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Strategic Management of High-level Hospitals from the Perspective of Stakeholders—The Case Study of the Affiliated Hospital of Guangdong Medical University

LIN Tingkui

Doctor of Management

Supervisor:

PhD Ana Margarida Madureira Simaens, Assistant Professor,
ISCTE University Institute of Lisbon

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Abstract

The thesis is about the strategic management of high-level hospitals from the stakeholders' perspective and takes the Affiliated of Guangdong Medical University (hereinafter referred to as the GMUAH) as the case study. The GMUAH has formulated the 14th Five-Year Plan and the strategic goal of entering the top 100 in the ranking of the national performance evaluation of China's tertiary public hospitals based. In accordance with the strategic management theory, the strategic plan of the GMUAH has been executed, and the goal of the GMUAH has not yet been achieved after reviewing and comparing them with the performance evaluation indicators of China's tertiary public hospitals. The surface reasons for restricting the GMUAH from ranking in the top 100 in China's tertiary public GMUAH performance evaluation are the low proportion of the GMUAH's third and fourth surgeries and the low research funding per 100 people. This thesis unveils that the fundamental reason is the conflict of interest and conflicting interests among different stakeholders.

This thesis uses stakeholder theory as the theoretical background, and the case study as a research method, explored through interviews and a survey. Interviews were conducted with 18 stakeholders at the GMUAH to identify eight points of conflicts of interest and conflicting interests. Then, a survey was conducted among 2439 stakeholders in GMUAH. The survey results are as follows: firstly, more than 80% of stakeholders hold a supportive attitude towards the strategic planning and goals of the GMUAH; secondly, nearly 90% of stakeholders believe that the strategic goals of the GMUAH are reasonable and consistent with its own development; thirdly, the main points of conflicts of interest and conflicting interests are the allocation of resources and benefits between departments, as well as the conflict between the overall strategic interests of the GMUAH and the interests of the department itself. This study provides practical guidance of stakeholder theory on GMUAH strategic management, which is of great significance for achieving the strategic planning and goals of the GMUAH. The solutions to different conflicts of interest and conflicting interests in the GMUAH can also provide some reference and development ideas for the strategic management of other large public hospitals.

Keywords: Strategic planning, Conflicting interests, Conflict of interest, Stakeholder theory

JEL: L10, L20, M10

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Resumo

A tese aborda a gestão estratégica de hospitais de alto nível na perspectiva dos stakeholders (partes interessadas) e toma como estudo de caso a Universidade Médica Afiliada de Guangdong (a seguir designada por GMUAH). A GMUAH formulou o 14.º Plano Quinquenal e o objetivo estratégico de entrar no top 100 da classificação da avaliação nacional do desempenho dos hospitais públicos terciários da China com base na situação. De acordo com a teoria da gestão estratégica, o plano estratégico do GMUAH foi executado e o objetivo do GMUAH ainda não foi alcançado após análise e comparação com os indicadores de avaliação do desempenho dos hospitais públicos terciários da China. As principais razões que impedem o GMUAH de se classificar entre os 100 primeiros na avaliação do desempenho do GMUAH público terciário da China são a baixa proporção de terceira e quarta cirurgias do GMUAH e o baixo financiamento da investigação por cada 100 pessoas. No entanto, esta tese revela que a razão fundamental é o conflito de interesses e os interesses contraditórios entre as diferentes partes interessadas.

Esta tese utiliza a teoria das partes interessadas como base teórica e o estudo de caso como método de investigação, explorado através de entrevistas e de um inquérito. Foram realizadas entrevistas a 18 partes interessadas no GMUAH para identificar oito pontos de conflitos de interesses e interesses contraditórios. Em seguida, foi realizado um inquérito junto de 2439 partes interessadas no GMUAH. Os resultados do inquérito são os seguintes: em primeiro lugar, mais de 80% das partes interessadas têm uma atitude de apoio em relação ao planeamento estratégico e aos objetivos do GMUAH; em segundo lugar, cerca de 90% das partes interessadas consideram que os objetivos estratégicos do GMUAH são razoáveis e coerentes com o seu próprio desenvolvimento; em terceiro lugar, os principais pontos de conflito de interesses e de interesses contraditórios são a repartição dos recursos e dos benefícios entre os serviços, bem como o conflito entre os interesses estratégicos globais do GMUAH e os interesses do próprio serviço. Este estudo fornece uma orientação prática da teoria dos stakeholders na gestão estratégica do GMUAH, o que é de grande importância para a realização do planeamento estratégico e dos objetivos do GMUAH. As soluções para os diferentes conflitos de interesses e para os interesses contraditórios no GMUAH podem também fornecer algumas referências e ideias de desenvolvimento para a gestão estratégica de outros grandes hospitais públicos.

Palavras-chave: Planeamento estratégico, Interesses conflitantes, Conflito de interesses, Teoria das partes interessadas

JEL: L10, L20, M10

摘 要

当前,无论是从中国国家层面,还是从中国广东省、中国广东医科大学等层面,都要求中国三级公立医院进行高水平建设,对此广东医科大学附属医院审时度势制定了“十四五”战略规划及进入中国三级公立医院绩效考核前100名的战略目标。依据战略管理理论,通过对战略规划及战略目标进行回溯,对照中国三级公立医院绩效考核指标进行战略执行评估,发现广东医科大学附属医院的战略规划及战略目标仍未落地。而限制广东医科大学附属医院在中国三级公立医院绩效考核排名未进入前100名的表面原因是医院三四级手术占比不高和医院每百人科研经费不高两个方面,深层次原因则是医院不同利益相关者之间的利益冲突。

在利益相关者等理论的指导下,将广东医科大学附属医院作为个案进行访谈和问卷调查。对广东医科大学附属医院18名利益相关者进行了访谈,归纳出8个利益冲突点。在此基础上进一步通过对广东医科大学附属医院2439名利益相关者进行了问卷调查。调查结果发现:一是80%以上的利益相关者对广东医科大学附属医院的战略规划及战略目标是认可的;二是接近90%的利益相关者认为广东医科大学附属医院的战略目标很合理,战略目标与自身的发展是一致的;三是8个利益冲突点主要集中在科室间资源分配、收益分配以及医院整体战略利益与部门自身利益之间的冲突。通过研究,进一步加强了利益相关者理论对于医院战略管理的实践指导,对于实现广东医科大学附属医院的战略规划及战略目标具有重要意义。同时,对广东医科大学附属医院不同利益冲突点的解决对策,也可为其他大型公立医院的战略管理提供一定的借鉴与发展思路。

关键词: 战略规划, 冲突的利益, 利益的冲突, 利益相关者理论

JEL: L10, L20, M10

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未来，我将以博士学习沉淀为新的起点，不忘初心，努力前行，为实现梦想而奋斗。

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Contents

Chapter 1: Introduction.....	1
1.1 Research background	1
1.1.1 Description of the healthcare system in China	1
1.1.2 Development positioning and strategic goal of the GMUAH	7
1.2 Research problem.....	10
1.2.1 Strategic backtracking: failure to achieve strategic goals	10
1.2.2 Measuring performance: failure to enter the top 100	11
1.3 Research Question	13
1.4 Research purpose	14
1.5 Research framework	15
Chapter 2: Literature Review	19
2.1 Strategy and strategic management	19
2.2 Stakeholder theory	25
2.3 Hospital strategic management.....	30
2.3.1 Macro perspective: a review of research on hospital strategic management.....	30
2.3.2 Micro perspective: a review of research on hospital strategic management	34
2.4 Hospital strategic management from the perspective of stakeholders	41
2.4.1 Macro perspective: hospital strategic management under stakeholders	41
2.4.2 Micro perspective: hospital strategic management under stakeholders	44
2.4.3 The role of stakeholders in achieving strategic goal of the GMUAH.....	50
2.5 Research model.....	52
Chapter 3: Methodology	55
3.1 Interview design.....	55
3.1.1 Interview preparation.....	56
3.1.2 Conducting formal interviews.....	60
3.2 Survey design	63
3.2.1 First round of pilot survey	63
3.2.2 Second round of pilot survey	64
3.2.3 Formal questionnaire survey.....	65
Chapter 4: Results and Discussion	69
4.1 Interviews results and analysis	69

4.1.1 Interviews results	69
4.1.2 Interviews analysis	79
4.2 Survey results and analysis.....	81
4.2.1 Basic information of the sample	81
4.2.2 Survey results and analysis	82
4.3 The significance of results.....	91
4.4 Discussion on research results	92
Chapter 5: Recommendations	101
5.1 Improve the proportion of third and fourth-level surgeries.....	101
5.1.1 Reasonably allocate internal and external departmental resources.....	101
5.1.2 Implement the strategy of internal training and external talent recruitment ...	106
5.1.3 Develop a performance evaluation reward and punishment mechanism	112
5.1.4 Cultivate a talent echelon of different disciplines	115
5.2 Improve research funding for per hundred people.....	118
5.2.1 Optimize the reward and punishment performance evaluation system.....	118
5.2.2 Improve the "triple" salary System for talent income	122
5.2.3 Support full participation in scientific research	124
5.2.4 Scientifically develop a distribution mechanism for conversion benefits	127
Chapter 6: Conclusions.....	133
6.1 The main conclusions.....	133
6.2 The main limitations	138
Bibliography.....	141
Other References	147
Annex A: Interview outline.....	149
Annex B: Survey	151

List of Tables

Table 1.1 Overall situation of the national examination of the GMUAH from 2018 to 202....	12
Table 1.2 Dynamic changes of performance evaluation indicators of the GMUAH from 2018 to 2021	13
Table 2.1 Research topics of strategic management in different periods	35
Table 3.1 Basic information of interviewees	58
Table 3.2 Factor load coefficient after rotation	64
Table 3.3 Factor load coefficient	66
Table 3.4 The values of AVE and CR of the model.....	68
Table 3.5 Results of the Discriminant Validity Test	68
Table 4.1 Conflicts of interest among different stakeholders	73
Table 4.2 Conflicting interests among different stakeholders.....	74
Table 4.3 Conflicts of interest and conflicting interests among different stakeholders	75
Table 4.4 Analysis of cognition and selection of short board in GMUAH (n=2439)	82
Table 4.5 Stakeholder understanding of the strategic planning of the GMUAH	83
Table 4.6 Comparison of cognitive scores for high-level hospital construction.....	84
Table 4.7 CI and COI Points among different stakeholders	85
Table 4.8 Comparison of COI scores among respondents.....	87
Table 4.9 Comparison of CI scores among respondents	88

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List of Figures

Figure 1.1 Performance evaluation indicators for tertiary public hospitals in China.....	3
Figure 1.2 Development of the strategic goals of the GMUAH	9
Figure 1.3 Research structure diagram	17
Figure 2.1 The Development trends of hospital strategic management research	31
Figure 2.2 Main research areas of hospital strategic management	32
Figure 2.3 Keywords highlighted in hospital strategic management research	34
Figure 2.4 Research and development trends in hospital strategic management.....	42
Figure 2.5 Main research areas of stakeholders and hospital strategic management.....	43
Figure 2.6 Research model	53
Figure 3.1 Excerpt of code system from Maxqda	62
Figure 4.1 Understanding the shortcomings of the national examination	83
Figure 4.2 Reasons for the low proportion of third and fourth-level surgeries	90
Figure 4.3 Reasons for the low proportion of research funding for per hundred people	91

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Chapter 1: Introduction

1.1 Research background

1.1.1 Description of the healthcare system in China

1.1.1.1 From a national perspective in China

The development of health care is related to everyone's survival, development and quality of life. It is also a guarantee of people's health, and more importantly, it is related to the future of the nation. Since the reform and opening, the medical and health industry in China has been continuously developing, and the people's health level has been continuously improving. In the current medical and health service system, public hospitals in China concentrate the vast majority of high-quality medical and health resources, representing the level of development of the regional medical and health industry. They shoulder the important responsibility of ensuring primary care and play a crucial role in promoting the comprehensive establishment of a basic medical system, improving the health level of the whole population, and achieving the overall goal of universal access to basic medical services.

In recent years, the reform of public hospitals has made significant progress in the construction of medical infrastructure, mobilizing the enthusiasm of the medical staff and regulating medication and examination behavior. The operating mechanism of public hospitals has been improved, and a service system that links from top to bottom has taken shape. The public welfare of medical institutions has been reflected, and the fairness between urban and rural areas has been improved, benefiting the public. However, the current reform and development of the healthcare industry in China has reached a critical period of overcoming difficulties. As the top priority and most challenging part of healthcare reform, the reform of public hospitals in China has always received social attention. There is still a lot of uncertainty in the internal and external environment faced by most public hospitals in China. At the same time, with the opening of the healthcare market and the continuous increase in the number of private healthcare institutions in China, public hospitals in China have to face an increasingly fierce competitive environment.

To comprehensively promote the healthy development of public hospitals in China, establish and improve the medical and health system, implement the Healthy China strategy,

and provide high-quality medical services to the people, the General Office of the State Council of China issued the Opinions on Strengthening the Performance Evaluation of Third level Public hospitals in 2019 (General Office of the State Council of the People's Republic of China, 2019). This document emphasizes that the performance evaluation of public hospitals (commonly known as the national examination) should be an important lever to promote the implementation of deepening medical reform policies. It proposes a series of specific evaluation indicators and work tasks to build a support system. The performance evaluation of tertiary public hospitals in China is known as the national examination by insiders and is the most authoritative assessment and evaluation of public hospitals officially released by the National Health Commission. It is recognized as the gold standard for evaluating the comprehensive strength of public hospitals. Through performance evaluation, China aims to promote the transformation of tertiary public hospitals from scale expansion to quality and efficiency in their development mode and from extensive administrative management to comprehensive performance management in their management mode, ensuring a more scientific and fair income distribution. This is expected to promote the implementation and effectiveness of comprehensive reform policies in public hospitals, achieving efficiency and quality improvement. In the same year, the performance evaluation of tertiary public hospitals in China were launched, and a relatively complete tertiary public hospital performance evaluation system was established. The functional positioning of tertiary public hospitals was further implemented, internal management was more standardized, and the overall efficiency of medical services was effectively improved. The hierarchical diagnosis and treatment system was further improved (General Office of the State Council of the People's Republic of China, 2019). The performance evaluation of tertiary public hospitals is mainly based on a comprehensive analysis of tertiary public hospitals in China. China ranks hospitals according to their functional positioning, diagnosis and treatment targets, and speciality characteristics so that hospitals of different categories can understand their position and rank among their peers nationwide. As the baton of hospital management, the performance evaluation of tertiary public hospitals in China is an authoritative benchmark for testing and evaluating the high-quality development effectiveness of public hospitals and also an official basis for demonstrating the hard power of all public hospitals in China. Through the performance evaluation of public hospitals, directional, global, and regular reform measures and key elements to promote hospital development are condensed into specific indicators, providing a beacon for guiding the development of public hospitals. Specific indicators are detailed in Figure 1.1 (General Office of the State Council of the People's Republic of China, 2019).

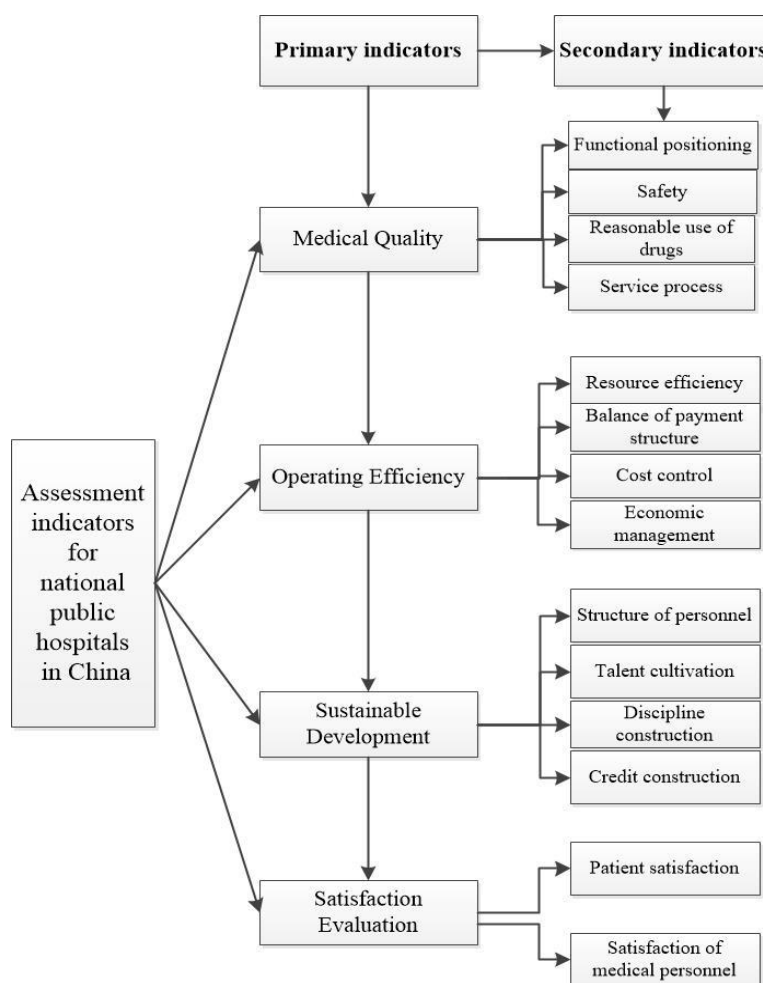


Figure 1.1 Performance evaluation indicators for tertiary public hospitals in China

As depicted in Figure 1.1, the performance evaluation of tertiary public hospitals in China includes four primary indicators: medical quality, operational efficiency, sustainable development, and satisfaction evaluation (General Office of the State Council of the People's Republic of China, 2019).

The first primary indicator is medical quality. Providing high-quality medical services is the core task of tertiary public hospitals (General Office of the State Council of the People's Republic of China, 2019). The state assesses hospitals' medical quality and safety through indicators such as medical quality control, rational drug use, and homogenization of inspection and testing. The state assesses the medical quality and safety of key diseases and critical technologies in hospitals through representative single-disease quality control indicators. The state assesses the effectiveness of hospitals in improving medical services through indicators such as appointment diagnosis and treatment, outpatient and emergency services, and patient waiting time.

The second primary indicator is operational efficiency. Operational efficiency reflects the level of refined management in hospitals and is the key to achieving scientific management in

hospitals (General Office of the State Council of the People's Republic of China, 2019). Assess the efficiency of medical resource utilization through human resource allocation and personnel load indicators. A hospital's economic operation and management can be assessed through economic management indicators. The examination of revenue and expenditure structure indicators can indirectly reflect the government's implementation of medical responsibilities and the rationality of hospital medical income structure, promoting the achievement of income and expenditure balance and slight surplus, effectively reflecting the goal of the technical service value of medical personnel. Furthermore, the hospital's proactive control over unreasonable cost growth can be measured by appraising the changes in average outpatient and inpatient expenses.

The third primary indicator is sustainable development. The construction of talent teams and teaching and research capabilities reflect the sustainable development ability of hospitals and are important indicators of the innovative development and sustainable healthy operation of tertiary public hospitals (General Office of the State Council of the People's Republic of China, 2019). The stability of medical personnel is mainly assessed through talent structure indicators. The innovation support ability of hospitals is assessed through the indicator of scientific research achievement conversion. The leading development and continuous operation of hospitals are assessed through the technical application indicator, and the credit construction of hospitals is assessed through the comprehensive public credit evaluation level indicator.

The fourth primary indicator is satisfaction evaluation. Hospital satisfaction consists of two parts: patient satisfaction and medical staff satisfaction (General Office of the State Council of the People's Republic of China, 2019). Patient satisfaction is an essential manifestation of the social benefits of tertiary public hospitals, and improving the satisfaction of medical staff is an important guarantee for hospitals to provide high-quality medical services. By evaluating the satisfaction of patients and medical staff, the patients' sense of gain and the enthusiasm of medical staff can be measured.

The performance evaluation indicators of tertiary public hospitals in China are refined into 14 secondary and 55 tertiary indicators, with a total score of 1000 points (National Health Commission, 2022). According to the scores of the participating tertiary public hospitals, they are divided into different levels, guiding Chinese public hospitals to pay attention to current medical services, medical behavior, medical development, and other aspects, and set goals and directions. From the various indicators of the performance evaluation, it can be seen that providing high-tech medical services, continuously optimizing the physician structure and enhancing medical education and technological innovation capabilities of tertiary public

hospitals in China are the keys to promoting high-quality development and high-level construction of hospitals. The national performance evaluation of Chinese tertiary public hospitals is an important means to facilitate the high-quality development of public hospitals and a baton for hospitals to adjust their development direction and resource layout. The performance evaluation of Chinese public hospitals (also known as the national examination) has gradually become the core standard in China.

