Literature review

Table d.2 Definitions of Organizational Commitment

No.	Researcher	Time	Definition
1	Becker	1960	With the increasing input of employees into an organization, OC represents a psychological contract of employees desiring to stay with and continue to serve the organization.
2	Kanter	1968	Organizational Commitment refers to an individual's willingness to devote energy and show loyalty to the social system, signifying a desire for self-expression by attaching oneself to social relations.
3	Sheldon	1971	OC represents how workers feel about their organization and feel their oneness with the organization.
4	Porter, Crampon and Smith	1976	Organizational Commitment refers to the extent to which an individual identifies with and involve himself in an organization, including (1) the extent of identification with the organization's goals and beliefs; (2) the degree of willingness to make extra efforts for the organization's interests; (3) the degree of desire to remain a part of the organization.
5	Steers	1977	Organizational Commitment reflects an individual's attitude

			towards his work, including the consistency of actual work and desired work, personal identification with the work, and personal unwillingness to leave the current organization to find other works.
6	Wiener	1982	Organizational Commitment refers to the individual's internalized normative pressure, which enables individual to align his behaviors with the goals and interests of the organization.
7	O'Reilly and Chatmen	1986	Organizational Commitment represents a psychological contract formed between an employee and an employer, which evolves from compliance, identification to internalization.
8	Allen and Meyer	1990	Organizational Commitment is a psychological state that connects individuals and organizations.
9	Ling, W.X.et al	2001	Organizational Commitment is an attitude of organizational members towards the organization, which can explain why they stay with an organization and it is also an indicator to test the loyalty of organizational members to the organization.
10	Lu, G.L.	2005	Organizational Commitment means after internalizing the goals and values of enterprises, employees develop a strong sense of identification with the personnel system of enterprises, thus feel highly motivated and are willing to stay with the enterprise and devote themselves to the enterprise.

Table d.3 Summary of structural models of Organizational Commitment

Structure dimension	The researchers	The main content
One-dimensional structure	Becker	A psychological will of an employee organization is a single normative commitment.
	Buchanan	An emotional experience of an organization, such as identity, loyalty.
	Allen, & Meyer.	Employees get some benefit or favor from the organization; thus, they have a sense of debt and feel that they should stay in the organization to "repay the favor".
Two-dimensional structure	Hall, & Schneider, Nygren.	OC was divided into attitudinal commitment and behavioral intention commitment. The former refers to employees' identification with the organization, their commitment to work and their loyalty to the organization. The latter refers to the willingness of individual employees to work hard for the organization and the desire to maintain the identity of employees within the organization.
	Meyer, & Allen	It was proposed that OC mainly included emotional commitment and continuous commitment, and "Emotional commitment scale" and "continuous commitment scale" were developed.
	McGee, & Ford	OC was considered to include affective commitment and continuance commitment, and a 16-item scale was developed.
Three-dimensional structure	Allen, & Meyer	OC is divided into three dimensions: affective commitment, continuous commitment and normative commitment. Emotional commitment refers to having a sense of identity with the organization, including deep feelings towards the organization; A continuing commitment is a commitment made by an employee to remain in an organization because he or she weighs the costs of leaving the organization. Commitment to norms refers to the gradual formation of a sense of norms to make employees feel they should stay in the organization due to the long-term influence of the society or public opinion.
	Jaros, Jermier and Koehler.	OC can be divided into continuous commitment, affective commitment and moral commitment. Persistent commitment and affective commitment are in line with Allen & Meyer (1990); Moral commitment means that members of an organization identify with the authority system of the organization and internalize the norms and values of the organization.
Four-dimensional structure	(Blau, 2001)	OC is divided into four dimensions: affective commitment, normative commitment, cost commitment and selection commitment. Cost commitment refers to an employee who stays in an organization because the sunk costs of time, effort, and networking are too great. Choosing commitment means that you have the will to leave but have no better choice, so you don't leave.
	Swailes	OC was divided into four dimensions: affective commitment, continuous commitment, normative commitment and behavioral commitment.
Five-dimensional structure	Yu	OC is composed of five levels, from low to high, which can be summarized as utilitarian commitment, participatory commitment, pro-attribute commitment, target commitment and spiritual commitment.
	Ling, Zhang and	This study proposes five factor models of Chinese enterprise workers, namely affective commitment, normative commitment, ideal

Li	commitment, economic commitment and opportunity commitment. Among them, ideal commitment is the research result of Localization in China, which has not been involved in western research. Ideal commitment means that employees attach importance to individual growth and pursue the realization of ideal.