At the same time, in June 2021, the General Office of the State Council of China issued the *Opinions on Promoting the High-Quality Development of Public hospitals* (The State Council of the People's Republic of China, 2021), which clarified the goals, directions, and measures for the high-quality development of public hospitals, proposed the establishment of an indicator system for evaluating the high-quality development of Chinese public hospitals, and organically combined with the performance evaluation of public hospitals, which is the fundamental guideline for the reform and development of public hospitals in China in the new stage. High-quality development and high-level construction have become the core principles of hospital development strategy in China. The *Opinions on Promoting the High-Quality Development of Public hospitals* put forward the overall requirement of putting people's health at the center, strengthening the dominant position of public hospitals, adhering to government leadership, public welfare leadership, and public hospital leadership, sticking to the integration of medical prevention, emergency response, and equal emphasis on traditional Chinese and Western medicine. It aims to establish and improve a modern hospital management system and focuses on strengthening system innovation, technological innovation, model innovation, and management innovation, as well as accelerating the expansion of high-quality medical resources and regionally balanced layout. The development mode of Chinese public hospitals has been shifted from scale expansion to quality and efficiency improvement, from extensive management to refined management, and from focusing on material elements to paying more attention to talent and technical elements in resource allocation, which provides strong support for better offering high-quality and efficient medical and health services, preventing and resolving major epidemics and public health risks, and building a healthy China.

1.1.1.2 From the perspective of Guangdong Province in China

In June 2018, to further deepen the reform of public hospitals and improve the people's health level, Guangdong Province launched the "Peak Plan" for the construction of high-level hospitals (Guangdong Provincial People's Government, 2018). With reform and innovation as the driving force, efforts were made to remove institutional and mechanism obstacles that

restrict the high-quality development of hospitals. Benchmarking against international and domestic advanced levels, it was proposed to promote several high-level hospitals to become domestic first-class and world-leading hospitals and drive the improvement of medical service levels in Guangdong Province, China. The Guangdong Provincial Government attaches great importance to and vigorously promotes the construction of high-level hospitals. Until April 2021, a total of 50 high-level hospitals have been selected for key construction in two phases, focusing on building medical development, clinical medical research and innovation capabilities, introducing and cultivating cutting-edge medical talents, improving disciplinary level, formulating modern hospital management, leading and driving the province's medical level to promote the high-level development of hospitals.

To conscientiously implement the development concept of putting the people at the center, further, promote the construction of a healthy Guangdong and a strong province with excellent medical services, accelerate the expansion of high-quality medical resources and regionally balanced layout, and consolidate the overall pattern of medical and health care, Guangdong Province in China has formulated and issued the Implementation Plan for Further Promoting the Construction and Development of High-level hospitals (Guangdong Provincial People's Government, 2021). To achieve full coverage of high-level hospital construction throughout the province, emphasis is placed on promoting 15 comprehensive hospitals to enter the top 100 in China and striving to make regional leading hospitals that currently rank between 100-200 in the performance evaluation of tertiary public hospitals in China to enter the top 100 in the national performance evaluation.

1.1.1.3 From the perspective of Zhanjiang City, Guangdong province, China

The case studied in this thesis is the GMUAH. Due to its geographical location in Zhanjiang City, Guangdong Province, China, some of the medical and health policy systems in Zhanjiang City are also of great significance for this study. In 2022, the People's Government of Zhanjiang City issued the Notice on the Action Plan for the Construction of Regional Medical Centers in Zhanjiang City (People's Government of Zhanjiang City, 2022), which requires that Zhanjiang should base itself on the new development stage, implement the new development concept, and construct a new development pattern, promote the high-quality and leapfrog development of health services in Zhanjiang, and integrate the development of health care into the acceleration of the construction of provincial sub center city. This document mentions the need to develop first-class technology, build first-class platforms, build first-class teams, establish first-class disciplines, and play a first-class role in all aspects and throughout the process of building a

modern coastal economic belt in order to comprehensively enhance the comprehensive capacity, core competitiveness, and regional influence of medical and health services in Zhanjiang City, Guangdong Province, China (People's Government of Zhanjiang City, 2022). Moreover, this document particularly emphasizes assisting the GMUAH in striving to enter the top 100 in the performance evaluation of Chinese tertiary public hospitals during the 14th Five-Year Plan period (People's Government of Zhanjiang City, 2022).

1.1.1.4 From the perspective of Guangdong Medical University in China

The 14th Five-Year Plan for the development of Guangdong Medical University (Guangdong Medical University, 2021) has been outspoken in its support for the GMUAH to be the Top 100 Hospitals in China. In December 2021, Guangdong Medical University held a special conference on managing affiliated hospitals. The conference mainly focused on creating a new pattern of high-quality development for directly affiliated hospitals. It explicitly proposed encouraging and supporting the construction of the GMUAH into a high-level hospital.

Public hospitals are asked to undergo high-quality development and high-level construction based on the overall requirements and strategic goals for hospital development proposed by China, Guangdong Province, Zhanjiang City, and Guangdong Medical University. This is not only the trend of reform and development of public hospitals in China, but it is also an inevitable choice for constructing modern high-level hospitals.

1.1.2 Development positioning and strategic goal of the GMUAH

The GMUAH is located on the beautiful coast of the South China Sea in Zhanjiang City, Guangdong Province, China, known as the Pearl of Southern Guangdong. The GMUAH is a leading hospital in western Guangdong, providing health services to over 30 million people in western Guangdong, Guangxi, and Hainan provinces. The GMUAH was formerly known as the Affiliated Hospital of Zhanjiang Medical College. It was renamed the GMUAH in 1992 and officially renamed the GMUAH on April 16, 2016. The GMUAH has won more than 120 honorary titles, including the first batch of Grade A Tertiary Hospitals in Guangdong Province, the National Civilized Unit, the National Women's Civilized Demonstration Post, the National Youth Civilized Unit, and the Advanced Group in Guangdong Province of China in the Fight Against the Covid-19. The GMUAH is the largest and most multi-functional comprehensive hospital with strong technical strength and the most advanced medical equipment in western Guangdong, China. It has been approved as a national medical sub-center and a national, provincial, and regional medical center. It has become a medical rescue center radiating to the

western Guangdong region of China and a regional medical highland integrating medical education and research. As one of the first critical construction hospitals in the Peak Plan for the construction of high-level hospitals in Guangdong Province, the GMUAH has always aimed to enhance its overall strength and become a regional medical highland. The service positioning of the GMUAH is based on western Guangdong Province, radiating to southern China, facing China, and connecting the world; the functional positioning is to undertake clinical medical, medical education, and medical research tasks, as well as to undertake medical treatment tasks for regional complex and critical illnesses and sudden public emergencies; The mission of the GMUAH is to provide medical and health services to the people, cultivate excellent medical talents for society, and create career development opportunities for employees; The strategy of GMUAH governance is to establish a GMUAH through medical treatment, promote the development of science and education, strengthen the GMUAH through talent, and govern the GMUAH according to law.

In 2018, the GMUAH was successfully selected as one of the first key construction units for high-level GMUAH construction in Guangdong Province, China, and was approved as one of the first nine high-level hospitals in Guangdong Province, China.

In 2019, the Chinese Government proposed the Opinions on Strengthening the Performance Evaluation of Tertiary Public Hospitals.

In 2020, the GMUAH achieved excellent results in constructing high-level hospitals. The overall evaluation of seven aspects of the construction content was excellent, ranking first among the 11 strong grassroots hospitals, with innovative management ranking first compared to hospitals at the same level. The GMUAH was also approved as “the national provincial regional medical center”.

In 2021, the Implementation Plan for Further Promoting the Construction and Development of High-level Hospitals released by the Guangdong Provincial Government also emphasizes the key promotion of 15 comprehensive hospitals to enter the top 100 in China, meaning to strive to make the leading regional hospitals that currently rank between 100-200 in the performance evaluation of national tertiary public hospitals to enter the top 100 in the ranking. Meanwhile, in 2021, Guangdong Medical University expressed its full support for the GMUAH to become a high-level hospital.

In 2022, the Government of Zhanjiang City also emphasized the necessity of assisting the GMUAH in striving to enter the top 100 in the performance evaluation of national tertiary public hospitals during the 14th Five-Year Plan period.

To maintain a sustained competitive advantage and high-level development, a hospital must

formulate a hospital development strategy that aligns with the external environment and internal situation. In response, the GMUAH reviewed the situation and addressed the major strategic layout of health and hygiene between China and Guangdong Province. Combined with the specific requirements of China, Guangdong Province, Zhanjiang City, and Guangdong Medical University for improving the quality and efficiency of public hospitals, the GMUAH has formulated the 14th Five-Year Strategic Plan and implementation path that is in line with the actual development of the GMUAH itself. In the 14th Five-Year Plan, it is explicitly stated that by the end of the 14th Five-Year Plan period, efforts would have been made to comprehensively build one of the top 100 hospitals in China, leading the western Guangdong Province, radiating the Beibu Gulf, and connecting with the Guangdong Hong Kong Macao Greater Bay Area. Entering the top 100 in the performance evaluation ranking of Chinese national public hospitals has been included in the strategic development goals of the GMUAH, as shown in Figure 1.2. High-level construction and high-quality development can be further promoted in the GMUAH by achieving strategic goals, which will help comprehensively and continuously advance the construction of Healthy China and provide comprehensive and full-cycle health protection for the people.

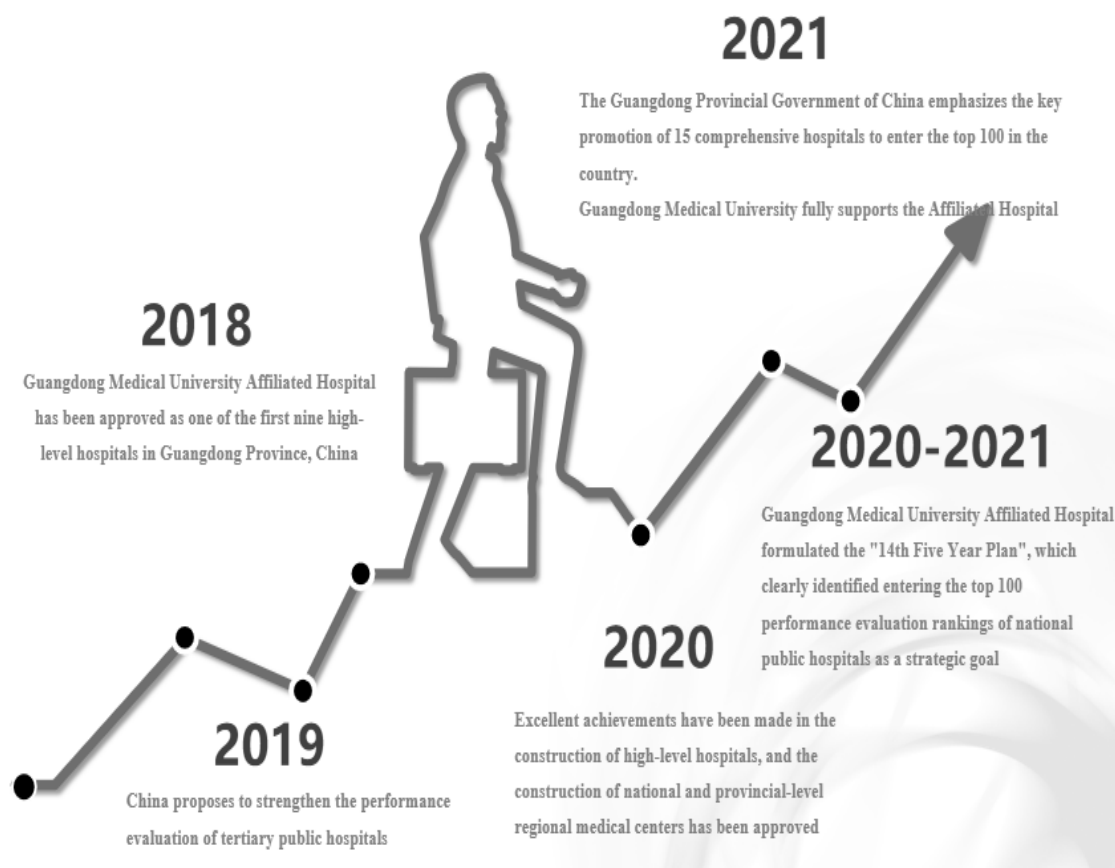


Figure 1.2 Development of the strategic goals of the GMUAH

1.2 Research problem

This thesis mainly focuses on the reasons for the failure to implement the strategy, namely the reason why the strategic development goal of the GMUAH, which was explicitly proposed in the 14th Five-Year Plan to enter the top 100 in the performance evaluation ranking of Chinese national public hospitals, has not been fully implemented.

Concretely, this thesis mainly focuses on conflicting interests (CI) and conflicts of interest (COI) which lead to the failure of the implementation of the strategy of the GMUAH.

Specifically, the first aspect is to use strategic management theory to review the development strategy of the GMUAH and find that adhering to strategic goals is beyond doubt.

The second aspect is to measure the performance of the GMUAH in the national examination, which is that it did not enter the top 100 and has two shortcomings, namely low scores in medical quality and sustainable development.

The third aspect is to analyze the conflicting interests and conflicts of interest in achieving the strategic goals of the GMUAH. By analyzing the stakeholders of the GMUAH, a solid foundation has been laid for the subsequent empirical research, and the issues studied in this thesis have been further clarified.

1.2.1 Strategic backtracking: failure to achieve strategic goals

The strategic management process typically includes three stages: strategic formulation, implementation, and evaluation (Cristiana & Anca, 2013).

In the strategic formulation stage, it is necessary to analyze the internal and external environment to formulate its future long-term development direction and goals and develop specific action plans to achieve these goals. The main purpose of this stage is to determine the vision, mission, strategic goals, and long-term strategic plan (David, 2011).

In the strategic implementation stage, it is necessary to determine specific action plans, transform the formulated strategic plans into specific action plans, and continuously monitor and adjust these action plans to ensure that their strategic goals can be achieved.

In the strategic evaluation stage, it is necessary to regularly evaluate the implementation of its strategic plan and make necessary adjustments based on the evaluation results. At this stage, activities include three aspects: re-examine external and internal factors, which are the basis for determining the current strategy (review the basis), measure performance and take corrective actions (David, 2011).

To be more specific, the first step is to understand whether changes have been made to the original strategic plan based on retrospective analysis. If there are no changes, specific performance should be measured. If there are changes, measures should be taken to correct strategic deviations; the second step is measuring performance, and it is also important to consider whether there have been significant changes to the implementation of the original strategic plan. If there have been no changes, the implementation should continue according to the original strategy. If there have been changes, corresponding measures should be taken to correct them.

The achievement of phased goals guarantees any grand strategic goal. Based on the above analysis, the author combines the actual situation of the GMUAH to review its strategic planning and implementation process and measures its actual performance. An analysis was conducted on the development plans formulated by the GMUAH, especially the objective evaluation of its 14th Five-Year Plan. The core strategic goal of entering the top 100 in the performance evaluation ranking of Chinese national public hospitals by 2025 was focused on strategic review and performance evaluation status analysis. Through strategic review analysis, it was found that the strategic goal of the GMUAH to enter the top 100 in the performance evaluation ranking of Chinese national public hospitals by 2025. It is consistent with the requirements of China, Guangdong Government, Zhanjiang Government, and Guangdong Medical University. Therefore, it is necessary to strengthen the existing GMUAH development strategy. At present, the development strategy of the GMUAH is combined with the performance evaluation of tertiary public hospitals in China, closely following the national policy orientation and using the performance evaluation of tertiary public hospitals in China as the starting point, which forces the GMUAH to transform and develop from extensive management to refined management, from past scale development to improvement of connotation and quality. This will help promote the high-quality transformation and development of the GMUAH, as well as the continuous promotion of high-level hospital construction. The GMUAH aims to improve the quality of its medical services, scientific and educational capabilities, and level by adapting to this new situation and regulating its medical behavior.

1.2.2 Measuring performance: failure to enter the top 100

The GMUAH compares the performance evaluation indicators of national public hospitals in China. It uses performance evaluation as the ruler to identify gaps and find the right direction by measuring its strengths and weaknesses. When this thesis was developed, the GMUAH had

not yet entered the top 100 in the performance evaluation ranking of Chinese national public hospitals, ranking 115 among them. Although rated A+, it had not yet achieved its strategic goals. There were 54 actual planned indicators, of which 40 were completed by the GMUAH, with a completion rate of 74.1%. Six items were basically completed, while eight items were not completed. The assessment score increased from 732.7 points in 2018 to 788 points in 2021. The national monitoring indicator level has increased directly from A level in 2018, 2019, and 2020 to A+ in 2021. The Case Mix Index (CMI) ranking, total research funding ranking, and the number of third- and fourth-level surgeries are constantly changing. The comprehensive ranking of the GMUAH in the performance evaluation of public hospitals in China increased from 221 in 2018 to 115 in 2021 (see Table 1.1 for details), which is one step closer to the top 100 (Affiliated Hospital of Guangdong Medical University, 2022).

Table 1.1 Overall situation of the national examination of the GMUAH from 2018 to 2021

Items	2018	2019	2020	2021		Quarter Quarter (QOQ)	On
Score of National Monitoring Indicators	732.7 Points	754.1 Points	748.7 Points	788 Points	↑	39.3 Points	
National Monitoring Indicator Level	Level A	Level A	Level A	Level A+	↑	Level One	
Ranking of National Monitoring Indicators	221	120	124	115	↑	Number Nine	
Assess the Total Number of Hospitals	1154	1183	1227	1355	↑	128	
CMI National Ranking	164	121	130	141	↓	Number Eleven	
National Ranking of Total Scientific Research Funding	174	113	137	145	↓	Number Eight	
Ranking of Fourth-Level Surgeries Nationwide	150	140	129	145	↓	Number Sixteen	

By comparing the performance evaluation data of national public hospitals since 2018, the GMUAH's scores of the four primary indicators, which are medical quality, operational efficiency, sustainable development, and satisfaction evaluation, in the performance evaluation of national tertiary public hospitals are as follows: the score of satisfaction evaluation continued to rise from 86 points in 2018 to 114 points in 2021 (out of a maximum of 120 points), while the score of operational efficiency continued to increase from 259 points in 2018 to 266 points in 2021 (out of a total of 270 points), with both achieving a relatively large improvement step; however, there were still significant gaps in the other two indicators, namely medical quality and sustainable development, with prominent shortcomings (see Table 1.2 for details). The

score for medical quality was 306.8 points, and the score for sustainable development was 101.2 points in 2021 (Affiliated Hospital of Guangdong Medical University, 2022). These two shortcomings have seriously restricted the overall development of the GMUAH and have become an important influencing factor that affects its ranking in the national performance evaluation of Chinese tertiary hospitals.

Table 1.2 Dynamic changes of performance evaluation indicators of the GMUAH from 2018 to 2021

Index	Full marks	2018	2019	2020	2021	Fraction Disparity
Medical Quality	430	297.5	287.3	282.7	306.8	-123.2
Operational Efficiency	270	259	250	266	266	-4
Sustainable Development	180	90.2	117.8	95	101.2	-78.8
Satisfaction Evaluation	120	86	99	105	114	-6

Firstly, regarding medical quality indicators, the proportion of discharged patients undergoing surgery at the GMUAH is relatively low, with a score of only 56 out of 100 for the proportion of discharged patients undergoing level four surgery.

Secondly, there are also significant shortcomings in the indicator of sustainable development, especially with a research project funding score of only 40 points per 100 health technicians (out of 100). Therefore, how to increase the proportion of surgeries, especially the proportion of third-fourth-level surgeries and the funding for scientific research projects per 100 health technicians, is a prominent issue in front of the GMUAH. It is also the main reason that affects the construction of high-level hospitals and fails to enter the top 100 performance evaluation ranking of public hospitals in China.

Therefore, the main reason the GMUAH's strategy has not been fully implemented falls on the proportion of third- and fourth-level surgeries in the medical quality indicator and the funding score for scientific research projects per hundred health technicians in sustainable development indicator.

1.3 Research Question

Through reviewing and tracing the strategic planning and execution of GMUAH, it was found that the strategic goal of GMUAH has not been achieved. The GMUAH failed to enter the top 100 performance evaluation of China's tertiary public hospitals due to two main shortcomings. The first shortcoming is in terms of medical quality, with a relatively low proportion of third - and fourth level surgeries; The second shortcoming is in terms of sustainable development, with

low research funding per 100 people. Therefore, the research question of this paper mainly revolves around exploring the reasons why the GMUAH strategy has not been implemented. The first research question is to explore why the strategic goal of GMUAH cannot be achieved? The second research question is to explore what are the reasons that constrain the two shortcomings of GMUAH? The third research question is to explore how to resolve these two shortcomings and achieve GMUAH's strategic goal?

1.4 Research purpose

The GMUAH, as a large-scale comprehensive tertiary grade A hospital integrating medical treatment, teaching, scientific research, preventive healthcare, and rehabilitation, has achieved certain results in its past development and has certain regional competitive advantages. It has been selected as one of the first construction units of the Guangdong Province High-level Hospital Construction Peak Plan and a national, provincial, and regional medical center construction unit providing new development opportunities for the GMUAH. GMUAH has formulated its medium and long-term development strategy. Although it has conducted multiple rounds of research and argumentation in the early stage, the final implementation effect was not as expected, with a significant deviation from the initial plan and a low overall goal completion rate. So, clarifying the medium- and long-term development goals of the GMUAH, formulating development strategies that meet the GMUAH's own development needs, and enhancing the GMUAH's core competitiveness through strategic management are practical management challenges facing the GMUAH. The performance evaluation of public hospitals in China, which measures the high-quality development of high-level hospitals, has gradually become an important policy choice to promote the comprehensive reform of public hospitals. Certain key aspects need to be focused on in terms of GMUAH strategic management, such as how to carry out strategic management in the fierce competition of the medical industry, determine development goals, improve management methods, find the correct positioning, and continue to make good use of the performance evaluation as an important method of the reform.

The 14th Five-Year Plan formulated by the GMUAH conforms to the development requirements of public hospitals in China, Guangdong Province, and Guangdong Medical University. It proposes the strategic goal of entering China's top 100 tertiary public hospitals. This study analyzes the shortcomings of the GMUAH in terms of medical quality (proportion of third- and fourth-level surgeries) and sustainable development (research projects funding for a hundred people) by comparing it with the national examination indicator system. Furthermore,

empirical research methods are used to explore the conflicting interests and conflicts of interests behind these shortcomings. Firstly, it helps to stimulate the subjective initiative of medical personnel and improves the quality of medical services and research levels. Secondly, it helps to optimize the allocation of GMUAH resources and achieve rational use of resources. Thirdly, it helps to achieve the strategic goals of the GMUAH and ultimately build the GMUAH as one of the comprehensive top 100 hospitals in China that leads western Guangdong, radiates the Beibu Gulf, and connects with the Guangdong-Hong Kong-Macao Greater Bay Area with the integration of the diagnosis and treatment of difficult and critical illnesses, medical talent cultivation, and medical research, continuously improving the level of medical technology and service quality, and providing the people with comprehensive and complete life cycle medical and health services.

1.5 Research framework

This study is divided into four steps.

The first step is to determine the research topic. The research on the high-level hospital construction of GMUAH is mainly aimed at exploring its strategic management. Firstly, analyzing the research background. The main background is that China issued the "Opinions on Strengthening the Performance Evaluation of Third tier Public Hospitals" in 2019. The GMUAH is a leading hospital in western Guangdong, providing health services to over 30 million people in western Guangdong, Guangxi Province, and Hainan Province in China. In response to the needs of building high-level hospital at the national, provincial, municipal, and university levels and the actual situation of the hospital, the GMUAH has formulated the "14th Five Year Plan" strategic plan, which aims to enter the top 100 performance evaluation of China's tertiary public hospitals. Secondly, analyzing the research problem. Finding out the performance evaluation rankings of China's tertiary public hospitals over the years, the hospital's ranking has improved, but it still cannot enter the top 100 (hovering between 125-115), making it difficult to achieve the hospital's strategic goal. Based on the objective results of performance evaluation, the GMUAH has two main shortcomings: a low proportion of third - and fourth level surgeries and low research funding per 100 people. Finally, proposing research questions. Why can't the strategic goal of the GMUAH be achieved? What are the reasons for the formation of the two shortcomings? How to address the shortcomings and achieve the strategic goal of the GMUAH?

The second step is theoretical research. Firstly, it is necessary to study and research the

literature and theories of strategy and strategic management. Studying and researching the relevant theories of strategy and strategic management by Chandler, Ansoff, Porter, David, and others. Secondly, conducting research and analysis on the concepts, principles, and classifications of stakeholder theory, with a focus on studying Freeman's stakeholder theory. Once again, it is about studying and researching hospital strategic management. Through Web of Science search platform, it was found that research on hospital strategic management progressed slowly in 2007 and then showed a significant improvement. The hot topics in hospital strategic management research include strategic planning, strategic goals, leadership, and balanced scorecard. Secondly, Having the focus on studying hospital strategic management from the perspective of stakeholders. It should pay attention to the many disharmonious issues in the operation of public hospitals caused by conflicting interests and conflicts of interest among stakeholders. Finally, based on David's strategic management model, a high-level hospital strategic management model is constructed. Strategic management includes three parts: strategic formulation, strategic implementation, and strategic evaluation(David, 2011). The article mainly focuses on the strategic evaluation part, tracing the strategy of the GMUAH and measuring its performance.

The third step is empirical research. The article adopts a qualitative research method. Revealing the reasons why the strategy cannot be implemented through interviews and questionnaires. The article analyzes the ci and coi behind it and proposes targeted solutions. The stakeholders of GMUAH are mainly concentrated in three main stakeholders: hospital managers, middle-level management cadres, and general employees. These three stakeholders will be taken as the research objects. Firstly, the selection of interviewees includes clinical department heads, hospital human resources department heads, research department heads, medical department heads, and nursing department heads. These objects are the main stakeholders of the hospital and have a full understanding of the hospital's current situation. Secondly, using MAXQDA software for coding. Meanwhile, designing a questionnaire for the article and conducting a survey. Two rounds of preliminary surveys were conducted to confirm the reliability and validity of the questionnaire. KMO, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA) are performed on the questionnaire. During the formal investigation, the “Wenjuanxing” software would be distributed to all employees, including hospital managers, middle-level managers, and general staff. Finally, the survey results are obtained. The main focus of the investigation is to identify the shortcomings that affect the achievement of the hospital's strategic goal, as well as the reasons for the failure to achieve the hospital's strategic goal, especially the ci and coi involved. In addition, a survey was conducted

on the specific methods and measures for achieving the hospital's strategic goals. On this basis, further analysis and discussion will be conducted on the survey results.

The fourth step is to suggest countermeasures and draw conclusions. Based on the survey results of questionnaire and interview, corresponding solutions are proposed to address the two shortcomings in GMUAH. In terms of third - and fourth level surgeries, corresponding strategies are mainly proposed around resources, talents, assessments, and disciplines. In terms of research funding per hundred people, corresponding measures are mainly proposed around evaluation, allocation, full staff research, and employee benefits. Please refer to the Figure 1.3 for details.

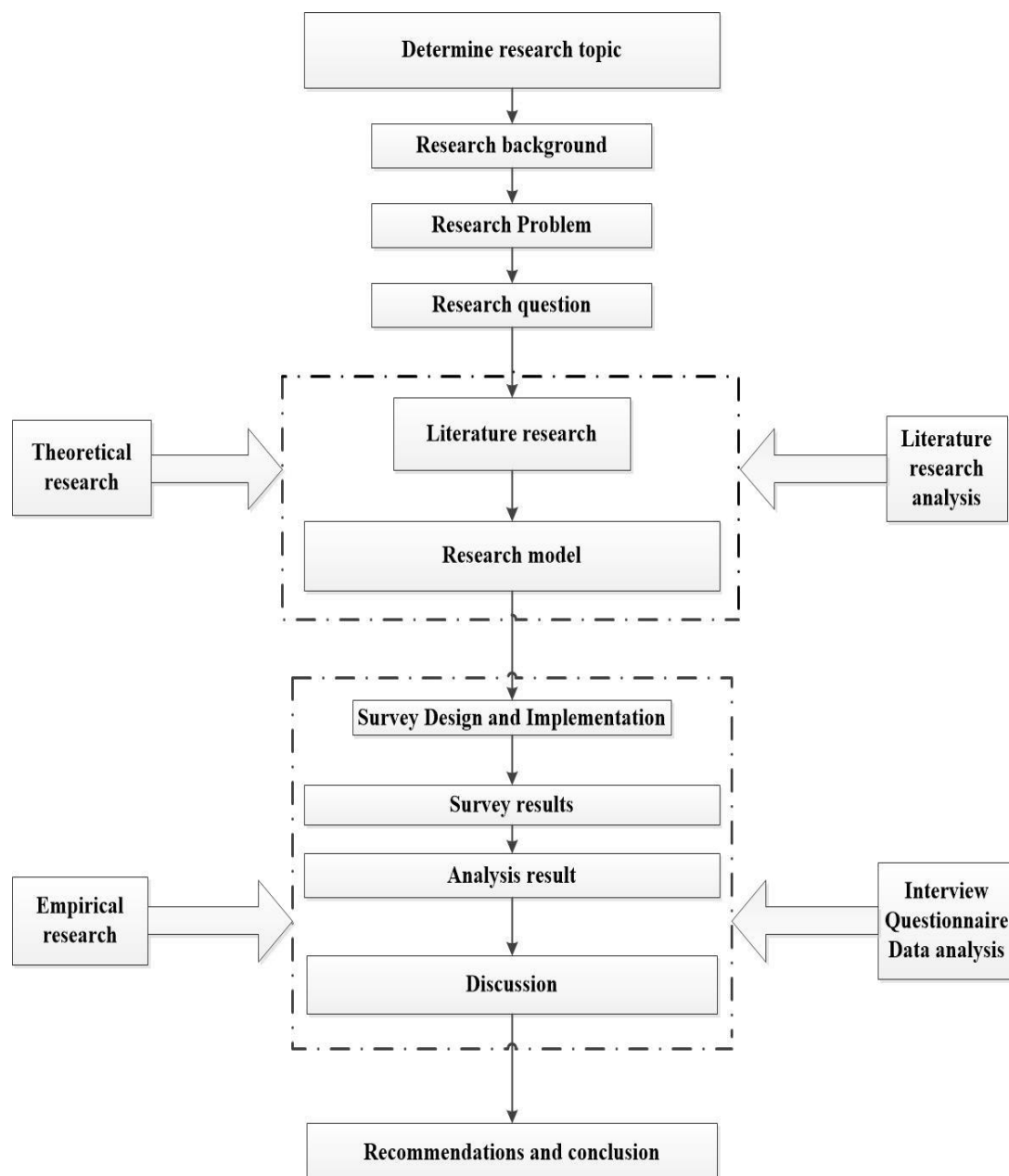


Figure 1.3 Research structure diagram

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Chapter 2: Literature Review

2.1 Strategy and strategic management

The term strategy originates from the Greek word *strategos*, which means military commanders and local administrators (Mackay & Zundel, 2017). Later, it evolved into a military term, referring to the strategy of military commanders commanding military operations, with the meanings of leadership and military. The term strategy was initially used in military operations, and later, many military strategies were also applied in enterprise management, especially in business strategy, which requires a comprehensive grasp and control of the competitive environment (Cattani et al., 2017). There are many similarities between military strategy and enterprise management strategy, both of which aim to achieve victory. They still have differences. The essence of military strategy is to eliminate the enemy and win the war, but corporate strategy is less radical. Most enterprises seek to coexist with their competitors, not necessarily eliminate them. In China, in the 6th century BC, Sun Wu's *The Art of War* is considered to be the earliest work in China to plan its strategy (Hanzhang, 2007). In modern times, the term strategy has been extended to various fields such as politics, economy, society, and healthcare, and its meaning has evolved to refer to overall and comprehensive strategies, plans, and countermeasures that influence victory or defeat (Luttwak, 2001).

Drucker, the father of modern management, defined strategy as follows: to do the right thing from the beginning rather than the acceptable thing (Swaim, 2010). For enterprises or hospitals, it means finding the right person to do the right things right, that is, finding the right person, setting the right direction, and doing the right things right, and this is strategic management. After the work *Strategy and Structure* was published, strategy gradually gained attention in the field of enterprise management (Chandler, 1962). Chandler (1962) defined strategy as "determining the basic long-term goals and objectives of the enterprise, taking action procedures, and allocating necessary resources to implement these goals". Chandler (1962) explored the changing relationship between the management structure of enterprises and their growth, with the main purpose of ensuring the smooth implementation of strategies. His views have made significant contributions to the research of strategic management by other scholars in the future. Ansoff (1957) mainly discussed the market scope, growth carriers, competitive

advantages, and synergies of strategy. Ansoff's definition emphasizes market factors, so it tends to be more environmentally oriented. Christensen and Montgomery (1981) defined strategy as "a pattern of purpose, purpose, or goal, as well as the main policies and plans aimed at achieving these goals, used in this way to state the current and future state of a business". Mintzberg (1987) advocated for strategic 5P, which is a guide for planning and future actions. 5P includes Plan, Ploy, Pattern, Position, and Perspective. Porter (1991) pointed out that strategy is a series of different activities that create unique and valuable positioning. The rules businesses face are also simple: discovering and seizing the most ideal positioning. Butler et al (1997) believed that strategy is a scoring card that comprehensively evaluates the performance of a company's strategy, both financial and non-financial. So far, the definition of the term strategy varies slightly among different schools of thought and scholars, but its spirit and essence are largely similar.

The founder of strategic management is Igor Ansoff, whose special position in strategic management is mainly reflected in his pioneering research on strategic management (Ansoff, 1957). Strategic management is a management mindset and methodology defined as the art and science of cross-functional decision-making that enables an organization to achieve its goals through formulation, implementation, and evaluation (David, 2011). Intended to establish and implement long-term goals for the organization and effectively respond to changes in the internal and external environment. Strategic management emphasizes matching resource allocation with organizational mission and vision to achieve competitive advantage and sustainable development (Obieze, 2023). The basic principles of strategic management include clarifying the organization's mission and vision, analyzing the external environment and internal resources, setting strategic goals and plans, implementing and monitoring strategic execution, and continuously learning and adjusting strategies (Poister & Streib, 1999).

Strategic management has rich connotations. David (2011) believed that "strategic management is the art and science of formulating, implementing, and evaluating cross functional decisions that enable organizations to achieve their goals." Strategic management is defined as "an art and science that focuses on formulating, implementing, and evaluating management decisions and actions with comprehensive functions. Such management decisions and actions can ensure the achievement of the goals set by an organization within a relatively stable time" (David, 2011), and his approach is currently recognized by most scholars. At the Pittsburgh Conference, Schendel and Hofer (1979) proposed a strategic management program model that includes basic activities, which has been in use ever since with slight modifications. These activities include organizational goal formulation, environmental analysis, strategic

formulation, strategic evaluation, strategic implementation, and strategic control. Environmental analysis refers to analyzing a company's competitive and more general environment to determine its opportunities and threats. Enterprises should adapt to the environment, as the environment determines the most suitable strategic pursuit.

In 2006, Asian management master and Japanese strategic management expert Ohmae (2006) pointed out that compared to competitors, strategic management is the most effective way to change a company's strength. Ohmae (2006) believed that strategy is a competitive advantage, and the sole purpose of strategic planning is to enable enterprises to obtain sustained advantages over their competitors efficiently. There are three main factions of strategic management: the competitive strategy faction, the resource allocation strategy faction, and the goal strategy faction (Alidrisi & Mohamed, 2012). The competitive strategy school believes that the key to business strategy is the relative competitive advantage of the organization. There are three basic types of competitive strategies to choose from to determine competitive advantage: low-cost strategy, differentiation strategy, and specialization strategy (Dyer & Singh, 1998). The resource allocation strategy school believes that the core of organizational business strategy is the way resources are allocated. By planning and studying the future resource allocation of the organization and its interaction with the external environment, guide and solve all major issues in the organization's development. The main viewpoint of the goal strategy school is that the core of the organizational strategy is to determine and implement the organization's long-term goals, including both the determination of long-term goals and the implementation process of goals. It can be said that since the emergence of strategic management, with the joint efforts of many scholars and entrepreneurs, especially the contributions of Chandler and Ansoff, the theory of strategic management has rapidly developed and spread. With the deepening of relevant research and the establishment of theoretical foundations, many non-profit organizations began implementing strategic management in the 1980s, such as government, education, and medical institutions.

The strategic management process includes three stages: strategy formulation, strategy implementation, and strategy evaluation (Kabeyi, 2019). Strategy formulation includes formulating an enterprise's vision and mission, identifying external opportunities and threats, determining internal strengths and weaknesses, establishing long-term goals, proposing alternative strategies, and selecting specific strategic solutions (Simerson & Keith, 2011). The issues involved in the strategic formulation include deciding which new industries to enter, which businesses to abandon, how to allocate resources, whether to expand the business scope or diversify, whether to enter the international market, whether to conduct mergers and

acquisitions or form joint ventures and how to prevent malicious takeover (Alkhafaji & Nelson, 2013). Since the resources possessed by any organization are not infinite, strategists must decide which strategic plan to choose from will bring the greatest benefits to the enterprise. Strategy determines an enterprise's long-term competitive advantage. Whether good or bad, strategic decisions will bring various important consequences and have a lasting impact on the enterprise (Adner & Helfat, 2003). Senior management personnel in enterprises should have a broad vision, fully understand the decision-making process of strategic formulation, and have the authority to allocate various resources required for strategic implementation, fully conducting scientific and reasonable allocation of resources.

Strategy implementation requires enterprises to set annual goals, formulate policies, motivate employees, and allocate resources to ensure the formulated strategy can be effectively implemented (Kaplan & Norton, 2005). Strategic implementation is often referred to as the action phase of strategic management, which mainly includes shaping the corporate culture that supports strategy (Bourgeois & Brodwin, 1984), establishing effective organizational structures, planning marketing initiatives, budgeting, developing and using information management systems, and linking employee compensation to enterprise performance. Strategic implementation means mobilizing employees and managers to put the formulated strategies into action, which is often seen as the most difficult stage in the strategic management process, requiring individuals to have discipline, responsibility, and dedication (Hussey, 2007). Successful strategic implementation relies on the ability of managers to motivate employees, which is more of an art than a science. If the strategy is well formulated but cannot be implemented, it will not achieve any expected goals (Kabeyi, 2019).

Strategic evaluation is the final stage of strategic management, and managers need to know when the strategy they have formulated has gone wrong. Strategic evaluation is the basic means to obtain this information (Punt et al., 2016). The three basic strategic evaluation activities are: (1) Checking the external environment and internal conditions that serve as the foundation of the current strategy (review basis); (2) Measuring the performance of strategic implementation; (3) Taking corrective actions (David, 2011). Strategic evaluation is necessary because today's success does not guarantee tomorrow's glory. Success often brings new and different problems, and an enterprise that feels proud and complacent due to achieving small results will inevitably lead to destruction.

Chandler (1962), as an early representative of strategic management theory, proposed the classic assertion that "organizations belong to strategy". Chandler (1962) clearly stated that strategy is the process of defining an organization's short-term and long-term goals and

achieving these goals by managing the resources it possesses. Furthermore, a clear strategy was proposed that elaborates on the relationship between the environment and organizational structure. It was suggested that the formulation of a strategy should be market-oriented, that the organizational environment should be understood first before formulating the strategy, and that the organizational structure should be determined. Although Chandler proposed the relationship between strategy and environment, he did not provide a clear description of the choice of competitive environment. Porter (1980) suggested the impact of the "five forces", and it is clear that early strategic management theory did not explicitly address the issue of competitive environment selection. Potential entrants, existing competitors, substitutes, buyers, and suppliers collectively influence the development potential and profitability of the organization. To develop a strategy that suits one's own situation, it is necessary to understand the organization's environment fully and have a reasonable position in order to stand undefeated in competition.

The resource-based theory also emphasizes the importance of organizational environments and resources (Wernerfelt, 1984). The publication "A Resource-based View of the Firm in 1984" marked the birth of resource-based theory (Wernerfelt, 1984). Resources refer to anything that can showcase the core competitiveness of an organization, which can exist in the form of tangible assets or intangible assets. The trademarks, employee knowledge, skills and abilities, machinery and technology, capital, contracts, and effective procedures and processes owned by an enterprise can all be referred to as resources. The assumption of resource-based theory is that enterprises have different tangible and intangible resources that can be transformed into unique capabilities, which are the source of sustainable competitive advantages for enterprises (Kamaluddin & Rahman, 2013). The basic idea of this theory is to view enterprises as a collection of resources, focusing on the characteristics of resources and strategic factor markets and using this to explain the sustainable advantages and differences between enterprises (Oliver, 1997). The resource-based theory is used to examine performance differences caused by resource heterogeneity, aiming to explain how organizations maintain unique and sustained advantages in a competitive environment (Barney, 1991). This theory focuses on performance differences between enterprises, which are considered to be caused by differences in resource income with different levels of efficiency (Hitt et al., 2016). A high level of organizational performance means that an enterprise has lower costs and can create greater performance levels and net benefits compared to inefficient enterprises. In other words, the difference in enterprise performance depends on the difference in resources of enterprises, which comes from the resources and abilities that enterprises can control and make reasonable use of. It is an economic

theory about an enterprise's competitiveness, which states that an enterprise's competitive advantage comes not only from competition between external environments but also from internal resources (Barney & Clark, 2007). Therefore, enterprises need to invest a lot of energy and resources to develop and maintain core capabilities in order to effectively respond to external competition.