Table d.3 Studies on the outcome variables of Job Engagement

Scholars	Outcome variables	Research contributions	Concept of Job Engagement and measure methods	Research objects
Britt, Castro and Adler (2005)	Psychological health, physical health	Highly engaged soldiers can relieve themselves after long hours of work and thus produce weak negative emotions; overwork has negative impact on the psychological health and physical health of soldiers with high personal engagement	Britt's four-item scale focusing on self-perception and self-image	176 American soldiers from garrison force
Saks (2006)	Work satisfaction, OC, turnover intention	Job Engagement is positively and significantly correlated with work satisfaction and OC and negatively correlates to turnover intention; Job Engagement can predict the work satisfaction, OC and turnover intention	Self-made six-item scale measuring the psychological state of employees	102 employees from different fields in Canada, with an average age of 34
Xanthopoulou, Bakker, Demerouti and Schaufeli (2009)	Economic returns	Highly engaged employees are rewarded with high income	UWES-9 scale	52 employees from fast food industry in Holland
Alarcon and Edwards (2011)	Work satisfaction and turnover intention	After the work burnout is controlled, Job Engagement is positively and significantly correlated with high level of work satisfaction and low turnover intention	UWES-17 scale	227 American part-time university students

Table d.4 Summary table of studies on outcome variables of perceived organizational support

The researchers	Their consequences
Eisenberger et al. (1986)	Perceived Organizational Support was negatively correlated with absenteeism rate. The Perception of Organizational Support has a greater impact on employees with strong exchange consciousness
(George & Brief, 1992)	The Perception of Organizational Support can promote the generation of OCB such as helping colleagues and helping organizations avoid risks
(Settoon, Bennett, & Liden, 1996)	The Perception of Organizational Support is positively correlated with organizational commitment
(Moorman & Niehoff, 1998)	Procedural fairness indirectly affects OCB by influencing organizational support
(Rhoades, Eisenberger, & Armeli, 2001)	Organizational support is positively correlated with Job Engagement
(Bobbio, 2012).	Organizational support has positive influence on Job Engagement and work satisfaction
(Fu & Wang, 2013)	Organizational support and psychological capital are the most important factors affecting work satisfaction

Annex E

Table e.1 Table of interviews in depth

The name of the hospital	Nature of the hospital	The interview object	The number of interviews
The First Affiliated Hospital of Zhejiang University Medical College	Public third grade	The medical personnel	5
The Second Affiliated Hospital of Zhejiang University Medical College	Public third grade	The medical personnel	5
Shao Yifu Affiliated Hospital of Zhejiang University Medical College	Public third grade	The medical personnel	5
Children's Affiliated Hospital of Zhejiang University Medical College	Public third grade	The medical personnel	2
Obstetrics and Gynecology Affiliated Hospital to Zhejiang University Medical College	Public third grade	The medical personnel	2
Zhejiang Provincial People's Hospital	Public third grade	The medical personnel	3
Zhejiang Cancer Hospital	Public third grade	The medical personnel	3
Zhejiang Hospital of Traditional Chinese Medicine	Public third grade	The medical personnel	5
Hangzhou Traditional Chinese Medicine Hospital	Public third grade	The medical personnel	5
Hangzhou Honghui Hospital	Public third grade	The medical personnel	5

Table e.2 Table of respondents with open questionnaire

The name of the hospital,	Nature of the hospital	Respondents	The number of surveys
The First Affiliated Hospital of Zhejiang University Medical College	Public third grade	medical personnel (including doctors, nurses and medical technicians)	3:3:2
The Second Affiliated Hospital of Zhejiang University Medical College	Public third grade	medical personnel (including doctors, nurses and medical technicians)	3:4:2
Shao Yifu Affiliated Hospital of Zhejiang University Medical College	Public third grade	medical personnel (including doctors, nurses and medical technicians)	3:4:2
Children's Affiliated Hospital of Zhejiang University Medical College	Public third grade	medical personnel (including doctors, nurses and medical technicians)	3:3:2
Obstetrics and Gynecology	Public	medical personnel (including	2:4:2

Affiliated Hospital to Zhejiang University Medical College	third grade	doctors, nurses and medical technicians)	
Zhejiang Provincial People's Hospital	Public third grade	medical personnel (including doctors, nurses and medical technicians)	2:4:2
Zhejiang Cancer Hospital	Public third grade	medical personnel (including doctors, nurses and medical technicians)	2:4:2
Zhejiang Hospital of Traditional Chinese Medicine	Public third grade	medical personnel (including doctors, nurses and medical technicians)	2:4:2
Hangzhou Traditional Chinese Medicine Hospital	Public third grade	medical personnel (including doctors, nurses and medical technicians)	3:3:2
Hangzhou Honghui Hospital	Public third grade	medical personnel (including doctors, nurses and medical technicians)	2:4:2