Prahalad and Doz (2017) proposed two innovative methods for business management strategies in their research: passive strategic innovation and active innovation strategy. The former is proposed due to corporate crisis, while the latter is a development strategy based on the development of the enterprise. Parker (2008) provided a more thorough discussion of strategic management in the context of the business ecosystem. Parker (2008) proposed that in order for organizations to achieve more benefits and win in competition, it is necessary to design a reasonable product portfolio or business model to generate network effects.

With the increasing diversification of patient medical needs and the intensifying competition in the medical market, strategic management theory has been widely applied in hospitals. It not only enriches the theory of hospital management but also effectively promote the better and faster development of hospitals (Ginter et al., 2018). With the continuous deepening of China's healthcare system reform, how to attract more patients and provide them with high-quality and satisfactory services in the fiercely competitive medical market environment requires hospitals to scientifically analyze and plan their external competitive environment and various internal resources to obtain and maintain long-term competitive advantages. From this perspective, strategy occupies a core position in the operation and management of modern hospitals, which helps to clarify the future development direction of hospitals. Hospital strategic management refers to a series of strategic planning activities related to the overall situation of the GMUAH, carried out by the GMUAH to adapt to changes in the external environment, enable long-term and stable healthy development, and achieve established strategic goals. It is the process of adapting the internal capabilities of an organization and institution to the needs of the external environment. It is based on predicting and analyzing the future competitive environment; an advanced management method aimed at seeking long-term competitive advantage is, to some extent, the "magic weapon" for hospitals to win in competition (Schulz & Johnson, 2003). This study applies strategic management theory and focuses on strategic formulation, implementation, and evaluation within the framework of strategic management. By tracing the strategic foundation of the GMUAH, it measures the specific performance of the GMUAH and focuses on analyzing the specific conflicting interests and conflicts of interest and their reasons. Furthermore, taking certain

measures to resolve the conflicting interests and conflicts of interest it will help to achieve the strategic goals of the GMUAH better.

2.2 Stakeholder theory

Stakeholder theory gradually developed in Western countries around the 1960s, and its influence rapidly expanded after entering the 1980s. Its emergence promoted the transformation of enterprise management methods. The concept of "stakeholders" was proposed by the Stanford Research Institute (SRI) in 1963 (Friedman & Miles, 2006). The first person known to apply the concept of stakeholders was Eric Rhenman, who expanded the definition of unilateral stakeholders in SRI to bilateral relationships, emphasizing the mutual influence between the enterprise and stakeholders (Eskerod, 2020). Professor Eric Rhenman, who in the 1960s first proposed an explicit theoretical framework for stakeholder thinking (Eskerod, 2020), believed that stakeholders are individuals or groups who rely on the enterprise to achieve their goals, and the enterprise also relies on their existence for its sustainable development, such as investors and employees. However, at that time, the issue of stakeholders did not receive much attention, leading to silence in research on stakeholder theory for nearly 20 years (Eskerod, 2020).

The earliest economist to formally use the term stakeholders was Ansoff, who believed that to set ideal business goals, it is necessary to comprehensively balance the conflicting claims of various stakeholders in the enterprise, including managers, workers, shareholders, suppliers, and customers (Ansoff, 1957). The term "stakeholder" was first proposed and can be traced back to Freeman's book "Strategic Management: A Stakeholder Approach", which explicitly proposed the stakeholder theory (Freeman, 1984). This strategic management perspective emphasizes the role of stakeholders in enterprise strategic analysis, planning, and implementation, focusing on defining stakeholders from the perspective of their impact on the enterprise and emphasizing stakeholder participation in enterprise strategic management (Freeman, 1984). Since then, stakeholder research has mostly been conducted according to his framework.

The stakeholder theory originated from research on corporate governance in the 1960s. Through continuous research and development, it gradually formed a relatively complete theoretical framework and was widely applied in fields such as economics and management. The stakeholder theory emphasizes the focus on multiple stakeholders, with the core idea of putting stakeholders' interests at the center (Harrison & Wicks, 2013). Stakeholder theory refers

to the management activities carried out by business managers to balance the interests and requirements of various stakeholders comprehensively. Compared with traditional shareholder supremacy, this theory holds that the development of any enterprise cannot be separated from the investment or participation of various stakeholders. Enterprises pursue stakeholders' overall interests, not just certain entities' interests (Greenwood, 2007). Stakeholders include trading partners such as shareholders, creditors, employees, consumers, and suppliers of the enterprise, as well as pressure groups such as government departments, local residents, local communities, media, and environmentalists, and even objects directly or indirectly affected by the enterprise's business activities such as the natural environment and future generations of humans (Svendsen, 1998). These stakeholders are closely related to the survival and development of an enterprise. Some share the operational risks of the enterprise, some pay the price for its business activities, and some supervise and constrain the enterprise. The business decision-making of the enterprise must consider their interests or accept their constraints (Pajunen, 2006). In this sense, the survival and development of an enterprise depend on the quality of its response to the demands of various stakeholders, rather than just shareholders. This enterprise management philosophy theoretically elaborates on the center of enterprise performance evaluation and management, laying the foundation for subsequent performance evaluation theories. Stakeholders are crucial to the operation and development of an enterprise. Studies have shown that different stakeholders have varying degrees of impact on the enterprise's operations, and there are differences in the interests and requirements of each stakeholder, which can significantly impact the enterprise's business development. Moreover, all stakeholders can't maintain a consensus on all issues. Therefore, meeting and coordinating the interests and requirements of various stakeholders is an important task (Heikkila & Gerlak, 2005).

Freeman (1984) defined stakeholders as "any group or individual who can influence or be influenced by the achievement of organizational goals". Although this portrays the interactive relationship between stakeholders and corporate strategy, it is too broad. Later, Freeman et al. (2018) further revised the definition to "stakeholders are those who benefit or suffer from company activities, and their rights are respected or infringed upon by company activities". Savage et al. (1991) have defined stakeholders as those who are influenced by organizational activities and have the ability to influence them, and Crilly (2011) has defined stakeholders as those who can influence and be influenced by organizational activities. These are mainly from this perspective, and these definitions emphasize the interactive relationship between stakeholders and enterprise organizations, thereby providing conditions for stakeholder participation in enterprise strategic management activities.

Stakeholder theory emphasizes the interests and requirements of stakeholders in the enterprise's business activities and fully integrates humanistic management ideas. According to the general theory, stakeholder theory challenges the traditional shareholder primacy governance model, which originated in the United States. It has gradually developed in questioning the practice of shareholder-first corporate governance in countries such as the United States and the United Kingdom. The governance model of shareholder first believes that shareholders own the enterprise, and the enterprise's operation must only maximize shareholder profits (Hayden & Bodie, 2020). The main difference from the traditional shareholder-first corporate theory is that stakeholder theory holds that the development of any enterprise cannot be separated from the investment or participation of various stakeholders, such as shareholders, creditors, employees, consumers, and suppliers. Enterprises should not only serve the interests of shareholders but also protect the interests of other stakeholders (Etzioni, 1999). Freeman and his successors have pushed stakeholder research to unprecedented heights, and stakeholder perspectives have been integrated into modern strategic management theory, playing an increasingly active role in enterprise affairs. Freeman's viewpoint has been supported by many economists and has become a standard paradigm for stakeholder research. Although there is still insufficient understanding of the definition of stakeholders and no practical mechanism has been provided for the realization of stakeholder interests, it undoubtedly lays the foundation for the dynamic evolution of stakeholder research in recent years.

After years of research, the methods for defining stakeholders have formed two major categories: multidimensional segmentation methods represented by Freeman, Carrol, Wheeler, and Mitchel scoring methods. Freeman et al. (2010) divided stakeholders into those who have ownership, those who are economically dependent, and those who are socially interested based on ownership, economic dependence, and social interests. Carroll (1991) classified stakeholders into core, strategic, and environmental stakeholders based on their importance. Wheeler and Sillanpää (1998) introduced the social dimension into the classification criteria of stakeholders, dividing all stakeholders into four categories: (1) The primary stakeholders, who have a direct relationship with the enterprise and have people involved. (2) Secondary stakeholders who connect indirectly with businesses through social activities. (3) The primary nonsocial stakeholders who have a direct impact on the enterprise but do not have specific connections with individuals. (4) Secondary non-social stakeholders who indirectly impact the enterprise but do not have a connection with specific individuals. Mitchell et al. (1997) proposed to distinguish stakeholders from three dimensions: power, legitimacy, and urgency. By scoring, stakeholders are classified into deterministic, expected, and potential stakeholders.

This method is more dynamic and operational, gradually becoming a commonly used method for stakeholder classification (Freeman, 1984).

If the research in the 1980s solved the problem of who stakeholders are and why their interests should be considered, then starting from Freeman, the focus of research shifted to the mechanism of realizing stakeholder interests. Freeman's fundamental viewpoint is that when making strategic decisions in a company, the influence of stakeholders must be considered, and stakeholder analysis must be conducted. The interests of key stakeholders must be integrated into the company's strategic goals, and the implementation of the company's strategy also requires active participation from stakeholders (Freeman et al., 2010). After analyzing the relationship between the organization and stakeholders, the issue of implementation mechanisms should be addressed. How can stakeholders be integrated into the enterprise's strategic decision-making process? Freeman proposed the Stakeholder Enabling Principle, which states that companies should operate for the benefit of their stakeholders. In order to achieve this goal, they also proposed the Principle of Directors or Response Responsibility and the Principle of Stakeholder Recourse (Freeman & Reed, 1983). The former requires the enterprise directors to exercise business judgment with caution to maintain and guide the consistency of enterprise affairs and stakeholder authorization laws; The latter grants stakeholders the right to sue directors who cannot fulfill their duty of prudence. The research has practical significance, as he successfully applied stakeholder analysis methods to corporate strategic management and provided a programmatic explanation of its implementation mechanism (Freeman et al., 2018). The organizational environment is constantly changing, and if the interests between the organization and stakeholders change, directors may not be responsible according to the Stakeholder Enabling Principle, and stakeholders may not be able to exercise their right to claim compensation. More importantly, whether the rules have a basis for operation in reality or whether this implementation mechanism is truly efficient, the answer is not satisfactory (Freeman & McVea, 2005).

It is undeniable that after the 1990s, Amis et al. (2020) began to focus more on corporate strategic planning research from the stakeholders' perspective. Amis et al. (2020) believed that the role of corporate strategic planning should not only include regulating the relationship between shareholders and management, the relationship between major shareholders and small and medium-sized shareholders, but also regulating the role of shareholders and other stakeholders, such as protecting the interests of creditors and communities. The main purpose of corporate strategic planning should be to maximize the enterprise's value while protecting the interests of all stakeholders (Amis et al., 2020).

In summary, compared with traditional shareholder supremacy, stakeholder theory emphasizes that the development of any enterprise cannot be separated from the investment and participation of various stakeholders. These stakeholders are closely related to the survival and development of the enterprise. Some share the operational risks of the enterprise, some are committed to its business activities, and some supervise and restrict the enterprise. In this sense, the survival and development of an enterprise depend on the quality of its response to the demands of various stakeholders rather than just shareholders. Stakeholder theory expands the research perspective from the enterprise itself to the external environment, placing greater emphasis on the important role played by stakeholders in the operation of the enterprise. It deeply recognizes the essence of the enterprise as a social existence and enables it to find a universal balance of interests in an increasingly diverse society.

This theory is of great significance for the management practice of the GMUAH, as it inspires GMUAH administrators to identify the most important and relevant stakeholders. Once stakeholders are identified, managers need to establish connections and communicate with them to ensure they have a clear understanding of their expectations and specific demands for the organization. In the process of high-quality development, public hospitals are facing important changes such as changes in value positioning, upgrading of management models, and changes in driving methods, which have led to a trend of increased data, status adjustment, and complex relationships among stakeholders, causing many disharmonious problems in the operation of public hospitals (Schulz & Johnson, 2003). The development strategy of the GMUAH involves multiple interest groups, and the interests of each interest group are intertwined and complex, with different goals pursued. Due to the two obvious shortcomings of the GMUAH in benchmarking against the national examination, there are different conflicts and contradictions of interest among the GMUAH's stakeholders, gradually presenting a situation of diversified interest subjects, diversified interest relationships, and complex interest demands. The manifestations of interest conflicts are also diverse. Therefore, in the process of formulating and implementing the strategy of the GMUAH, it is necessary to face a variety of conflicting interests and conflicts of interest, conduct detailed stakeholder analysis, strengthen the management of conflicting interests and conflicts of interests, and strive to find a balance of interests among GMUAH administrators, medical personnel, research personnel, and other stakeholders, ultimately promoting the true implementation of the strategic planning of the GMUAH.

2.3 Hospital strategic management

Strategic management is the most important and challenging aspect of hospital management. Hospital managers need to consider the hospital's future strategic positioning and winning strategies, face the difficulties and bottlenecks encountered in the hospital's development process, improve internal personnel capabilities, adjust hospital operation mechanisms, and strengthen the overall construction of the hospital (Schulz & Johnson, 2003). To comprehensively grasp the existing research on hospital strategic management, a comprehensive search was conducted in the Web of Science core database using the keyword hospital strategic management, and a literature pool was constructed. The reason for using "hospital" and "strategic management" as search keywords is mainly to consider the hospital as the research object, while also focusing on the research topic of strategic management in this article, and combining the two to carry out corresponding research. The time span was from January 1, 1978, to December 31, 2023, resulting in 5458 relevant literatures on hospital strategic management. The main reason for choosing hospital strategic management after January 1, 1978, is that through search, it was found that there was relatively little research on hospital strategic management in the academic community before January 1, 1978, which has little research value for this article. VOS viewer analysis software and bibliometric analysis were used to conduct a macro and micro analysis of the research status, hot topics, and development of hospital strategic management. The following is a further analysis of the research situation.

2.3.1 Macro perspective: a review of research on hospital strategic management

2.3.1.1 Research development trends

According to the time series statistics of the number of articles published each year, observing the basic development trend of research in this field, it is found that academic research on hospital strategic management is generally on the rise. By analyzing the Web of Science core database literature, research on hospital strategic management can be typically divided into two stages.

The first stage (1978-2007) is considered the slow growth stage. At this stage, it stabilizes at less than 150 articles per year except for 1997. This stage mainly focuses on the connotation and extension of hospital strategic management concepts, as well as strategic frameworks and strategic decision-making measures (Van Cauwenbergh & Cool, 1982).

The second stage (from 2007 to 2023) is considered the rapid development stage. During this stage, the number of research published each year remained stable at over 100, and from 2007 to 2023, there have been approximately 200 or more works per year. Overall, the research on hospital strategic management issues has increased significantly and rapidly during this stage, with a high number of articles published each year and abundant academic research. The research focuses on various fields, and different scholars have comprehensively researched hospital strategic management from different perspectives. For example, research on hospital strategic management tools (Demir & Ugurluoglu, 2019), hospital strategic information management (Haux, 2004), hospital human resource strategic management (Khatri et al., 2006), hospital strategic management processes (Nabila, 2014), hospital strategic decision-making (Cano et al., 2017), and other fields.

Through the analysis of citations, it is found that the research trend line between citation volume and literature publication volume is highly consistent, especially in the past five years. As can be seen, with increasing research on hospital strategic management, the number of citations will also increase accordingly. In 2022, academic research on hospital strategic management reached its peak, but after 2022, academic research on hospital strategic management began to decline, indicating that the current research on hospital strategic management is gradually slowing down. However, strategic management remains one of the research hotspots and priorities in hospital management. Specific circumstances, as shown in Figure 2.1.

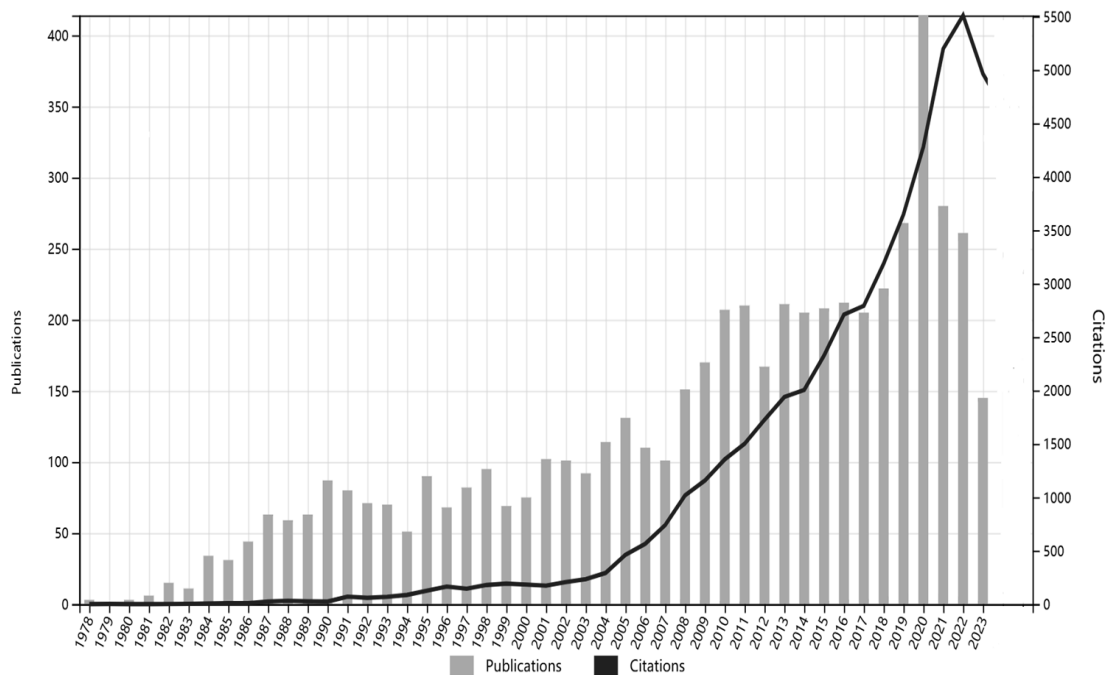


Figure 2.1 The development trends of hospital strategic management research

2.3.1.2 Main research areas

By analyzing the literature in the Web of Science core database, it is found that there is currently a relatively large number of scientific publications on hospital strategic management, mainly focusing on different fields such as healthcare science services, business economics, psychology, behavioral science, computer science, public environment occupational health, and medical informatics. There are 3310, 1493, 848, 796, 752, 693, and 480 related papers, respectively, as shown in Figure 2.2. It can be seen that the research on hospital strategic management presents a diverse range of fields, not only involving the medical field but also involving disciplinary background knowledge in multiple fields, such as economics, informatics, psychology, and behavioral science, belonging to the category of interdisciplinary research.



Figure 2.2 Main research areas of hospital strategic management

2.3.1.3 Main research countries and institutions

The first aspect is the literature analysis in the Web of Science core database, research on hospital strategic management conducted in different countries with the topic of hospital strategic management, and the publication years are from 1978-2023.

Through classification research by countries, it was found that the countries and regions with relatively high levels and quantity of research on hospital strategy are the United States, England, Canada, Germany, Australia, Italy, China, Spain, Brazil, Portugal, the Netherlands,

the United Kingdom, India, Iran, France, and other countries. Compared with other countries, the United States and China have more research on hospital strategic management from 1978 to 2023. The research results in hospital strategic management are vibrant.

The second aspect is the analysis of the literature in the Web of Science core database. There are several research institutions for hospital strategic management from 1978 to 2023. The author classified research institutions and found that the institutions with relatively high levels of research on hospital strategy mainly include Harvard University, University of London, University of Pennsylvania, University of California, University of Michigan, University of Toronto, University of Texas, University of Michigan, Walden University, University of Ohio, Florida State University, Federal University of Virginia, University of Alabama, Saint Paul University, University of Georgia, the University of Alabama at Birmingham.

2.3.1.4 Research hot-spots

By analyzing the literature in the Web of Science core database, this study exported the literature in txt format and conducted a visual analysis using VOS viewer software. Through research, it has been found that the current research on hospital strategic management generally tends to focus on hospital strategic planning, hospital strategic management goals, hospital strategic management characteristics, hospital strategic management foundation, hospital strategic management reform, hospital strategic management leadership, hospital strategic management information, and other aspects. Primarily speaking, there is considerable research on strategic planning in hospitals. In addition, through the literature review, it is found that some scholars have conducted a certain amount of research on hospital strategic management by using stakeholder theoretical methods, which also have certain inspiration and reference significance for the research topic of this study. Currently, various methods, such as surveys to conduct comprehensive research on hospital strategic management, are mainly used, as shown in Figure 2.3.

new economy and innovation, gaining competitive advantages through strategic innovation, emphasizing organizational flexibility and response speed, and achieving the goals of organizational strategic management through knowledge management and organizational science. After 2010, strategic management used the Balanced Scorecard as a strategic evaluation and control tool, transforming abstract strategic systems into a well-defined set of performance indicators through performance evaluation and measuring and managing the evolution of strategic management practices (Wang & Yu, 2002). Please refer to Table 2.1 for specific details.

Table 2.1 Research topics of strategic management in different periods

Period	Theme	Important issues	Concepts and Skills
1950	Budget Management	Through financial budget management and project evaluation	Budget management Project evaluation
1960	Enterprise Planning	Growth plan	Growth prediction model
1970	Enterprise Strategy	Diversified operations and investment planning	Strategic operational unit ; Investment portfolio planning
1980	Industry Analysis and Competition Analysis	Industry selection and positioning; market segmentation	Experience curve Market share Industrial structure analysis Competitor analysis
1990	Pursuing competitive advantage	Internal competitive advantage	Resource analysis Core competitiveness analysis
2000	Strategic Innovation and New Economy	Gain competitive advantage through strategic innovation	Organizational flexibility and responsiveness Knowledge Management and Organizational Learning Strategic performance indicators: learning and growth;
After 2010	Balanced Scorecard (BSC)	A well-defined set of performance indicators for measuring and implementing management strategies	Internal processes; Customer relationships; financial index

Strategy is a comprehensive action to promote core advantages and achieve success in competition. Strategy occupies a core position in the operation and management of modern hospitals, helping to clarify the future development direction of hospitals (Hitt et al., 2012). As early as 1912, the renowned American surgeon Albert predicted that "a hospital is a healthy and happy factory. Therefore, hospitals should master the excellent principles of managing factories, which will make hospitals produce the highest efficiency (Hopp & Lovejoy, 2012). At that time, Albert's words were surprising, but more than 100 years later today, his predictions have not only become a reality, but a new term, Health Industry, has embraced the entire healthcare industry in the United States. Strategic management methods are no longer limited to profitable

organizations such as enterprises and companies; countless non-profit organizations are also widely and effectively applied, including hospitals, libraries, and universities. Strategic management emphasizes the interaction between hospitals and their environment, to enable hospitals to adapt, utilize, and even influence changes in the environment. Hospitals should constantly monitor and scan the oscillating changes in the internal and external environment, identify strengths and weaknesses in the internal environment, as well as opportunities and threats in the external environment (Dey & Hariharan, 2008).

Hospitals have a history of adopting strategic management for over 40 years. In 1978, scholars Miles et al. (1978) proposed that hospital business strategies can be divided into four types: prospector, analyzer, defender, and reactor. People understand it as a process of solving problems encountered in the business process. Specifically, conservative: This type of hospital is unwilling to take risks, has centralized power control, and focuses on internal management. Pioneering: This type of hospital has a variety of service methods and often undergoes changes. They are willing to take risks in their operations and frequently try to compete for "first place" in the market with new products or service methods. Analytical type: This type of medical institution combines a conservative and exploratory approach, maintaining stable service methods and content while also seeking new projects and service opportunities, waiting for other institutions to gain experience in service and technology before entering the market, thus only taking a small amount of risk. Reactive: The management strategies of these hospitals are unpredictable, making it difficult to compare them with other business strategies, and they are only suitable for use in environments with minimal changes.

With the increasing diversification of patient medical needs, intensified competition in the medical market, and changes in the external macro and industry environment, hospital managers need to be able to quickly identify and adapt to changes like enterprise managers in order to achieve the survival and development of hospitals. With the development and maturity of enterprise strategic management theory, strategic management thinking has been widely applied in non-profit organizations such as hospitals. It not only enriches the theory of hospital management but also effectively promotes the better and faster development of hospitals. Benefiting from the flourishing development of strategic management theory, research on hospital strategic management started earlier and is relatively mature. Based on long-term research on Toyota's production system, Graban and Kubik (2011) demonstrated the feasibility of implementing lean management in hospitals to hospital managers through successful examples of hospital transformation; The University of Michigan in the United States has implemented an outpatient medical independence strategy plan for nine affiliated hospitals,

which has not only increased the proportion of outpatient revenue to total revenue, but also enhanced patient satisfaction with outpatient medical services (Ge & Griffith, 2012). In recent years, the emergence of Covid-19 has led some scholars to believe that its widespread is not simply a crisis in intensive care but is closely related to society and humanitarianism. To prevent the spread of Covid-19, the actual benefits of social means far outweigh those of medical means. As decision-makers in hospitals, it is important to strive for systematic coordination and strong support for community and hospital development as important strategies (Cepiku et al., 2021). From this perspective, strategy occupies a core position in the operation and management of modern hospitals, which helps to clarify the future development direction of hospitals.

The strategic adjustment of hospitals is adjusted with changes in the external environment and policies. Taking the United States as an example, due to the proliferation of doctor-patient conflicts, the direct doctor-patient relationship between hospitals and patients has gradually transformed into a tripartite relationship between hospitals, patients, and insurance companies. Hospitals are situated in a special relationship between patient needs, monitoring and compensation by medical insurance companies, and government-led regulation. The strategic management of a hospital often determines its success or failure. The current hospital management strategy in the United States can be broadly divided into five types from the perspectives of inward and outward orientation: competitive response strategy, market supply and demand strategy, product supply strategy, operational management strategy, and organizational structure response strategy (Chen, 2002). These five strategies are mainly reflected in their tendency towards strategic management, and there is no strict distinction between them. Often, several strategies intersect with each other. Hospitals belong to a special type of enterprise that is responsible for their own profits and losses in a market economy and conducts research and evaluation of changes in the internal and external environment based on their own characteristics. It can be said that strategic management activities based on the actual situation of hospitals have become the core of hospital management to which hospitals attach great importance.

In terms of research tools, Hatefi and Haeri (2019) used Data Envelopment Analysis (DEA) and Balanced Scorecard frameworks in operations research, management science, and mathematical economics to test the overall management efficiency of public hospitals. It usually involves three stages, one of which is to use DEA to measure the performance efficiency of hospitals; The second is to analyze the organizational strategic plan and develop a strategic map to explain the connection with strategic goals based on the main points of the balanced scorecard (finance, customers, internal processes, and learning and growth); Thirdly, interviews

will be conducted with hospital management personnel on the overall strategic management of the hospital to determine how to improve management strategies to maximize balance and efficiency (Hatefi & Haeri, 2019). Various theories and analytical tools of strategic management, such as the Five Forces Analysis model and SWOT analysis, are widely used in medical institutions (Tao & Shi, 2016). Taking Porter's three major competitive strategies as an example, different types of hospitals or medical institutions can choose appropriate competitive strategies based on differences in the market competition environment (including differences in medical market size, funding, technology, equipment, talent, and main competitors) (Butler et al., 1997), or adopt cost leadership strategies, implement differentiated strategies, focus on a specific segmented medical market, or organically combine different strategies (Belton, 2017). Eicher and Steiner (2020) believed that a hospital manager must have a clear and reasonable positioning and development strategy for the hospital being managed, such as differentiation, cost leadership, or development priorities. However, most managers must ensure sufficient caution when facing differentiated choices and seek the relationship between traditional treatment and new medical services in hospitals. If the two are coordinated, it is beneficial for the development of the hospital. However, if they are separated, it will limit the improvement of hospital performance due to increased costs (Eicher & Steiner, 2020).

Regarding hospital strategic management, there are also abundant research achievements in China. Scholars Jing et al. (2004) have explained the importance of combining strategic management with hospital management. Jing et al. (2004) have proposed that the definition of hospital strategic management refers to the dynamic management process of analyzing, formulating, evaluating, selecting, implementing, and controlling hospital strategies to enable hospitals to achieve their strategic goals. At present, with the rapid development of China's market economy and the continuous deepening of the new medical reform, a considerable number of hospital managers have begun to accept new ideas and concepts, apply new hospital management knowledge to manage their hospitals, start to think about their hospital's development strategy, consciously use strategic management methods, update the hospital's mission, introduce new management concepts, optimize the existing organizational structure, and optimize the allocation of human resources. Initial results have been achieved in improving management systems and regulations, improving operational efficiency, creating service characteristics, establishing specialized advantages, and creating a hospital cultural atmosphere. The dynamic management process enables hospitals to achieve their strategic goals through the formulation, execution, evaluation, and adjustment of hospital strategies. The research on strategic management of Chinese public hospitals has gone through the following stages: (1)

understanding; (2) cognitive; (3) practice; and (4) upgrade (Li & Shi, 2004).

The first stage is the understanding stage of strategic management (Li & Shi, 2004). Hospital managers are gradually realizing that strategic management is not only a practical tool for enterprise management but also plays a crucial role in the development of hospitals. The second stage is the cognitive stage of strategic management. Hospital managers have begun to understand the application of strategic management theories and methods to study and analyze hospitals and analyze various influencing factors to guide hospital development. The third stage is the strategic management practice stage. Hospital managers have proposed and updated strategic management theories, deeply reflected and analyzed hospital strategic management, and proposed corresponding solutions based on the development situation of the hospital. The fourth stage is the strategic management upgrade stage. GMUHAH managers have increasingly applied hospital strategic management to daily hospital management and have a considerable understanding and rich experience. They have begun to examine and study strategic management from the perspective of hospital development. Hospital managers convey the intention and significance of hospital strategic management to hospital backbone and grassroots employees and propose more profound insights and perspectives. After the mid-1980s, with the gradual promotion of strategic management in Chinese enterprises, Chinese hospitals gradually entered the era of strategic management after experiencing operational and operational management (Li & Shi, 2004). Especially in the process of marketization, various medical institutions such as large public hospital groups, foreign-funded hospitals, and private hospitals are competing in the medical market. The increasingly fierce competition forces hospitals to consider long-term development issues. Zhao and Liu (2005) have pointed out that strategic management can guide hospitals to scientifically and reasonably position themselves in the complex and ever-changing medical market, help unify the development goals and directions of hospitals, and effectively allocate resources.

It is of great significance to introduce strategic management into hospital management. With the overall promotion and continuous deepening of China's reform, the health front and hospitals are no exception. The country, society, and the general public have put forward many new hospital issues and requirements. Hospitals also need to gradually shift from being public welfare-oriented to being public welfare-oriented, operational, and commercial. Under the guidance of this new concept, hospitals must enter the economic market and participate in competition. Therefore, hospitals must implement strategic management to adapt to the requirements of the new situation.

The first is the needs of the times. Hospitals have entered an era of strategic victory to adapt

to the changing society and service targets and to adapt to changes in competitors and competition rules. In fact, the acceleration of competition frequency is to cope with the changes themselves.

The second is the need for scientific and technological development. Humanity is undergoing a global new technological revolution, with the speed of knowledge updates becoming faster and the cycle of technology transformation into reality becoming shorter. Primitive innovation is becoming a strategic high ground for contemporary technological competition. Information technology is advancing rapidly, biotechnology is emerging rapidly, and materials science is attracting attention.

The third is the need to establish a modern hospital system. Modern hospitals have different systems due to other investment themes. Although hospital systems can solve business mechanism problems, they cannot solve economic benefits. Therefore, while establishing modern hospital systems, strategic management must also be implemented to solve the hospital's economic benefits problem.

The fourth is the need for hospitals to conduct capital operations. With the continuous deepening of health system reform, the property rights system reform in public hospitals is imperative. Therefore, under the current policies, hospitals can undergo restructuring through acquisitions, mergers, shareholding, holding, joint ventures, and other means. The process of hospitals competing with the market, competitors, partners, and capital is also a process of GMUAH reform and restructuring. The development of hospitals is a combination of services and capital, and capital management is a necessary path. However, it must be guided by the hospital strategy to succeed.

The fifth is the need for hospitals to move towards internationalization. According to the World Trade Organization regulations, the healthcare industry should be open to the world market, government health departments should gradually withdraw from the healthcare market, and hospitals should serve the world and humanity. Therefore, hospitals not only need to compete in the domestic healthcare market in China, but also enter international competition. To compete, one must understand the laws of competition and the laws of competition, and more importantly, possess the strength and advantages of competition.

In summary, with the continuous deepening of medical and healthcare system reform, how to attract more patients and provide high-quality and satisfactory services in the fiercely competitive medical market environment requires hospitals to conduct scientific analysis and planning of the external competitive environment and various internal resources to obtain and maintain long-term competitive advantages. Overall, although hospital managers have

recognized the implementation of strategic management in hospitals, there are still difficulties in implementing strategic management, such as a lack of cultural foundation, incomplete strategic diagnosis and theoretical tools, incomplete strategic conditions, strategic rigidity or lack of stability, inadequate development strategy, and urgent need to strengthen hospital strategic analysis. Therefore, this thesis chooses a hospital case study as the research object to deeply explore the development strategy of university-affiliated hospitals under the background of high-level hospital construction in order to form relevant, beneficial supplements to the research on the development strategy of domestic hospitals.

2.4 Hospital strategic management from the perspective of stakeholders

To comprehensively grasp the existing research on hospital strategic management from the perspective of stakeholders, a comprehensive search was conducted in the Web of Science core database using keywords such as hospital strategic management and Stakeholder, and a literature pool was constructed. The time span was from January 1, 1978, to December 31, 2023, resulting in 348 relevant journal articles on hospital strategic management and stakeholders. Using bibliometric analysis to comprehensively analyze the research status, hot topics, and development of hospital strategic management, the following is a comprehensive analysis of the research situation.

2.4.1 Macro perspective: hospital strategic management under stakeholders

2.4.1.1 Research development trends

According to the time series statistics of the number of papers published each year, observing the basic development trend of research in this field, it is found that the academic community generally shows an upward trend in this research problem. Research on hospital strategic management can be generally divided into three different stages.

The first stage (1978-2000) is considered as the slow growth stage. At this stage, research on stakeholders and hospital strategic management was just beginning, and there was relatively little research, with a low annual publication volume (annual publication volume < 5).

The second stage (2001-2009) is considered as the steady development stage. At this stage, research on stakeholders and hospital strategic management was steadily developing, with an annual publication volume in the middle (5 < annual publication volume < 10).

The third stage is from 2012 to 2023, during which research on stakeholders and hospital

strategic management was in a rapid development stage, with an increase in publication volume and a high annual publication volume (average annual publication volume > 10).

Overall, especially after 2010, academic research on stakeholders and hospital strategic management has gradually increased, with a broad focus on various fields. Harrison and Thompson (2014) have conducted comprehensive research from different perspectives, and academic research is relatively rich, such as using stakeholder management methods to focus on the strategic management of healthcare organizations. For example, Malfait et al. (2017) identify and analyze stakeholders participating in hospital strategic development. Through analysis of citations, it was found that the research trend of citation volume and literature publication volume is highly consistent, especially in the past ten years, where citation volume has remained high and has shown a linear increase. With increasing research on stakeholders and hospital strategic management, citations have correspondingly increased, as shown in Figure 2.4.

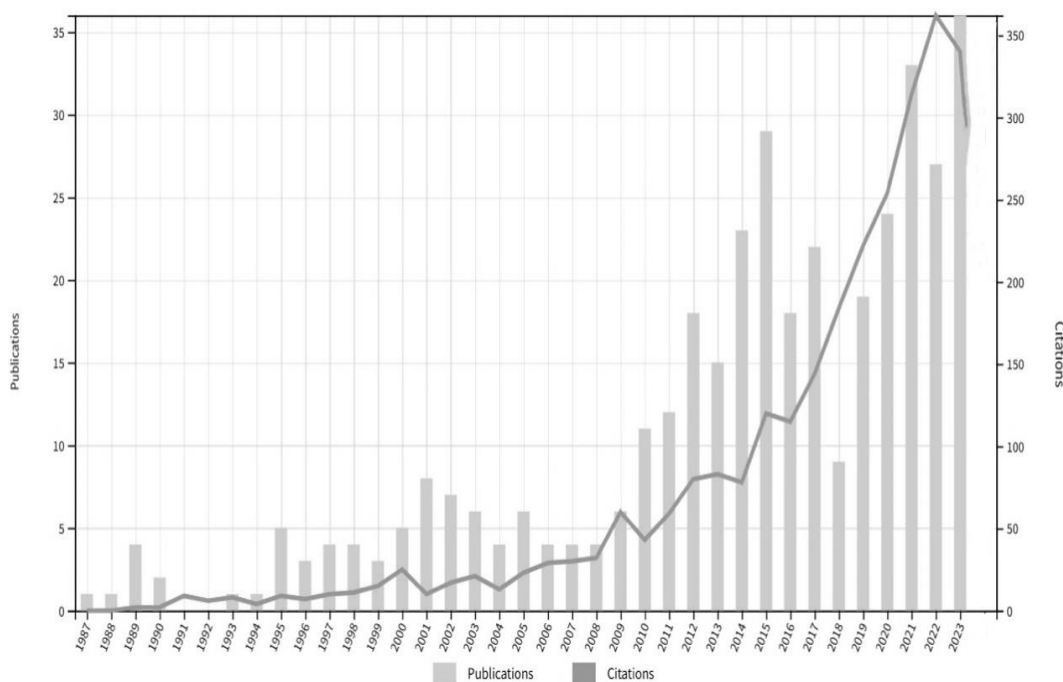


Figure 2.4 Research and development trends in hospital strategic management

2.4.1.2 Main research areas

The literature review reveals that the current research on stakeholders and hospital strategic management is generally focused on healthcare science services, business economics, public environment and occupational health, psychology, behavioral science, computer science, and other fields, as shown in Figure 2.5.



Figure 2.5 Main research areas of stakeholders and hospital strategic management

Research on the combination of stakeholders and hospital strategic management mainly focuses on the field of healthcare science services. Still, related research can also involve other fields, such as psychology, behavioral science, computer science, and other disciplines, presenting diverse forms.

2.4.1.3 Main research countries and institutions

Firstly, by analyzing the literature in the Web of Science core database, there are several research countries. Classified by countries, it was found that currently, the countries and regions with relatively high levels of research on stakeholders and hospital strategy mainly include the United States, England, Canada, Germany, Australia, Italy, China, Spain, Brazil, Portugal, the Netherlands, the United Kingdom, India, Iran, France. Compared with other countries, the United States and China have more research on hospital strategic management, especially the United States, which has reached 1294 articles. The proportion is about 26.8%, and the research results in this area are very rich.

Secondly, by analyzing the literature in the Web of Science core database, there are several research institutions for hospital strategic management. Classified by research institutions, it was found that the institutions with high levels of research on hospital strategy mainly include Harvard University, University of London, University of Pennsylvania, University of California, University of Michigan, University of Toronto, University of Texas, University of Michigan, Walden University, University of Ohio, Florida State University, Federal University of Virginia, University of Alabama, Saint Paul University, and University of Georgia, and the University of Alabama at Birmingham.

Furthermore, the current academic research on hospital strategic management generally tends to focus on hospital strategic planning, hospital strategic management goals, hospital strategic management characteristics, hospital strategic management foundation, hospital strategic management reform, hospital strategic management leadership, hospital strategic management information, and other aspects. Academic research is quite high, especially for hospital strategic planning. In addition, some scholars have conducted a certain amount of research on hospital strategic management by using stakeholder methods, which also has certain inspiration and reference significance for the research topic of this study. Regarding specific research methods, various methods, such as balanced scorecards and surveys, are used to conduct comprehensive research on hospital strategic management.

2.4.2 Micro perspective: hospital strategic management under stakeholders

Since its inception, stakeholder theory has been widely applied in various fields such as politics, economy, and social management, and its influence has become increasingly profound. Especially after 1980, its role in health policies, health institution management, and other aspects has become increasingly prominent. In the United States, Blair and Whitehead (1988) were the first to introduce stakeholder theory and methods into the field of healthcare. During this process, Blair's contribution was quite remarkable, as Blair proposed practical and feasible stakeholder analysis methods for application in the health field. The method proposed by Blair and Whitehead (1988) can generally be divided into two steps.

The first step should be to identify the organization's key stakeholders (Blair et al., 1989). The identification method is for analysts to first list the more apparent stakeholders. Then, through questionnaires or interviews, these stakeholders can name the groups or individuals that play a key role in the development of the healthcare organization according to their understanding and directly rank them. They can also be asked to rate the stakeholders.

The second step is to identify a stakeholder diagram (Blair et al., 1989), where the information to be expressed varies depending on the purpose of the analysis. Suppose a diagram is used to analyze the organizational environment. In that case, it can depict the relationships between key stakeholders and indicate the strength of the connections, which helps health organizations identify meaningful interest relationships and potential collaborators. Suppose a diagram is used to analyze the positions of stakeholders towards organizational goals or a certain project. In that case, it should indicate the specific positions of each stakeholder and classify them appropriately, such as support, opposition, and neutrality.