Table e.3 Statistical Table of Basic Information of Predictive Pest Samples(N=289)

Category 1	gender The number of	ratio	Category 2	Number of Working years	ratio	Category 3	Highest number of educated persons	ratio
male	40	13.85%	The Chinese communist party member		28.28%	Junior College and Below	58	20%
female	249	86.15%	The democratic parties		4.48%	Undergraduate course	159	55%
			The crowd		67.24%	A graduate student	72	25%
Category 4	Number of works	ratio	Category 5	Average monthly income	ratio	Category 6	Professional Title number	ratio
The doctor	102	35%	Less than 3000	24	8.28%	Elementary and undetermined levels	124	42.76%
The nurse	130	45%	3001-5000.	69	23.79%	The intermediate	113	38.97%
medical	57	20%	5001-7000.	110	37.93%	Deputy high	45	15.52%
			7001-10000.	57	20%	senior	8	2.76%
			More than 10000	29	10%			

Table e.4 Statistical Table of Basic Information of formal Test Samples(N=220)

Category 1	gender The number of	ratio	Category 2	Highest number of educated persons	ratio	Category 3	Number of works	ratio
male	45	20.78%	Junior College and Below	40	18.02%	The doctor	78	35.52%
female	175	79.22%	Undergraduate course	150	67.93%	The nurse	106	48.16%
			A graduate student	30	14.05%	medical	36	16.32%
Category 4	Number of Working years	ratio	Category 5	Average monthly income	ratio	Category 6	The number of age	ratio
3 years and below	40	18.38%	3000 yuan of the following	15	6.80%	Under the age of 30,	71	32.05%
4 to 7 years	29	12.86%	3000-4999 yuan	35	15.78%	31-40 years old	67	30.56%
8 to 11 years	31	14.26%	5000-6999 yuan	67	30.25%	41 to 50 years old	57	25.83%
12 to 15 years	47	21.28%	7000-9999 yuan	66	30.12%	51 and 55 years old	17	7.70%
16 years and above	73	33.22%	More than 10000 yuan	37	17.05%	Age 56 and above	8	3.86%
Class 7	Professional Title number	ratio						
primary	110	49.85%						
The intermediate	76	34.45%						
Deputy high	26	12.1%						
senior	8	3.6%						

Table e.5 Statistical Table of Basic Information of verification test Samples(N=767)

Category 1	gender The number of	ratio	Category 2	Highest number of educated persons	ratio	Category 3	Number of works	ratio
male	83	10.84%	Junior College and Below	115	15.01%	The doctor	266	34.64%
female	684	89.16%	Undergraduate course	610	79.45%	The nurse	391	50.95%
			A graduate student	42	5.55%	medical	110	14.41%
Category 4	Number of Working years	ratio	Category 5	Average monthly income	ratio	Category 6	The number of age	ratio
3 years and below	187	24.46%	3000 yuan of the following	43	5.60%	Under the age of 30,	337	42.5%
4 to 7 years	150	19.67%	3000-4999 yuan	85	11.05%	31-40 years old	228	28.75%
8 to 11 years	82	10.72%	5000-6999 yuan	172	22.40%	41 to 50 years old	175	22.07%
12 to 15 years	81	10.21%	7000-9999 yuan	307	40.02%	51 and 55 years old	25	3.15%
16 years and above	267	34.93%	More than 10000 yuan	160	20.93%	Age 56 and above	28	3.53%
Class 7	Professional Title number	ratio						
primary	399	51.95%						
The intermediate	265	34.55%						
The subtropical	85	11.1%						
high	18	2.4%						

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Annex F

Table f.1 The subscale of medical personnel Job Engagement (to be corrected)

The dimension	Measure the general idea of the item	Source
JE	At work, I feel a burst of energy At work, I feel strong and energetic I'm passionate about my work My work inspired me As soon as I get up in the morning, I want to go to work When work is stressful, I feel happy I'm proud of what I do I immersed myself in my work I reach a state of ecstasy at work	Schaufeli (2006).