In terms of health policy analysis, Glassman et al. (1999) used stakeholder methods to empirically study and analyze the health policies of countries such as the Dominican Republic and India. In terms of healthcare institution management, Galárraga and Bertozzi (2008) conducted specialized research on health maintenance organizations, pharmaceutical distribution networks, and disease global fund management under stakeholder theory. MacDonald et al. (2013) explored how to maximize mentor support, medical student quality, and resident supervision by utilizing stakeholders through field investigations of family medicine. Hivon et al. (2013) constructed business connections through websites and explored how healthcare technology companies can attract stakeholders to join in innovative development. Mladovsky et al. (2014) analyzed the impact of stakeholder values and power relationships on community medical insurance through qualitative research on three Senegalese cases. The existing literature shows that Ruairi and Zsuzsa were the first to go beyond theoretical exploration and use stakeholder methods for empirical analysis in health policy analysis. Brugha and Varvasovszky (2000) referred to analysis method for Hungary's alcohol restriction policy and appropriately modified it, proposing a more systematic stakeholder approach to health policy analysis. In healthcare institution management, Nandraj et al. (2001) referred to stakeholder analysis method in health policy analysis. Nandraj et al. (2001) studied the need to fully recognize and value stakeholders' interests when identifying and evaluating the Indian hospital market, especially private hospitals. In brief, stakeholder theory was widely applied in health policy analysis and the management of various types of healthcare institutions.

Some articles delve into the normative nature of stakeholder theory, proposing more exploratory questions for building healthcare systems or challenging certain practices and priorities in the healthcare industry. This research focuses mainly on the role of choice and representation (Emanuel, 1999). Emanuel (1999) stated that as long as shareholder value creation dominates, our healthcare system will be filled with conflicts of interest, driven by employers representing employees. The only way to resolve conflicts in this system will be for

companies to adopt stakeholder theory and emphasize the creation of total wealth, considering a large number of stakeholders rather than just shareholders. In another article, Gilmartin and Freeman (2002) discussed the impact of stakeholder theory and its normativity. They emphasize that stakeholder theory is crucial for understanding the fundamental business concepts of an enterprise's strategy. The stakeholder theory provides a way to create value for all stakeholders, incorporating values into the core of organizational life, which is our core goal in creating a fair and sound healthcare system. However, in their article, they presented a case study of the evaluation steps in the stakeholder evaluation process (Malvey et al., 2002).

In 1984, Freeman's *Strategic Management: Stakeholder Approach* was widely cited, and many healthcare literatures utilized Freeman's theoretical approach. A classic example of this work, described as having "instrumental" characteristics, is a research study (Blair et al., 1996). Blair et al. (1996) believed that healthcare has gradually taken shape, and executives within healthcare institutions need to pay attention to who the key stakeholders are, especially those who are undergoing unprecedented changes and are likely to continue to do so. The rapid changes in healthcare delivery methods and the indispensable evolution of healthcare delivery and cost control mean a high degree of complexity in management in healthcare environments. The view is that the degree and speed of structural changes that have already occurred in the industry are "unprecedented in postindustrial societies" (Shortell, 1988).

Given this background, they focus on correctly categorizing hospital stakeholders and adopting appropriate management strategies to treat these hospital stakeholders while minimizing threats and maximizing opportunities. Blair and Fottler (1990) , Blair and Whitehead (1988) examined and re-examined a typology previously developed. They claim that executives should categorize stakeholders into one of the four categories (supporters, mixed interests, non-supporters, and marginalized) and adopt a general strategy (participation, cooperation, defense, and monitoring) to manage them. Performance will improve if executives correctly classify stakeholders and apply appropriate strategies that match them (Blair et al., 1996). Suppose the classification is inappropriate or the strategy does not match the type of stakeholders (except for supporters/participants, mixed interests/collaborators, non-supporters/defense, and marginal/monitoring strategies). In that case, performance will be affected to a certain extent. In empirical research, Using stakeholder theory as a framework for analysis, Blair and Fottler (1990) defined the process of stakeholder management as the development process of a strategic analysis tool. They identified six discontinuous stages: (1) stakeholder identification, (2) stakeholder assessment, (3) stakeholder diagnosis and classification, (4) stakeholder strategy formulation, (5) stakeholder strategy implementation,

and (6) effectiveness evaluation of stakeholder management. Blair and Fottler (1990) emphasized stakeholder assessment in their empirical research. They collected data and provided an evaluation of four groups, including a comprehensive delivery system/network, managed healthcare institutions, doctors, and hospitals. In considering whether they constitute a "threat" or the possibility of cooperation, the author emphasizes four key issues: (1) the possibility of stakeholders controlling the practices of the respondent group; (2) The possibility of combining stakeholder and respondent's own group practice; (3) the degree to which stakeholders will control key respondent's group practice resources, and (4) the relative rights of each stakeholder related to respondent's group practice (Dymond et al., 1995). Burton (1999) evaluated the "Healthy City Plan" in Bangladesh by conducting a stakeholder analysis of two city health city projects implemented for many years. Stakeholders were classified by importance and influence matrix, and the factors of interest that stakeholders were concerned about were evaluated, indicating their power relationship.

Blair and Buesseler (1998) conducted a series of surveys on the opportunities and threats faced by management stakeholders in a constantly changing environment. Still, this time, the focus was on improving the accuracy of power analysis in the industry. Blair and Buesseler (1998) utilized Porter's research, particularly his Five Forces model, and applied it to stakeholder-level analysis.

Porter (1980) emphasized the role of power, while Blair and Buesseler (1998) claimed that cooperation is equally important as power in determining how stakeholders would behave (i.e. how they would act, whether they would threaten or collaborate with the company) One challenge of this study is their claim that managers need to deal with specific problems, and when the problem changes, the attitudes of stakeholders towards the core organization may also change (for example, a stakeholder who is otherwise "cooperative" may become a non-supporter on certain specific issues) (Blair & Buesseler, 1998; Porter, 1980). Their focus remains on observing the environment, assessing stakeholders, and categorizing them in line with general strategies aimed at managing stakeholders to achieve predetermined organizational goals. Whitehead et al. (1989) emphasized the importance of negotiation in stakeholder theory, stating that it provides a comprehensive approach to managing stakeholders from strategy to process. To improve the existing emphasis on group or interpersonal negotiation, their work provides an organizational level analysis that integrates these macro and micro levels, spanning the entire array of relationships between a company and its stakeholders. They started exploring this topic by linking negotiations, larger strategic dynamics, and the hospital's background environment.

More recently, Tampio et al. (2022) analyzed the challenges in stakeholder management and how these challenges arise in the stakeholder environment of large-scale hospital projects. Through this analysis, Tampio et al. (2022) aimed to determine the impact of stakeholder management on the value creation of hospital projects. Based on case studies of the development and construction of two public hospital projects, it is determined that certain factors can ensure the success of public hospital projects, such as clear project scope, including input from relevant stakeholders; appropriate change control system; close monitoring and control of hospital project costs and expenses; regularly conduct on-site inspections for quality control; clearly define the roles and responsibilities of project team members; adequate communication mechanism, and the widespread use of communication technology. Certain factors can lead to poor project effectiveness in hospitals, such as unclear project scope, lack of strategy for managing cost overruns, insufficient risk assessment, the evaluation criteria for contractor selection are not comprehensive, and high turnover of project personnel. Lavikka et al. (2019) conducted an in-depth analysis of five hospital case projects in Finland, Sweden, and the United States, and the research results showed that project stakeholders achieve project flexibility in product and process dimensions, which is the balancing force of hospital project complexity. In the case analysis of infrastructure construction projects such as hospitals, Butt et al. (2016) believed in-depth communication and information exchange with stakeholders can promote project progress. It can be said that the primary task of stakeholder management is to identify various stakeholders, accurately collect information and materials, and, based on these empirical data, make accurate predictions about the project needs of stakeholders. Stakeholder management is a critical component of the project management process. Over the years of research and development, stakeholder theory has formed three famous management models: Freeman's stakeholder strategy model views enterprises and stakeholders as a binary one-on-one relationship (Freeman et al., 2010). Mitchell et al. (1997) suggested that stakeholder saliency is determined by their attributes. The stakeholder social network model Rowley (1997) suggested that stakeholder relationships are multiple and not as simple as binary relationships. These three models are of great significance in the research of hospital strategic management, improving and promoting the research and development of hospital strategic management and stakeholder management.

Other studies have also highlighted the strategies of executives attempting to "manage" stakeholders for the company's benefit. Lim et al. (2005) developed a method for managing competitive stakeholders in the healthcare environment, which they hailed as an "important weapon of strategic management". They claim that the core focus is on how to "leverage

conflicting stakeholders to maximize the economies of scale for businesses", as they acknowledge stakeholder relationships and focus on the importance of corporate social responsibility. Their exploration provides managers with a way to handle the complexity of modern healthcare and proactively manage it. To assist managers in formulating strategies, they advocate a four-stage process - stakeholder analysis, strategic backtracking, strategic revision, and strategic implementation. Similar cases and existing rules in the past have helped managers understand the appropriate strategies that can be used, and this process has been expanded by drawing on the experience they developed. Savage et al.(1991) emphasized the importance of networks and systems theory as ways of thinking about healthcare. They adopt a stakeholder theory perspective to understand healthcare's complex and dynamic operational mechanisms, believing that healthcare executives must learn to manage stakeholder portfolios and understand their strategic significance. The deeper assumption of this study is that the presence of stakeholders is both an opportunity and a threat. Administrators need to shift their focus from managing individual stakeholders to considering multiple relationships and managing stakeholders for the organization's benefit. In addition, this article examines the financial performance of hospitals and their social responsibility, emphasizing the governance challenges of integrated delivery system networks and organizations.

In the past few decades, almost all countries worldwide have been carrying out reforms in healthcare, which necessitates the redistribution of limited health resources, allowing some people to gain new benefits while others may lose existing ones. Through the above analysis, it is found that stakeholders are participants and practitioners of health policy reform, and the achievement of strategic goals must be achieved through the coordination and cooperation of many different stakeholders associated with it. They have different resources, and their motivations, goals, methods, and degrees of participation in health reform vary. The achievement of their respective goals and the overall goals of health reform depends on the degree of coordination of interests among all stakeholders and collaborative behavior. Only under a reasonable institutional arrangement can a new type of interest balance mechanism be established to ensure the subjective motivation of individual rationality among all stakeholders, ultimately bringing objective results of collective rationality.

Currently, in the context of performance evaluation in China's tertiary public hospitals, competition is extremely fierce. Hospitals should pay more attention to strategic planning and the achievement of strategic goals, as well as the operation and management of various aspects of the hospital. Analyzing the stakeholders of the hospital can help promote the hospital to scientifically formulate its own strategic planning and corresponding strategic goals, thereby

promoting high-quality development and high-level construction of the hospital and enhancing its competitiveness. That is to say, the analysis of the interests among different stakeholders in the hospital is crucial for this study.

2.4.3 The role of stakeholders in achieving strategic goal of the GMUAH

Freeman (1984) considers stakeholders to be all individuals and groups who can influence the achievement of organizational goals or be influenced by an organization. Therefore, how to identify the main contradictions, conflicting interests, and conflicts of interest in the high-quality development and high-level hospital construction of the GMUAH through the national performance evaluation of public hospitals in China and do well in responding to and resolving those issues mentioned above, is the focus and key in dealing with the performance evaluation in the next step, as well as holds the utmost importance in the realization of the GMUAH's 14th Five-Year Plan and striving to achieve the strategic goal of entering top 100 of the national performance evaluation of tertiary public hospitals in China.

Stakeholders can be divided into direct and indirect stakeholders (Chen & Jia, 2004). Direct stakeholders include owners, employees and managers, suppliers, customers (patients), society, and other partners. Indirect stakeholders include governments, trade unions, social pressure groups, public organizations, the media, academia, and competitors (Chen & Jia, 2004). Medical institutions often concentrate on investors/governments, payers (medical insurance/commercial insurance), service recipients (patients and their families), service providers (medical staff/employees), and regulatory authorities (industry regulatory authorities) (Harrison & Thompson, 2014). Referring to the definition and the evaluation method (Freeman, 1984; Mitchell et al., 1997), which is the most typical stakeholder classification method in foreign countries, this thesis considers that the stakeholders of public hospitals are all individuals and organizations who have an interest in, influence, or are affected by the hospitals' business behavior and consequences. The main stakeholders include governments, medical universities, GMUAH management, GMUAH department directors (middle-level cadres), GMUAH staff, patients, medical insurance institutions, pharmaceutical merchants, healthcare industry organizations, and other public hospitals.

As a tertiary public hospital, the GMUAH has operational and public welfare characteristics. Building a strategic management system compatible with stakeholder governance in the context of the national examination is an important part of determining whether it can achieve high-quality development. Hospital strategic management is a complex system engineering involving many stakeholders such as the GMUAH, patients, other medical institutions,

government, and universities. Through analyzing the stakeholders of the GMUAH, it was found that the direct stakeholders mainly include GMUAH administrators, GMUAH department directors, ordinary employees, patients, and pharmaceutical equipment merchants; Indirect stakeholders mainly include the governments, medical universities, medical insurance institutions, health industry organizations, and other public hospitals. As mentioned earlier, there is still a significant gap between the two indicators of medical quality and sustainable development in the GMUAH, with prominent shortcomings. Regarding these two shortcomings, GMUAH administrators, department directors, and ordinary employees are important stakeholders to the GMUAH. It can be seen that GMUAH administrators, department directors, and ordinary employees are the main stakeholders of the research content in this thesis.

The performance evaluation indicators of medical quality and sustainable development have always been the key to assessing China's tertiary public hospitals. However, the GMUAH has shortcomings in these two aspects, which are the key factors and important indicators that restrict it from entering the top 100 in the ranking. Therefore, it is necessary to focus on analyzing and studying the conflicting interests and conflicts of interests behind these two shortcomings so as to fill in the gaps, strengths and weaknesses and identify shortages in order to truly improve the ranking and performance of the GMUAH and promote the GMUAH's high-level construction and high-quality development.

Based on the national examination indicator system, conflicting interests and conflicts of interest for the GMUAH in terms of medical quality are mainly concentrated in the low proportion of third and fourth-level surgeries. Regarding sustainable development, the GMUAH primarily focuses on low research project funding for every 100 health technicians. Therefore, to effectively study the conflicting interests and conflicts of interest in medical quality and sustainable development of the GMUAH, in terms of the proportion of the third- and fourth-level surgeries and research funding, related stakeholders should be GMUAH administrators and employees, including department directors and ordinary medical staff. Medical quality is a hospital's lifeline and core competitiveness, especially the third- and fourth-level surgical ability, which is a key indicator of whether a hospital is at a high level. Scientific research projects are a quantitative reflection of disciplinary construction and academic level, as well as a key link between basic research and clinical translation. Therefore, the specific points of conflicting interests and conflicts of interest in the third- and fourth-level surgeries and the funding of scientific research projects and how to resolve them are the focus of this study and prominent issues that need to be addressed. These contents will be studied in the following chapters.

2.5 Research model

This study mainly focuses on the strategic management of high-level hospital construction. Taking the GMUAH in China as a case study, strategic management, stakeholder, and resource-based theories are used to lead the entire study. According to the strategic management theory, the focus is on three aspects: strategic planning formulation, execution, and strategic planning evaluation of the GMUAH. As mentioned earlier, the GMUAH's basic strategic evaluation activities in the strategic evaluation stage include three aspects. One is to re-examine external and internal factors, mainly by reviewing the basis; the second is to measure performance, and the third is to take corrective actions.

Firstly, in the process of strategic evaluation of the GMUAH, the main focus is on a retrospective analysis of its strategic planning, and it is found that its strategic planning and goals are in line with the current policy guidelines of China, Guangdong Province, Zhanjiang City, and Guangdong Medical University.

Secondly, by comprehensively measuring the performance of the GMUAH in the process of strategic planning implementation, benchmarking the performance evaluation indicators of tertiary public hospitals in China, and combining the scores and rankings of the GMUAH in the national examination, it is found that there are two shortcomings which are medical quality and sustainable development. The problems lie in the low third- and fourth-level surgical rate in terms of medical quality and low funding of research projects for 100 health technicians in terms of sustainable development. In accordance with the stakeholder theory and benchmarking against the national examination indicators, the main stakeholders of the GMUAH include GMUAH administrators, department directors, scientific researchers, and other employees. The author further conducted interviews with stakeholders of the GMUAH through empirical research methods and distributed survey questionnaires based on the interview results to further determine the points of conflicting interests and conflict of interest that affect the achievement of the GMUAH's implementation of strategic goals as well as the entrance to the top 100 in the performance evaluation ranking of tertiary public hospitals in China.

Finally, combining resource-based theory and stakeholder theory, measures such as resolving conflicting interests and conflicts of interest, as well as reallocating resources, are taken to address the existing issues of conflicting interests and conflicts of interest in the GMUAH to fill these two gaps. Ultimately, this thesis also aims to contribute to the strategic goal of the GMUAH, which is to enter the top 100 in the performance evaluation ranking of Chinese national public hospitals, while further strengthening its strategic planning and

management. At the same time, it provides references for the strategic management of other large public hospitals. Please refer to Figure 2.6 for details.

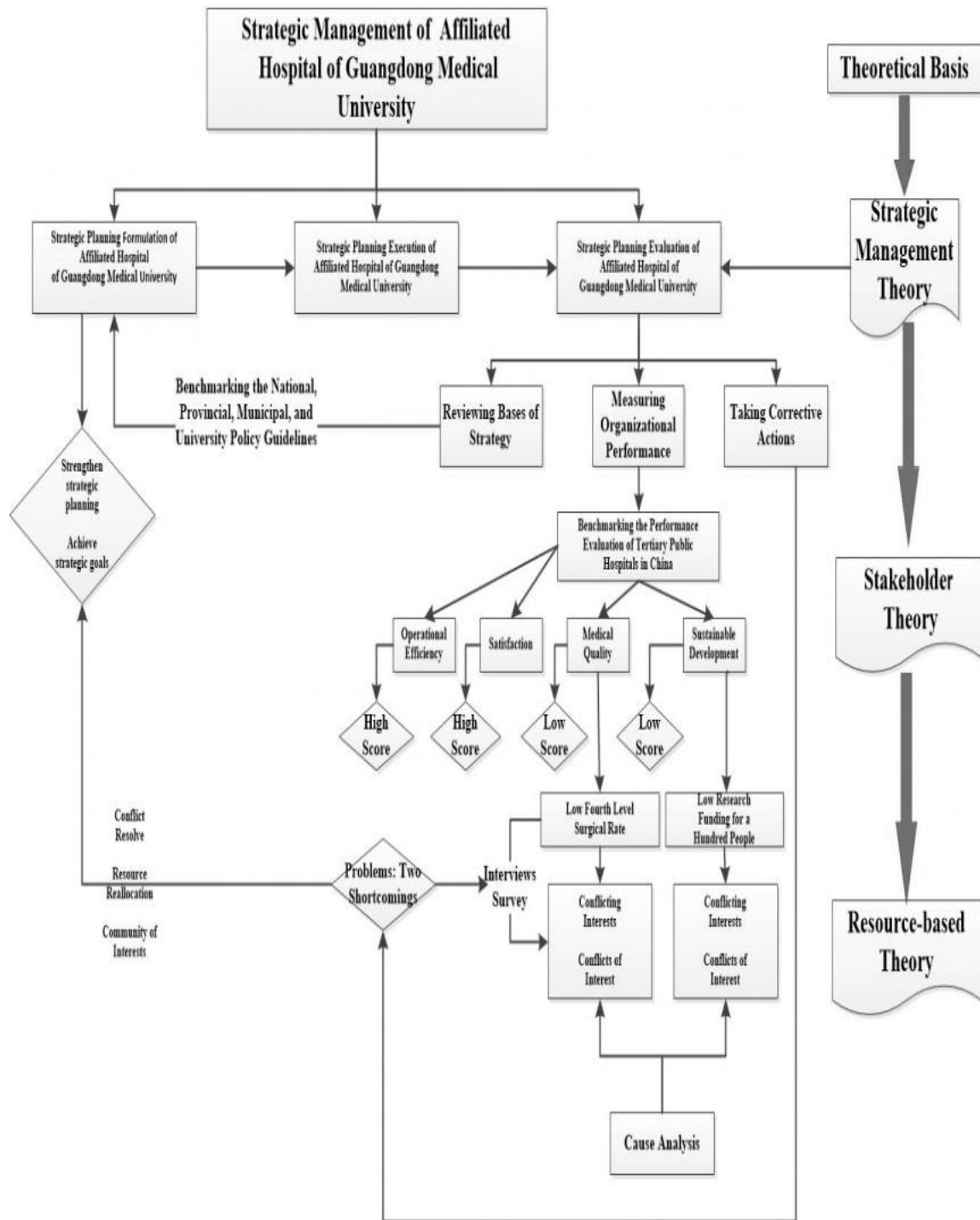


Figure 2.6 Research model

The literature review can accurately reflect the research status and development trend of the topic and reveal the research shortcomings, weaknesses, and development trends in this field. This study uses domestic and foreign academic journal websites to search for Chinese and foreign language databases such as Web of Science and CNKI, as well as relevant official websites, to systematically search for literature on hospital strategic management from the perspective of relevant stakeholders at home and abroad. Using software such as Visualization of Similarities (VOS) viewer, the research information is summarized and visualized to explore the current research status, shortcomings and trends, sort out knowledge structures, and clarify research content to provide a reference for researchers and policymakers in related fields both domestically and internationally, and also to provide solid theoretical support and rich data support for this study.

Chapter 3: Methodology

The research approach is inherently qualitative in nature and uses a case study method – with the GMUAH providing the focus. The case approach is particularly appropriate in addressing “why” and “how” questions, especially where the focus is on a contemporary phenomenon involving managerial decision-making that needs to be traced over time (Creswell & Poth, 2016). Within this field, the method has previously been used for the analysis of stakeholder interactions with organizations. According to stakeholder theory, conflict is a process of mutual confrontation that occurs between organizations or individuals due to inconsistent goals, differing interpretations of facts, and inconsistent expectations of behavior, interests, values, beliefs, and ideas. Stakeholders are crucial to the strategic development of hospitals. Studies have shown that different stakeholders have varying degrees of influence on hospital strategic management, and their interests and requirements differ, which can have a significant impact on the business development of an enterprise. Moreover, it is impossible for all stakeholders to maintain a consensus on all issues. The main reason for failing to achieve the strategic planning goals of the GMUAH during the 14th Five-Year Plan period is the existence of conflicting interests and conflicts of interest among different stakeholders. Therefore, to further investigate specific points of conflicting interests and conflicts of interest, this chapter introduces the empirical research used in this thesis.

To avoid perspective bias, the research methodology of this study is a combination of semi-structured interviews with stakeholders and a survey of employees at the GMUAH. Empirical research uses a mixed approach, combining qualitative and quantitative methods (Venkatesh et al., 2013). Attempts are made to unveil these conflicting interests and conflicts of interest through theoretical and practical analysis with interviews and surveys, and ultimately address the issue of the failure to implement the strategy of the GMUAH, which will accelerate the achievement process of the established strategic goals of the GMUAH.

3.1 Interview design

Interviews can help to improve the depth and comprehensiveness of research conclusions. As the research purpose of the interview in this study is mainly to explore the reasons why the strategy of the GMUAH could not be smoothly implemented, the author mainly focuses on the

two shortcomings of the GMUAH in the national examination to find the points of conflicting interests and conflict of interest that restrict its development. Therefore, the interview content mainly focuses on the existing problems, reason analysis, and solutions for the performance evaluation of public hospitals in China. The selection of interviewees mainly targets on the relevant stakeholders of the GMUAH in the two shortcomings of the national examination. It is planned to explore their experiences and feelings towards the shortcomings of the national examination through semi-structured interviews with stakeholders and extract possible points of conflicting interests and conflicts of interest. All the interview data is analyzed using MAXQDA analysis software and summarize the conflicting interests and conflicts of interest that affect the development of GMUAH, their causes, and relevant solutions.

3.1.1 Interview preparation

The first step is to determine the survey objectives for the interview research. Before conducting the interview, the entire study should clarify research objectives, conduct targeted interviews, and obtain the necessary information and data. The objective of this research interview is to identify the reasons why the strategic goal of GMUAH has not been achieved, as well as relevant solutions.

The second step is to determine the interviewee. A total of 18 interviewees were identified, including clinical department heads, hospital human resources department heads, research department heads, medical department heads, and nursing department heads. Why choose these 18 interviewees? To ensure the effectiveness and reliability of the interviews conducted with these 18 interviewees.

Firstly, it's professionalism. These objects are mostly department heads, who are the main stakeholders of the hospital and have sufficient understanding and experience of the hospital's current situation, especially its strategic planning and goal, and can provide valuable information and insights. Their professional knowledge and experience can ensure the accuracy and depth of the interview content.

Secondly, it's reliability. Choosing reliable interviewees is crucial. The 18 department heads of GMUAH are all core stakeholders of the hospital, ensuring accurate and truthful information in terms of professional background, experience, reputation, and avoiding the impact of misleading or false information on the investigation results.

Thirdly, it's targeting. Selecting interviewees based on the purpose and theme of the survey, with targeted approaches. The research content of the paper is about the strategic planning, strategic goal, and construction of high-level hospital. These 18 interviewees are more targeted

and more in line with the survey purpose of this study.

Finally, it's diversity. Although the 18 interviewees are mainly middle-level cadres of GMUAH, in order to ensure the comprehensiveness and representativeness of the survey results, a diverse range of interviewees should be selected as much as possible.

Diversified interviewees can provide a wider range of information and perspectives, which helps to form more comprehensive and objective investigation conclusions (Merriam & Grenier, 2019).. Therefore, when selecting these 18 interviewees, it is important to focus on individuals with different backgrounds and roles.

Firstly, administrative and logistics management personnel from the hospital were selected, such as the head of the Development Planning Department, the head of the Human Resources Department, the head of the Training Department, the head of the Quality Control Department, the head of the Finance Department, the office director, and the union chairman.

Secondly, clinical medical personnel from the hospital were selected, such as the director of the dermatology department, the director of the nephrology department, the director of the vascular and breast medicine department, the director of the ophthalmology department, the director of the emergency department, the director of the traditional Chinese medicine department, the director of the obstetrics and gynecology department, and the director of the respiratory and critical care department.

Thirdly, the research has selected clinical technicians from the hospital, such as the director of the medical laboratory center and the director of the pathology department. Finally, dedicated researchers were selected, such as the head of the research department and director of the neurology research institute. These interviewees not only need to carry out medical business, but also need to carry out corresponding scientific research business.

In addition, it is convenient to contact these 18 interviewees and arrange the interview time and location. Due to the fact that these 18 interviewees are all internal stakeholders of the hospital, the vast majority of stakeholders work at GMUAH, except for a few interviewees who practice in multiple locations or work part-time in other hospitals. The entire interview process would become very convenient, making it very easy to schedule meetings and start interviews with these stakeholders at a time and place. Based on the above reasons, this study ultimately identified these 18 stakeholders. By conducting interviews with these 18 stakeholders, it is beneficial to gain a specific understanding of the reasons why the strategic goal of GMUAH has not been achieved, which will facilitate the research and exploration in this article.

The determination of the final sample size for the interview follows the principle of information saturation, and the basic information of the specific interviewees is detailed in

Table 3.1.

Table 3.1 Basic information of interviewees

Interviewee	Gender	Role	Department
Interviewee 1	Male	Director	Department of Vascular Thyroid Breast Surgery
Interviewee 2	Male	Director	Department of Office
Interviewee3	Male	Director	Department of Ophthalmology
Interviewee4	Male	Director	Department of Training
Interviewee5	Female	Director	Department of Finance
Interviewee6	Male	Director	Department of Nephrology
Interviewee7	Female	Director	Department of Laboratory Medicine Center
Interviewee8	Male	Director	Department of Respiratory and Critical Illness
Interviewee9	Female	Director	Department of Emergency
Interviewee10	Female	Chairman	Department of Labor Union
Interviewee11	Male	Scientific Researcher	Institute of Neurology
Interviewee12	Male	Director	Department of Human Resources
Interviewee13	Male	Director	Department of Dermatology
Interviewee14	Female	Director	Department of Pathology
Interviewee15	Female	Director	Department of Development Planning
Interviewee16	Female	Director	Department of Traditional Chinese Medicine
Interviewee17	Female	Director	Department of Quality Control
Interviewee18	Female	Director	Department of Obstetrics and Gynecology

The third step is to develop an interview plan. Investigation and interview are a time-consuming process that require clever and comprehensive construction. Before the interview, sufficient preparation should be made, including preparing the interview outline, setting questions, determining the interviewer, and determining the interview time and location. Mainly targeting stakeholders of GMUAH as potential sampling objects, first-hand data is collected through one-on-one semi-structured interviews. The interview location is determined based on the affordability of geography, and in-depth interviews are conducted for about an hour each time to ensure that the number of questions in the interview outline is moderate and not too many. The number of questions is around 10-15, which can be flexibly adjusted according to the interviewee's answers, considering the sensitivity of the questions and providing a trusted interview environment for the interviewee as much as possible. Before the interview, it is necessary to schedule a time with the interviewee. The interview was independently conducted by one interviewer, and an interview outline was set in advance. The questions raised should be clear, and relevant interview records should be kept. It would control the interview direction and topic content of the interviewees, encourage them to actively participate and express their attitudes and opinions towards the questions asked.

The fourth step is to draft an interview outline. According to David's strategic management theory, the three basic activities of strategic evaluation are: (1) examining the external

environment and internal conditions as the foundation of the current strategy (strategic retrospective); (2) Measuring the performance of strategic implementation; (3) Take corrective measures (David, 2011). Therefore, the design of the interview outline is mainly based on the strategic management theory. Specifically, the interview outline mainly focuses on three categories: firstly, reviewing the hospital's "14th Five Year Plan" strategic planning; The second is to measure the performance evaluation of GMUAH in China's tertiary public hospitals, identify the existing problems and reasons. The third is to propose specific measures to achieve the strategic goal of GMUAH.

Finally, targeted interviews will be conducted based on the specific situation of the hospital, mainly targeting two shortcomings in the performance evaluation of the hospital in China's national tertiary public hospitals, namely the low proportion of research funding for 100 people and the low proportion of third - and fourth level surgeries, in order to identify relevant conflict of interest points.

The structure of the interview outline is logical, and the order of questions is natural and smooth. It would start with simple questions and gradually transition to more complex ones to ensure that the interviewee has time to gradually get into the state (Britten, 1995). The questions in the interview outline are open-ended, aiming to stimulate the interviewee to elaborate on their viewpoints as much as possible. The interview questions revolve around the research dilemma and research questions mentioned earlier. What are the reasons why the strategic goal of Guangdong Medical University Affiliated Hospital to enter the top 100 tertiary public hospitals in China has not been achieved? How to solve and achieve strategic goals?

The first step is to conduct a pre interview. Three interviewees conducted pre interviews. Through pre interviews, it was found that the interview questions were not specific and clear, and some vague or overly broad expressions were used, which could easily misunderstand the true intentions of the interviewees and inadvertently give illogical answers. For example, when designing questions, they directly asked about the reasons why strategic goal could not be achieved, which was too general and did not mention the evaluation indicators of China's tertiary public hospitals. In addition, targeted questions lack flexibility and cannot be asked according to different interviewees in order to obtain more specific information. When designing questions, it was directly pointed out that third - and fourth level surgeries and research funding per hundred people were the reasons for the failure to implement the strategy of GMUAH. The interview question can easily induce and influence respondents, causing them to give answers that are not their true thoughts. At the same time, the logic between interview questions is not strong, which cannot fully guide the in-depth conduct of the interview.

Therefore, corresponding adjustments were made to the interview questions, removing some illogical and easily misleading questions, and correcting the vague, ambiguous, or difficult to understand questions in the interview questions. At the same time, missing content was also added to ensure the smooth progress of the formal interview. Based on the feedback from the pre interview, revise the preliminary interview questions and ultimately determine the formal interview outline.

The second step is to formally make the interview outline. Firstly, it will conduct interviews with relevant stakeholders of GMUAH regarding the understanding of the formulation of the 14th Five Year Plan and whether the strategic goal for GMUAH to enter the top 100 public hospitals in China's performance evaluation are reasonable. Secondly, interviews will be conducted with stakeholders regarding the performance evaluation of GMUAH in China's tertiary public hospitals. Determining the problems and reasons of GMUAH by comparing the performance evaluation indicators of China's tertiary public hospitals. At the same time, conducting interviews and surveys on the reasons for the relatively low ranking of performance evaluation indicators and the specific measures taken. Finally, interviews were conducted on the two shortcomings of GMUAH, focusing on the aspects of third - and fourth level surgeries and research funding per hundred people.

3.1.2 Conducting formal interviews

The investigation process is as follows. Firstly, the specific interview activity began with the commitment and mutual recognition of both parties - the interviewer explained the purpose of the interview to the interviewee, obtained a commitment from each other to keep the interview content confidential and only for scientific research, and recorded the entire interview process. Secondly, based on the preliminary interview outline, the interviewees were asked about their basic understanding of the field covered by the 14th Five Year Plan of the Affiliated Hospital of Guangdong Medical University, their assessment of the development situation, and their proposed breakthrough ideas, in order to grasp the overall situation of the research sector to which the interviewees belonged. Subsequently, specific answers were given to the interviewees, and the particularly prominent and representative questions they raised were selected for in-depth analytical questioning, guiding them to explore the issues of conflicting interests and conflicts of interest within them. Finally, questions about the development needs, the support they hope the Hospital can provide, and specific ways to resolve conflicting interests and conflicts of interest among different stakeholders were asked. During the interview process, all interviewees had a clear and familiar understanding of the objective situation in their field and management scope and were able to

introduce the situation proficiently.

In the formal interview stage, the author mainly asked questions about the interview outlines and supplemented, questioned and delved deeper based on the interviewees' responses. After obtaining the informed consent of the interviewees, the entire interview process was recorded by recording or taking notes. This interview mainly used MAXQDA interview software as the carrier for recording and organizing interview text. Based on the specific situation of each interview, the interview data was organized into electronic documents word by word and sentence by sentence. MAXQDA qualitative interview software was used to ensure the interview's authenticity and extract keywords to form the conclusion, which is also the original interview data for the expert interview of this study. The interview notes were input by the author and converted into standardized document materials. The research resulted in 18 standardized document materials, which were compiled into a verbatim interview draft of approximately 200,000 words. To better analyze the interview contents, the interview recordings of 18 interviewees were transcribed into texts, and the transcribed texts were repeatedly read to understand further the information obtained from the interviews. MAXQDA is used in this study as a helpful software in encoding and summarizing a large amount of textual information from the interviews.

Opening the project file in MAXQDA software and importing the text data that needs to be analyzed. In the specific application of MAXQDA software, data is imported by using the data import wizard. Next, proceeding with the encoding operation. Encoding is a core step in qualitative analysis, which involves labeling and categorizing important information in textual data into specific themes or codes. In the application of MAXQDA, the main methods are manual code creation and automatic code generation through text analysis functions. In the process of text encoding, MAXQDA's tagging function is mainly used to label text paragraphs, sentences, or individual words and associate them with corresponding codes. In addition, MAXQDA provides the "encoding stripe" function, which can visually see the distribution of code in the text, helping to identify key information and patterns. The entire process is very intuitive in MAXQDA, greatly improving the efficiency of encoding and classification work through a graphical interface and shortcut key operations.

In the initial process of organizing the data, the perceived reasons why the strategy has not been implemented at the GMUAH were coded and summarized. During the coding process, new themes were constantly discovered, and new codes were created. These themes were entirely derived from the contents of the interviews, and the analyses mainly took the viewpoints of the interviewees into consideration. After completing the first encoding, it was

found that most of the reasons were categorized as COI and CI. Then, COI and CI were further coded and gradually abstracted into more general contents, ultimately forming eight main contradictions (please see Figure 3.1 for details).



Figure 3.1 Excerpt of code system from Maxqda

3.2 Survey design

This study conducts a survey to collect primary data. The survey is distributed in two steps: the first step is a pilot survey. To ensure the validity and reliability of the survey, a pilot survey is conducted in two rounds. In the first round, a reliability and validity test were conducted on 35 relevant stakeholders from the GMUAH. It was found that the reliability and validity did not reach the expected values. The vocabulary, sentence expression, and some contents of the survey were adjusted to ensure conciseness, clarity, and accuracy. Based on the results of the first round of the pilot survey, the unsatisfactory survey items were deleted or optimized. In the second round of the pilot survey, reliability and validity tests were conducted on 110 stakeholders from the GMUAH, and it was found that the reliability and validity all met the prescribed requirements. The second step is to conduct a formal survey. The aim of this study is to address the following issues through the survey: the first is to examine the basic situation of stakeholders related to the GMUAH in terms of the two shortcomings of the national examination; the second is to explore the awareness and support of the strategic goals of the GMUAH among stakeholders; the third is to focus on exploring the conflicting interests and conflict of interest that have hindered the implementation of the strategic goals of the GMUAH.

This study uses a questionnaire survey method to collect data related to strategic management in the GMUAH. The survey questionnaire is designed in three sections: (1) demographic characteristics and basic employment information, (2) aspects of strategic management in the Affiliated Hospital of Guangdong Medical University, and (3) specific conflict events and their underlying causes as summarized from prior interviews.

To ensure the reliability and validity of the questionnaire as well as the effectiveness of the survey, the study was conducted in with two pilot surveys and a formal survey.

3.2.1 First round of pilot survey

During the first pilot survey, data were collected from 35 stakeholders associated with the Affiliated Hospital of Guangdong Medical University. The reliability and validity of the collected data were analyzed. Results indicated that the Cronbach's α coefficient for the strategic management-related variables was 0.660 (Cronbach's $\alpha < 0.7$), suggesting moderate reliability. Additionally, the Kaiser-Meyer-Olkin (KMO) value for the scale was 0.518 (KMO < 0.6), reflecting poor validity and weak correlations among the variables and showing the

dataset unsuitable for factor analysis. Hence, revisions to the questionnaire items were necessary, and new data needed to be collected.

3.2.2 Second round of pilot survey

Based on the reliability and validity analysis of data from the first round of the pilot survey, combined with insights from earlier interviews, the questionnaire for the second round was refined. This process involved restructuring and optimizing survey questions and adjusting the order of options to improve clarity and coherence.

In the second round, questionnaires were distributed to 111 stakeholders from the Affiliated Hospital of Guangdong Medical University. Reliability analysis of the collected data revealed a Cronbach's α coefficient of 0.903 (Cronbach's $\alpha > 0.7$) for the scale measuring variables related to strategic management. This indicates that the scale demonstrated excellent reliability, ensuring consistent and dependable measurement results.

Exploratory factor analysis (EFA) was conducted on the survey data using principal component analysis. Factors were extracted based on eigenvalues greater than 1 and subjected to varimax rotation for clarity. The results showed a KMO value of 0.792 (KMO > 0.6) and a statistically significant Bartlett's test ($p < 0.001$), which rejected the null hypothesis. These findings confirmed the adequacy of the data for factor analysis, as significant correlations existed among the variables.

Following the standard of eigenvalues greater than 0.5, two factors were extracted from the 14 structured questions to describe aspects of hospital strategic management, explaining a cumulative variance of 62.42%. Analysis of the factor loading coefficients after rotation showed that all question items had factor loadings greater than 0.4 on their respective factors. Additionally, communalities (common factor variances) for all question items exceeded 0.4, with no discrepancies observed in the correspondence between items and factors. Please refer to Table 3.2 for detailed information.

Table 3.2 Factor load coefficient after rotation

Variables	factor load coefficient after rotation		Communalities (common factor variances)
	Awareness project on the '14th Five-Year Plan' of GMUAH	Other stakeholder-related projects under the specific contexts of the GMUAH	
1. I am familiar with the development plan for building a high-standard hospital at the GMUAH (the '14th Five-Year Plan').	0.901		0.867
2. I understand the goals and specific initiatives involved in constructing high-standard hospitals at the GMUAH.	0.895		0.867

3. I think it is reasonable for the GMUAH to prioritize ranking among the top 100 public hospitals in the national performance assessment.	0.935	0.896
4. I think the construction of high-standard hospitals by the GMUAH is beneficial for the personal development of employees.	0.913	0.852
5. Compared with external talent recruitment, department leaders prefer to nurture and develop their own students.	0.674	0.546
6. Compared with hiring external talents, department leaders are more inclined to have their own nurtured talents take over their roles.	0.672	0.526
7. Compared to the surgical departments, the hospital allocated more resources to internal medicine departments before the activation of Inpatient Building B.	0.733	0.592
8. Compared to routine surgeries, more complex Grade III and IV surgeries are more likely to lead to departmental financial losses.	0.760	0.583
9. Rather than focusing on cultivating the ability of their department to handle Grade III and IV surgeries, department heads tend to prefer performing these surgeries themselves.	0.791	0.629
10. Compared to clinical personnel of the same rank, researchers receive higher compensation.	0.636	0.440
11. The revenue-sharing mechanism for the commercialization of research achievements between employees and the hospital is unfair.	0.776	0.611
12. Compared to scientific research, department heads prioritize clinical practice.	0.687	0.472
13. Compared to scientific research, hospital leadership places greater emphasis on clinical practice.	0.608	0.425
14. In the allocation of research funding, there is a preference for staff with higher academic qualifications over regular employees.	0.614	0.433

Based on the results of the second round of pilot surveys, the findings demonstrate strong feasibility. This provides significant insights for the formal questionnaire survey, enhancing its credibility and validity.