Table f.2The subscale of Organization Commitment of medical personnel (to be corrected)

The dimension	Measure the general idea of the item	Source
OC	I have a strong sense of belonging to my employer.	Shen (2008)
	I feel it my duty to work hard for my employer.	
	The employer's environment, working conditions and reputation helped me achieve my ambition.	Zhang, Feng, and Li (2014)
	I think my work is something I'm good at.	
	I'm concerned about my boss's future.	
	If I leave my present work, there will be a major financial loss.	
	I am willing to work for my present employer until retirement.	Shen (2008)

Table f.3 The subscale of Medical personnel Perceived Organizational Support (to be corrected)

The dimension	Measure the general idea of the item	Source
POS	The organization attaches great importance to my work objectives and values	Ling, Yang, and Fang (2016)
	When you are in trouble, you can get help from the unit	
	The unit really CARES about my happiness	
	The company is willing to help me to do my best	
	If you do your best work, the organization won't notice	Eisenberge et al. (1986).
	The organization CARES about my overall satisfaction with my work	
	The organization rarely CARES about me	
	The organization values my opinion or opinion	
	The organization will be proud of my achievements in my work	

Table f.4 The subscale of Organizational Citizenship Behavior of medical personnel (to be corrected)

The dimension	Measure the general idea of the item	Source
OCB	Carry out the function with the team and organization's interests in mind. Volunteer to contribute to the team and organization. Get involved in helping your team and organization. Share your work knowledge with others. Work beyond normal working hours. Do some work in your spare time. Work on holidays. Rearranging or changing personal plans for work reasons.	Podsakoff et al. (1990).

Table 6.5 The subscale of Doctor-Patient Relationship (to be corrected)

The dimension	Measure the general idea of the item	Source
DPR	The patient trusts that you will prioritize his/her needs The patient trusts the decision you have made for him/her The patient is willing to follow your recommended treatment plan The patient believes that the procedure you requested is reasonable You often have patient and repeated communication with the patient and family You are always careful to inform patients of the risks that may arise from their treatment You always take care to help patients and their families You often compare options and provide the best treatment for the patient You are proud of your expertise in helping patients effectively You are more than happy to receive the patient's follow-up visit	Zeng. Ma, and Gou (2018)

Table f.6 Reliability analysis of Job Engagement subscale

A dimension	item	CITC	Alpha if item Delete	Scale overall Cronbach α values
JE	Q31	0.818	0.941	0.953
	Q32	0.841	0.940	
	Q33	0.823	0.941	
	Q34	0.855	0.939	
	Q35	0.765	0.944	
	Q36	0.736	0.947	
	Q37	0.778	0.942	
	Q38	0.862	0.938	
	Q39	0.788	0.942	

Table f.7 Organizational Commitment component reliability analysis

A dimension	item	CITC	Alpha if item Delete	Scale overall Cronbach α values
OC	Q40	0.833	0.924	0.938
	Q41	0.853	0.922	
	Q42	0.846	0.923	
	Q43	0.789	0.928	
	Q44	0.823	0.925	
	Q45	0.634	0.942	
	Q46	0.797	0.928	

Table f.8 Perceived Organizational Support component reliability analysis

A dimension	item	CITC	Alpha if item Delete	Scale overall Cronbach α values
POS	Q47	0.758	0.805	0.871
	Q48	0.759	0.806	
	Q49	0.755	0.803	
	Q50	0.785	0.802	
	Q51	0.251	0.867	
	Q52	0.718	0.810	
	Q53	0.073	0.899	
	Q54	0.759	0.804	
	Q55	0.747	0.806	

Table f.8 Organizational Citizenship Behavior reliability analysis

A dimension		item	CITC	Alpha if item Delete	Among these the Cronbach α values	Scale overall Cronbach α values
OCB	OCB 1	Q56	0.862	0.940	0.951	0.884
		Q57	0.886	0.933		
		Q58	0.905	0.927		
		Q59	0.867	0.938		
	OCB 2	Q60	0.710	0.862	0.882	
		Q61	0.832	0.814		
		Q62	0.789	0.831		
		Q63	0.655	0.881		

Table f.9 Doctor-Patient Relationship reliability analysis

A dimension		item	CITC	Alpha if item Delete	Among these the Cronbach α values	Scale overall Cronbach α values
DPR	DPR1	Q64	0.782	0.933	0.934	0.950
		Q65	0.871	0.903		
		Q66	0.865	0.906		
		Q67	0.856	0.908		
	DPR2	Q68	0.778	0.932	0.940	
		Q69	0.762	0.934		
		Q70	0.850	0.924		
		Q71	0.822	0.927		
		Q72	0.849	0.923		
		Q73	0.850	0.924		

Table f.10 Organizational Citizenship Behaviors subscale characteristic root and cumulative variance ratio

factor	Characteristics of the root	Variance interpretation ratio	Cumulative variance interpretation ratio
1	4.4444	55.546	55.546
2	2.014	25.177	80.723

Table f.11 Results of exploratory factor analysis (principal component) of Organizational Citizenship Behavior

Measuring item	The principal components	
	OCB1	OCB2
Q56	0.905	
Q57	0.915	
Q58	0.937	
Q59	0.909	
Q60		0.804
Q61		0.909
Q62		0.888
Q63		0.771

(Note: in the coefficient display, the absolute value =0.5)

Table f.12 Feature root and cumulative variance ratio of Doctor-Patient Relationship component table

factor	Characteristics of the root	Variance interpretation ratio	Cumulative variance interpretation ratio
1	6.884	68.843	68.843
2	1.089	10.893	79.736

Table f.13 Exploratory factor analysis (principal component) results of the Doctor-Patient Relationship component table

Measuring item	The principal components	
	DPR1	DPR2
Q64	0.806	
Q65	0.845	
Q66	0.832	
Q67	0.879	
Q68		0.714
Q69		0.746
Q70		0.843
Q71		0.822
Q72		0.847
Q73		0.844

(Note: in the coefficient display, the absolute value =0.5)

Table f.14 Sub-table of medical personnel Job Engagement

indicators	Measure the general idea of the item
Job Engagement JE	1. I feel empowered at work 2. At work, I feel strong and energetic I'm passionate about my work My work inspires me As soon as I get up in the morning, I want to go to work 6. I feel happy when work is stressful 7. I'm proud of what I do I immerse myself in my work I reach a state of ecstasy at work

Table f.15 Organizational Commitment component of medical personnel

indicators	Measure the general idea of the item
Organizational Commitment OC	I have a strong sense of belonging to my employer. I feel it my duty to work hard for my employer. The employer's environment, working conditions and reputation have helped me achieve my ambition. I think my work is something I'm good at. I'm concerned about my boss's future. 6. If I leave my present work, I will have a major financial loss. I'm willing to work for my present employer until retirement.

Table f.17 Component of medical personnel Perceived Organizational Support

indicators	Measure the general idea of the item
	1. The organization attaches great importance to the goal and value of my work 2.When you are in trouble, you can get help from the unit 3. The organization really CARES about my happiness

Perceived Organizational Support POS	4.In order to let me exert my best ability to finish the work, the company is willing to help me as much as possible
	5. The organization CARES about my overall work satisfaction
	6.My opinion or opinion is valued by the organization
	7.The organization will be proud of my achievements in my work

Table f.16 The sub table of medical personnel's Organizational Citizenship Behavior

indicators		Measure the general idea of the item
Organizational citizenship behavior OCB	Interpersonal relationships OCBi	1. Carry out functions with the team and organization's interests in mind
		2.Volunteer to contribute to the team and organization
		3. Participate in teams and organizations that help you.
		4. Share your work knowledge
	Organizational behavior OCBo	5. Beyond normal working hours
		6. Take on work in your spare time
		7. Work on holidays
		8. Rescheduling or changing personal plans for work reasons

Table f.17 Doctor-Patient Relationship sub table

indicators		Measure the general idea of the item
Doctor - Patient Relationship DPR	Doctor-patient trust DPR1	1. The patient trusts that you will put his/her needs first
		2. The patient trusts the treatment plan you make for him/her
		3. The patient is willing to follow your recommended treatment plan
		4. The patient believes that the examination you requested is reasonable
	Patient centered diagnosis and treatment DPR2	5. You often communicate with patients and family members repeatedly and patiently
		6. You always carefully inform patients of the risks that may occur in their diagnosis and treatment
		7. You are always serious about helping patients and their families
		8. You often compare multiple plans and provide the most reasonable treatment plan for the patient
		9. You are proud that your professional skills can effectively help patients
		10. You are more than happy to receive the patient's follow-up visit

Table f.18 Descriptive statistical table of processional mission identification and matching of medical personnel

item	Numbers	Mean statistics	Standard deviation statistics	Partial degrees		kurtosis	
				statistical	The standard error	statistical	The standard error
Identification (Q1-Q4)							
1.It is the first duty of medical personnel s to heal the wounded and rescue the dying	767	1.45	0.580	0.869	0.088	0.239	0.176
2.I love medical work very much	767	1.72	0.615	0.260	0.088	0.625	0.176
3.I will take medicine as my lifelong career	767	1.70	0.593	0.203	0.088	0.597	0.176
4. Health care is a profession that benefits society and others	767	1.43	0.568	0.938	0.088	0.124	0.176
Work matching (Q5-Q7)							
5.I often find pleasure in medical activities	767	2.18	0.889	0.378	0.088	0.116	0.176
6. Medical work allows me to give full play to my personal ability	767	2.09	0.805	0.295	0.088	0.280	0.176
7. I can often feel the satisfaction and sense of achievement brought by medical work	767	2.16	0.866	0.324	0.088	0.291	0.176

Table f.19 Descriptive statistics on the professional mission orientation of medical personnel

item	Numbers	Mean statistics	standard deviation statistical	Partial degrees		kurtosis	
				statistical	The standard error	statistical	The standard error
Internal Drive (Q1-Q4)							
1. I'm willing to put a lot of effort into my current work	767	1.93	0.812	0.620	0.088	0.283	0.176
2. I'm in a work where I feel worthwhile	767	1.88	0.723	0.453	0.088	0.088	0.176
3. I follow my heart in my current work	767	2.19	0.910	0.416	0.088	0.315	0.176
4. I feel I'm destined for my current work in the medical profession	767	2.09	0.873	0.657	0.088	0.337	0.176
External guidance (Q5-Q8)	767	2.04	0.729	0.318	0.088	0.036	0.176
5. There are certain medical behaviors that make me more engaged in my work	767	2.21	0.864	0.236	0.088	0.370	0.176

6. I feel that I am inspired by some kind of power to take up my present work of medical care	767	2.30	0.885	0.458	0.088	0.064	0.176
7. Intensive medical work can make me grow up faster	767	2.04	0.740	0.350	0.088	0.071	0.176
8. It gives me great pleasure to serve patients							

Table f.20 Descriptive statistics on Career Calling significance and value drivers for medical personnel

item	Numbers	Mean statistics	Standard deviation statistics	Partial degrees		kurtosis	
				statistical	The standard error	statistical	The standard error
Sense of Meaning (Q1-Q4)							
1. My career has a positive impact on others	767	1.79	0.807	0.510	0.088	0.122	0.176
2. I can experience the meaning of life in my current career	767	2.06	0.840	0.530	0.088	0.029	0.176
3. I often find value in professional behavior	767	2.13	0.841	0.385	0.088	0.044	0.176
4. When I put myself into work, I will try to realize my meaning in life	767	2.04	0.772	0.334	0.088	0.167	0.176
Value leading behavior (Q5-Q8)	767	1.74	0.677	0.579	0.088	0.243	0.176
5. What I do in practice must be something meaningful to society	767	1.98	0.762	0.561	0.088	0.645	0.176
6. Meeting the needs of others is my greatest motivation at work	767	1.83	0.684	0.403	0.088	0.053	0.176
7. In order to become better medical personnel, I will make greater efforts	767	1.66	0.635	0.486	0.088	0.036	0.176
8. I want to give patients more health through medical work							

Table f.21 Descriptive statistics on medical personnel's Job Engagement

Item	Numbers	Mean statistics	Standard deviation statistics	Partial degrees		kurtosis	
				statistical	The standard error	statistical	The standard error
1. I feel empowered at work	767	1.97	0.745	0.388	0.088	0.119	0.176
2. At work, I feel strong and energetic	767	2.04	0.795	0.272	0.088	0.612	0.176

3. I'm passionate about my work	767	1.94	0.764	0.370	0.088	0.413	0.176
4. My work inspires me	767	2.15	0.828	0.124	0.088	0.648	0.176
5. As soon as I get up in the morning, I want to go to work	767	2.74	1.084	0.224	0.088	0.456	0.176
6. I feel happy when work is stressful	767	2.97	1.107	0.066	0.088	0.659	0.176
7. I'm proud of what I do	767	2.09	0.884	0.544	0.088	0.111	0.176
8. I immerse myself in my work	767	2.38	0.922	0.249	0.088	0.233	0.176
9. I reach a state of ecstasy at work	767	2.49	1.024	0.359	0.088	0.257	0.176

Table f.22 Organizational Commitment descriptive statistics table for medical personnel

item	Numbers	Mean statistics	Standard deviation statistics	Partial degrees		kurtosis	
				statistical	The standard error	statistical	The standard error
1. I have a strong sense of belonging to my employer	767	2.26	0.906	0.614	0.088	0.539	0.176
2. I feel it my duty to work hard for my employer	767	2.12	0.803	0.575	0.088	0.706	0.176
3. The employer's environment, working conditions and reputation have helped me achieve my ambition	767	2.32	0.879	0.405	0.088	0.310	0.176
4. I feel like my job is what I'm good at	767	2.09	0.775	0.504	0.088	0.523	0.176
5. I'm concerned about my boss's future	767	2.21	0.871	0.511	0.088	0.407	0.176
6. If I leave my present work, I will have a major financial loss	767	2.29	0.882	0.557	0.088	0.445	0.176
7. I'm willing to work for my present employer until retirement	767	2.31	0.946	0.610	0.088	0.362	0.176

Table f.23 Descriptive statistical table on Perceived Organization Support for medical personnel

item	Numbers	Mean statistics	Standard deviation statistics	Partial degrees		kurtosis	
				statistical	The standard error	statistical	The standard error
1. The organization attaches great importance to the goal and value of my work	767	2.31	0.857	0.220	0.088	0.098	0.176
2. When you are in trouble, you can get help from the unit	767	2.25	0.817	0.240	0.088	0.008	0.176
3. The organization really CARES about my happiness	767	2.45	0.939	0.283	0.088	0.022	0.176

4. In order to let me exert my best ability to finish the work, the company is willing to help me as much as possible	767	2.34	0.877	0.389	0.088	0.248	0.176
5. The organization CARES about my overall work satisfaction	767	2.23	0.774	0.400	0.088	0.724	0.176
6. My opinion or opinion is valued by the organization	67	2.52	0.861	0.077	0.088	0.094	0.176
7. The organization will be proud of my achievements in my work	767	2.31	0.817	0.157	0.088	0.005	0.176

Table f.24 Descriptive statistical table of medical personnel's Organizational Citizenship Behavior

item	Numbers	Mean statistics	Standard deviation statistics	Partial degrees		kurtosis	
				statistical	The standard error	statistical	The standard error
OCB1 (Q1 - Q4)							
1. Carry out functions with the team and organization's interests in mind	767	1.81	0.677	0.482	0.088	0.400	0.176
2. Volunteer to contribute to the team and organization	767	1.87	0.710	0.482	0.088	0.261	0.176
3. Participate in teams and organizations that help you	767	1.77	0.656	0.418	0.088	0.047	0.176
4. Share your work knowledge	767	1.73	0.630	0.477	0.088	0.467	0.176
OCB2 (Q5 - Q8)							
5. Work beyond normal working hours	767	2.43	1.068	0.492	0.088	0.344	0.176
6. Work on your own time.	767	2.49	1.042	0.429	0.088	0.322	0.176
7. Work on vacation	767	2.65	1.095	0.208	0.088	0.725	0.176
8. Rearranging or changing personal plans for work reasons	767	2.35	0.927	0.572	0.088	0.261	0.176

Table f.25 Descriptive statistical table of Doctor-Patient Relationship

item	Numbers	Mean statistics	Standard deviation statistics	Partial degrees		kurtosis	
				statistical	The standard error	statistical	The standard error
DPR1 (Q1 - Q4)							
1. The patient trusts that you will put his/her needs first	767	2.01	0.779	0.516	0.088	0.424	0.176
2. The patient trusts the treatment plan you make for him/her	767	2.03	0.731	0.229	0.088	0.291	0.176
3. The patient is willing to follow your recommended	767	2.07	0.721	0.257	0.088	0.096	0.176

treatment plan	767	2.10	0.750	0.340	0.088	0.076	0.176
4. The patient believes that the examination you requested is reasonable	767	1.77	0.654	0.340	0.088	0.485	0.176
DPR2 (Q5 - Q8)							
5. You often communicate with patients and family members repeatedly and patiently	767	1.85	0.669	0.422	0.088	0.291	0.176
6. You always carefully inform patients of the risks that may occur in their diagnosis and treatment	767	1.68	0.610	0.305	0.088	0.648	0.176
7. You are always serious about helping patients and their families	767	1.83	0.664	0.260	0.088	0.546	0.176
8. You often compare multiple plans and provide the most reasonable treatment plan for the patient	767	1.78	0.702	0.411	0.088	0.662	0.176
9. You are proud that your professional skills can effectively help patients	767	1.75	0.658	0.364	0.088	0.507	0.176
10. You are more than happy to receive the patient's follow-up visit							

Table f.28 Exploratory factor analysis (PCA) results of medical personnel Job Engagement

project	The principal components
	Job Engagement
Q1	0.860
Q2	0.883
Q3	0.853
Q4	0.868
Q5	0.832
Q6	0.774
Q7	0.817
Q8	0.898
Q9	0.819

Table f.29 Results of Organizational Commitment exploratory factor analysis (PCA) for medical personnel

project	The principal components
	Organizational Commitment
Q1	0.878
Q2	0.873
Q3	0.881
Q4	0.793
Q5	0.831

Q6	0.639
Q7	0.832

Table f.30 Results of exploratory factor analysis (PCA) on Medical personnel Perceived Organizational Support

project	The principal components
	Perceived Organizational Support
Q1	0.886
Q2	0.901
Q3	0.911
Q4	0.916
Q5	0.862
Q6	0.855
Q7	0.843

Table f.31 Results of exploratory factor analysis (principal component) of medical personnel's Organizational Citizenship Behavior

project	The principal components	
	OCB1	OCB2
Q1	0.880	
Q2	0.903	
Q3	0.936	
Q4	0.892	
Q5		0.879
Q6		0.906
Q7		0.893
Q8		0.793

Table f.32 Exploratory factor analysis (principal component) results of Doctor-Patient Relationship among medical personnel

project	The principal components	
	DPR1	DPR2
Q1	0.824	
Q2	0.848	
Q3	0.847	
Q4	0.855	
Q5		0.762
Q6		0.767
Q7		0.844
Q8		0.810
Q9		0.799
Q10		0.798

Table f.33 ANOVA of gender on professional mission of medical personnel

Principal component	Gender	M	SD	t	df	P values
Identity and matching	Male	1.9729	.60927	0.714	765	0.475
	Women	1.9203	.63605			
Guidance	Male	2.1717	.65847	1.262	765	0.207
	Women	2.0731	.67384			
Meaning and sense of value	Male	2.1165	.74433	-0.319	765	0.750
	Women	2.1457	.79390			

There are no gender differences in Q31-Q39 of the 2. input (JE), as detailed in tables 6-42.

Table f.34 ANOVA of gender input to medical staff

Principal component	Gender	M	SD	t	df	P values
Q31	Male	2.04	.756	.839	765	.402
	Women	1.96	.744			
Q32	Male	2.08	.815	.533	765	.594
	Women	2.04	.793			
Q33	Male	2.00	.765	.790	765	.430
	Women	1.93	.764			
Q34	Male	2.14	.783	-.093	765	.926
	Women	2.15	.834			
Q35	Male	2.71	1.143	-.253	765	.801
	Women	2.74	1.077			
Q36	Male	3.01	1.132	.400	765	.689
	Women	2.96	1.105			
Q37	Male	2.14	.885	.610	765	.542
	Women	2.08	.884			
Q38	Male	2.43	.913	.609	765	.543
	Women	2.37	.924			
Q39	Male	2.52	1.016	.225	765	.822
	Women	2.49	1.026			

Table f.35 Analysis of variance on Organizational Commitment of medical personnel by gender

Principal component	Gender	M	SD	t	df	P values
Q40	Male	2.48	.955	2.319	765	0.021
	Women	2.24	.897			
Q41	Male	2.23	.770	1.342	765	0.180
	Women	2.10	.806			
Q42	Male	2.47	.902	1.697	765	0.090
	Women	2.30	.875			
Q43	Male	2.07	.762	-0.204	765	0.839
	Women	2.09	.777			
Q44	Male	2.39	.908	1.906	765	0.057
	Women	2.19	.865			
Q45	Male	2.58	1.072	3.179	765	0.002
	Women	2.25	.850			
Q46	Male	2.66	1.039	3.635	765	0.000
	Women	2.27	.926			

Table f.36 Analysis of variance of Organizational Citizenship Behavior by gender

Principal component	Gender	M	SD	t	df	P values
Q54	Male	1.87	.640	0.843	765	0.400
	Women	1.80	.681			
Q55	Male	1.88	.651	0.170	765	0.865
	Women	1.87	.718			
Q56	Male	1.81	.653	0.539	765	0.590
	Women	1.77	.657			
Q57	Male	1.83	.581	1.591	765	0.112
	Women	1.71	.635			
Q58	Male	2.33	1.037	-0.913	765	0.362
	Women	2.44	1.072			
Q59	Male	2.39	1.080	-0.945	765	0.345
	Women	2.50	1.037			
Q60	Male	2.57	1.232	-0.731	765	0.465
	Women	2.66	1.078			
Q61	Male	2.25	.935	-0.976	765	0.329
	Women	2.36	.926			

Table f.37 Analysis of variance on medical staff Doctor-Patient Relationship by sexual

Principal component	Gender	M	SD	t	df	P values
Q62	Male	2.00	.749	-0.113	765	0.910
	Women	2.01	.783			
Q63	Male	2.05	.697	0.189	765	0.850
	Women	2.03	.735			
Q64	Male	2.02	.680	-0.549	765	0.583
	Women	2.07	.727			
Q65	Male	2.11	.749	0.120	765	0.904
	Women	2.10	.750			
Q66	Male	1.76	.655	-0.093	765	0.926
	Women	1.77	.654			
Q67	Male	1.80	.579	-0.753	765	0.452
	Women	1.85	.680			
Q68	Male	1.72	.631	0.669	765	0.503
	Women	1.68	.607			
Q69	Male	1.70	.639	-1.880	765	0.060
	Women	1.84	.665			
Q70	Male	1.67	.767	-1.390	765	0.165
	Women	1.79	.693			
Q71	Male	1.71	.690	-0.645	765	0.519
	Women	1.76	.655			