3.2.3 Formal questionnaire survey

Based on a review of the literature and theoretical analysis, and incorporating the results from two rounds of pilot surveys, we designed the “Strategic Management Survey Questionnaire for

the Affiliated Hospital of Guangdong Medical University”. Respondents were instructed to assess the hospital’s ‘14th Five-Year Plan’ and stakeholder-related projects under specific contexts from the perspective of hospital employees. The questionnaire was created using the platform “Wenjuan star” and distributed to employees of the GMUAH via SMS with a link to access the survey.

A total of 3000 questionnaires were distributed, and 2847 were returned, resulting in a response rate of 94.9%. After excluding responses that were completed casually, completed in less than 90 seconds, or contained logical errors, 2439 valid responses were retained, resulting in an effective response rate of 85.67%.

A reliability analysis of the survey data revealed that the Cronbach’s α coefficient for the strategic management measurement scale was 0.910. Specifically, the Cronbach’s α values for the question items related to the awareness of ‘14th Five-Year Plan’ and stakeholder-related projects under specific contexts were 0.923 and 0.918, respectively, both exceeding the recommended threshold of 0.7. These results indicate that the scale exhibits strong reliability, with high internal consistency and dependable measurement outcomes.

In addition, validity analysis further supported these findings. The KMO test and Bartlett’s test of sphericity produced a KMO value of 0.887 for the overall scale. The KMO values for the question items related to awareness of ‘14th Five-Year Plan awareness’ and stakeholder-related projects under specific contexts were 0.778 and 0.903, respectively, all exceeding the minimum acceptable value of 0.6. Moreover, Bartlett’s test yielded p-values less than 0.001, demonstrating statistical significance. These results confirm the interrelatedness of variables and satisfy the requirements for factor analysis.

Confirmatory factor analysis (CFA) was conducted on the survey sample data using principal component analysis with a predetermined number of factors. Factor rotation was performed using the maximum variance method. The results are as follows:

The factor loading coefficient table indicates that all measurement variables for both the awareness of ‘14th Five-Year Plan’ project and stakeholder-related projects under specific contexts passed the significance test ($p < 0.05$). Furthermore, the standardized factor loadings exceeded 0.6 for all question items. These findings suggest that the extracted factors account for sufficient variance, showing that each variable can be appropriately represented by a single factor. Please refer to Table 3.3 for detailed information.

Table 3.3 Factor load coefficient

Factor	Variables	Standardized		<i>P</i>
		Factor	Load	
		Coefficient		

Awareness project on the '14th Five-Year Plan' of GMUAH	1. I am familiar with the development plan for building a high-standard hospital at the GMUAH (the '14th Five-Year Plan').	0.941	-
	2. I understand the goals and specific initiatives involved in constructing high-standard hospitals at the Affiliated Hospital of Guangdong Medical University.	0.953	< 0.001
	3. I think it is reasonable for the GMUAH to prioritize ranking among the top 100 public hospitals in the national performance assessment.	0.779	< 0.001
	4. I think the construction of high-standard hospitals by the GMUAH is beneficial for the personal development of employees.	0.746	< 0.001
	5. Compared with external talent recruitment, department leaders prefer to nurture and develop their own students.	0.775	< 0.001
	6. Compared with hiring external talents, department leaders are more inclined to have their own nurtured talents take over their roles.	0.784	< 0.001
	7. Compared to the surgical departments, the hospital allocated more resources to internal medicine departments before the activation of Inpatient Building B.	0.733	< 0.001
	8. Compared to routine surgeries, more complex Grade III and IV surgeries are more likely to lead to departmental financial losses.	0.740	< 0.001
Other stakeholder-related projects under specific contexts of GMUAH	9. Rather than focusing on cultivating the ability of their department to handle Grade III and IV surgeries, department heads tend to prefer performing these surgeries themselves.	0.795	< 0.001
	10. Compared to clinical personnel of the same rank, researchers receive higher compensation.	0.654	< 0.001
	11. The revenue-sharing mechanism for the commercialization of research achievements between employees and the hospital is unfair.	0.725	< 0.001
	12. Compared to scientific research, department heads prioritize clinical practice.	0.740	< 0.001
	13. Compared to scientific research, hospital leadership places greater emphasis on clinical practice.	0.705	< 0.001
	14. In the allocation of research funding, there is a preference for staff with higher academic qualifications over regular employees.	0.625	< 0.001

The results of the Average Variance Extracted (AVE) and Composite Reliability (CR) for the model are as follows:

(1) Based on Factor 1, related to the ‘14th Five-Year Plan’ Awareness Project of the Affiliated Hospital of Guangdong Medical University, the AVE value was 0.745 ($AVE > 0.5$), and the CR value was 0.920 ($CR > 0.7$). These results indicate excellent extraction of measurement indicators within this factor.

(2) For Factor 2, related to the stakeholder-related project under specific contexts at the Affiliated Hospital of Guangdong Medical University, the AVE value was 0.535 ($AVE > 0.5$), and the CR value was 0.919 ($CR > 0.7$). These findings also demonstrate excellent extraction of measurement indicators within this factor.

Please refer to Table 3.4 for detailed information.

Table 3.4 The values of AVE and CR of the model

Factor	Average Variance Extracted (AVE)	Composite Reliability (CR)
Awareness Project of the ‘14th Five-Year Plan’ at the GMUAH	0.745	0.920
Stakeholder-related project under specific contexts at the GMUAH	0.535	0.919

The discriminant validity test results indicate that the square roots of the AVE for Factor 1, which relates to the awareness project of the ‘14th Five-Year Plan’ at the GMUAH, and Factor 2, which relates to stakeholder-related projects under specific contexts at the same hospital, are both greater than the Pearson correlation coefficients of the other factors. This demonstrates that the model possesses strong discriminant validity. Please refer to Table 3.5 for detailed information.

Table 3.5 Results of the Discriminant Validity Test

	Awareness project of the ‘14th Five-Year Plan’ at the GMUAH	Stakeholder-related projects under specific contexts at the GMUAH
Awareness project of the ‘14th Five-Year Plan’ at the GMUAH	0.863	
Stakeholder-related projects under specific contexts at the GMUAH	0.340	0.731

Chapter 4: Results and Discussion

4.1 Interviews results and analysis

4.1.1 Interviews results

In the initial process of organizing data, encode and summarize the perceived reasons for Guangdong Medical University Affiliated Hospital's failure to achieve strategic goals. During the coding process, constantly discover new themes and create new code. These themes are entirely derived from the content of the interviews, and the analysis mainly considers the perspectives of the interviewees. After completing the first coding, it was found that most of the reasons were classified as COI and CI. Of course, there are other reasons besides COI and CI, such as weak awareness of patents for research results in terms of research funding per hundred people. Then, COI and CI were further encoded and gradually abstracted into more general content, ultimately summarizing eight main contradictions. The specific classification and categories are based on resource-based theory. Internal conflicts within an organization, where decision-makers, implementers, and stakeholders do not share the same goals, will affect decision-making behavior from the perspective of maximizing their own utility(Wernerfelt, 1984). Meanwhile, strategic management theory and stakeholder theory are also important classification foundations. There are both internal resource allocation issues within the hospital and conflicts of interest between different stakeholders in the hospital, such as internal and external training within the department, internal medicine, and surgery. The interview mainly codes the reasons for the failure to implement the strategy of GMUAH from the perspectives of CI and COI. It found eight specific points of COI and CI.

The first is the conflict of interest between internal training and external recruitment within the department. Some department directors tend to prefer internal talent training, while others believe that external talent recruitment should be the main approach.

The personnel trained within the department will let the department directors and other colleagues have a deep understanding of their personalities, and they are more familiar with each other. After a certain period of assessment, their abilities are recognized. They will be very familiar with the department's work and also have a deeper emotional attachment to the department. (interviewee, 12)

From the opposite perspective, another interviewee said that,

External recruitment is better. The development of the GMUAH cannot be done without high-level talents. High-level talents have stronger strengths in disciplinary construction, scientific research capabilities, and medical technology level, so external recruitment can quickly enhance the strength of the GMUAH. (interviewee, 9)

The second is the conflict of interest between internal medicine and surgical departments in resource investment. The GMUAH has always consistently been strong in internal medicine, especially before the opening of Building B. The resources invested in the internal medicine departments were more than those invested in the surgical departments.

The strength of internal medicine has always been strong in the GMUAH, especially the Department of Nephrology, which has certain strengths not only in western Guangdong but also in Guangdong and even China. However, the assessment requirements of national public hospitals now ask for a focus on surgery, especially the ability and level of third and fourth-level surgeries. (interviewee, 18)

From the opposite perspective, another interviewee said that,

The strength of internal medicine in the GMUAH has always been relatively strong, but now it should be more inclined towards surgery; otherwise, the surgical strength cannot be improved, and the ranking in the national examination will inevitably not be enhanced, which will also affect the high-level construction of the GMUAH. (interviewee, 14)

The third is the conflict of interest between the departmental operational revenue and the third and fourth-level surgeries. GMUAH administrators prefer to undergo more surgeries at the third and fourth levels, while departments focus more on operational benefits. The more level three and four surgeries performed, the lower the operational benefits of departments. Therefore, departments are unwilling to undergo level three and four surgeries.

At present, although the GMUAH attaches great importance to level three and four surgeries, they cannot bring economic benefits to the GMUAH. Insufficient medical insurance payments and even losses can also bring economic losses to departments. Therefore, departments are unwilling to actively undergo level three and four surgeries. (interviewee, 16)

From the opposite perspective, another interviewee said that,

Level three and four surgeries incur losses not only for the GMUAH but also for other departments. If medical insurance payments for these surgeries are insufficient, the incentive performance of departments will be affected to a certain extent. (interviewee, 7)

The fourth is the conflict of interest between self-cultivation and medical echelon cultivation. In the third- and fourth-level surgeries, the cultivation of medical echelons takes a

long time, while department directors performing surgeries on their own will reduce time and improve efficiency. However, departments need collective cooperation for development, rather than relying solely on individual efforts, in order to have a longer term.

The surgery is performed by the chief surgeon alone. In fact, the completion of a surgery requires a team. Surgery is a team operation that requires the close cooperation of the chief surgeon, surgical assistant, surgical nurse, and anesthesiologist. It is teamwork and cannot be completed solely. (interviewee, 11)

From the opposite perspective, another interviewee said that,

Cultivating a doctor takes a long time, but building a team takes even longer. There is higher efficiency in terms of self-cultivation, and there will be more allocation of departmental reward performance. Therefore, many department directors choose to cultivate themselves and are unwilling to cultivate a medical echelon. (interviewee, 6)

The fifth one is the conflicting interest in the income of clinical and scientific research personnel at the same level. The characteristics of different departments in the GMUAH are different, and there are differences in income distribution between clinical and research personnel, which can lead to certain conflicting interests.

Usually, research personnel at the same level in the GMUAHs earn a higher income than clinical staff. Some clinical personnel hold the view that research personnel cannot directly generate profits and that clinical personnel work harder than those research personnel. Still, on the contrary, their salary and income are not as good as research personnel. (interviewee, 8)

From the opposite perspective, another interviewee said that,

The division of labor between research and clinical personnel is different. Research personnel make more efforts to construct discipline and overcome difficulties. Although the output is relatively slow, it greatly improves the GMUAH's research strength and is a long-term investment. Research personnel should receive higher income. (interviewee, 13)

The sixth one is the conflicting interest between employees and the GMUAH in the distribution of benefits from the conversion of scientific research achievements. The profit distribution ratio for scientific research achievement conversion is 30% for the GMUAH and 70% for employees, which, to some extent, dampens employees' enthusiasm for scientific research achievement conversion and leads to certain conflicting interests between employees and the GMUAH.

There is indeed a certain conflicting interest among employees when it comes to the distribution of benefits from the conversion of scientific research achievements. The research

achievements that employees work hard to produce only account for 70% of the actual conversion benefits, which can dampen their enthusiasm. (interviewee, 16)

From the opposite perspective, another interviewee said that,

Although employees account for 70% of the profits from scientific research achievement conversion, it is also appropriate for the GMUAH to account for 30% of the profits because the GMUAH makes certain contributions to employee scientific research achievement conversion processes, so the proportion of three to seven is reasonable. (interviewee, 12)

The seventh one is that the GMUAH and its departments focus on conflicting interests between scientific research and clinical practice. In the context of the national examination, GMUAH administrators place more emphasis on scientific research, while departments place more emphasis on clinical practice, resulting in a certain conflicting interest between the two.

Departments will inevitably attach great importance to clinical practice, which is an extremely important task of departments. The quality of clinical practice directly affects the bonus benefits of departments. Therefore, departments will definitely pay attention to clinical practice, which is also their responsibility. However, scientific research is also particularly important. (interviewee, 1)

From the opposite perspective, another interviewee said that,

GMUAH administrators actually attach great importance to clinical practice, but in the context of the national examination, they have to shift their focus to scientific research. As an affiliated university GMUAH, they should pay more attention to scientific research. Only with a stronger level of scientific research can the GMUAH go further in the long run. (interviewee, 6)

The eighth one is the conflicting interest between ordinary employees and highly educated individuals in allocating scientific research funds. Highly educated individuals will receive more research funding than ordinary employees.

Highly educated individuals with strong research abilities will naturally apply for more research projects and allocate more research funds. However, ordinary employees have relatively weak research abilities and apply for relatively few research projects, resulting in limited research funding. (interviewee, 2)

From the opposite perspective, another interviewee said that,

In recent years, highly educated personnel who have been publicly introduced will naturally receive a research start-up fee from the GMUAH, while ordinary employees do not. This will dampen the enthusiasm of ordinary employees, and their research motivation will be insufficient. (interviewee, 4)

It mainly codes the reasons for the failure to implement the strategy of the GMUAH from the perspectives of conflicts of interest and conflicting interests, and it intends to set them as A and B respectively. Regarding the specific reasons for the failure to implement the strategy of the GMUAH, MAXQDA qualitative software was used to code from eight aspects: allocation of research funds, emphasis on scientific research and clinical practice, distribution of benefits from research achievement conversion, income of clinical and research personnel, self-cultivation and medical echelon cultivation, departmental operating income and the third and fourth level surgical rates, investment in resources of internal medicine and surgery, and internal training and external recruitment. It is proposed to set them as a, b, c, d, e, f, g, and h. At the same time, coding and source design were carried out, and eight specific points of conflicting interests and conflicts of interest points were summarized. The following are Tables 4.1 and 4.2.

Table 4.1 Conflicts of interest among different stakeholders

Interest Dimension		Principal Contradiction		Typical Example	
Type	Identifier	Concept	Identifier	Content	Source
CI	A	Allocation of Scientific Research Funds	a	"The average research funding per researcher, if there is no researcher in the department, then definitely there is no chance for the department to gain projects. And if the department has dozens of researchers, but the research funding is still not enough."	Interviewee 13
CI	A	Emphasis on Scientific Research and Clinical Practice	b	"We need to strengthen communication and collaboration between clinical doctors and researchers, establish smooth channels of communication and mechanisms for cooperation, and enhance the enthusiasm and initiative of clinical doctors in participating in research. From my personal understanding, the connection between our hospital's clinical and research aspects still feels somewhat lacking, leading to a disconnect. Clinical issues or resources, such as clinical cases, are not fully utilized. On the other hand, many of the research personnel we have recruited, whether they are high-end or mid-level talents, haven't effectively integrated with clinical practice. The result is that everyone works independently without much coordination."	Interviewee 11
CI	A	Distribution of	c	"In the current research reward distribution scheme at the GMUAH,	Interviewee 14

CI	A	Benefits from the Transformation of Scientific Research Achievements		there are indeed some aspects that are not reasonable, particularly in terms of its formulation, which doesn't encourage clinical doctors to engage in research effectively. Presently, the scheme tends to favor basic scientific research, while clinical research remains relatively weak. This disparity contributes to the difficulty in motivating clinical doctors to actively participate in research."	Interviewee 18
		Income of Clinical and Scientific Research Personnel	d	"Financial support is also inadequate. I feel that our hospital invests very little in clinical research. There's minimal funding allocated specifically for our department to conduct research. Currently, if we want to initiate a research project, we have to fund the publication of articles ourselves. After publication, we can then seek reimbursement from the GMUAH for rewards. If I don't publish, what's the point? This discourages people from publishing."	

Table 4.2 Conflicting interests among different stakeholders

Interest Dimension		Principal Contradiction		Typical Example	
Type	Identifier	Concept	Identifier	Content	Source
COI	B	Self-Cultivation and Medical Team Cultivation	e	"Considering one's own interests, including living conditions, career development, benefits, platforms, and so on, is natural. However, these interests may not be achievable in our hospital, or the elements of these interests may involve other stakeholders in the GMUAH. For example, regarding the same platform, there's only one position available. If both Dr. A and Dr. B are competing for it, only one person can occupy it. This creates a conflict of interests among individuals at the same level."	Interviewee 12
COI	B	Departmental Operational Revenue and level three and four surgical rates	f	"With an increase in day surgeries, it's inevitable that the rate of fourth-level surgeries would decrease. So, during a recent meeting in Guangzhou with the director of the provincial hospital, he expressed how troublesome it is to manage performance. I asked, "Why?" I explained that if you assess based on fourth-level surgeries, then how do you manage day surgeries?"	Interviewee 18

			Currently, I mainly perform day surgeries, so I don't admit patients. I can only perform surgeries in outpatient settings. However, if I stop doing day surgeries, my overall surgery rate may not be as high. It's a contradictory issue. Because of this problem, I asked Li Mingyi for advice. I asked if we should admit such patients. If my rate of fourth-level surgeries decreases but my overall surgery rate increases, then my rate of minimally invasive surgeries might decrease. How should I resolve this?"	
COI	B	Allocation of Resources in Departments of Internal Medicine and Surgical Departments	"Feeling that it's not profitable, we might still need to invest, which could involve certain risks because we're collaborating with them on neuroimmunology experiments. Golden Area's idea is that their influence isn't strong enough in western Guangdong because they don't have a laboratory here. It's not as easy as in Beijing, Shanghai, or Guangzhou. Within western Guangdong, they want to establish a presence, and our original intention is to cooperate with them."	Interviewee 1
COI	B	Internal Training and External Recruitment within the Department	"In the process of medical services, especially concerning talents, some issues related to interests can lead to delays in execution. A simple example is the recruitment of high-level talents. The department director may feel that by recruiting such individuals, they are bringing in a team."	Interviewee 8

A reanalysis was conducted on the conflicts of interest and conflicting interests among different stakeholders at the GMUAH, as shown in Table 4.3.

Table 4.3 Conflicts of interest and conflicting interests among different stakeholders

Stakeholder/Interest Dimension	GMUAH Administrators	Department Directors	Clinical Personnel	Scientific Research Personnel
GMUAH Administrators	-			
Typical Example	-			
Source	-			
Department Directors/Type of conflict	Conflicting Interests			
Typical Example	"Firstly, the technological			

	intersections are different, which brings up various developmental issues for us... Let me give you a simple example, consumables. How do you balance them among three specialties? This is a huge issue, how to distribute them. You can't distribute them equally among the three; some are more capable than others. This is the issue with consumables."	
Source	Interviewee2	
Type of conflict	Conflicts of Interest	
Typical Example	"Firstly, the technological intersections are different, which brings up various developmental issues for us... Let me give you a simple example, consumables. How do you balance them among three specialties? This is a huge issue, how to distribute them. You can't distribute them equally among the three; some are more capable than others. This is the issue with consumables."	
Source	Interviewee 1	
Clinical Personnel	Conflicting Interests	Conflicts of Interest -
Typical Example	"The funding is also inadequate. Our hospital invests very little, particularly in	"If someone isn't performing well in clinical aspects, we should leverage their

clinical areas. strengths and
There's no provide them with
dedicated funding opportunities to
for research in our perform surgeries.
department. If we Instead of having
want to pursue a them focus solely
research project, on writing
we have to initially medical records
cover the costs of and managing
publishing articles individual
ourselves. After patients all day,
publication, we can the coordination
seek skills of the head
reimbursement are crucial. It's
from the GMUAH important to
for rewards. But if explain the
I do not publish, rationale clearly
what's the point? and encourage
This lack of them to initiate
support research activities
discourages people for the benefit of
from publishing. In everyone,
fact, in our including
performance conducting
evaluation, I've clinical trials.
specifically added Why would you
a criterion: ask a PhD in their
whoever publishes thirties to write
an article will case reports for
receive a certain you? We're
amount of money, willing to invest
which comes from so much money,
our own bonuses. so it's essential to
But in fact this explain the
should be a task reasoning to
handled by the everyone, foster
GMUAH." unity, and
constantly remind
them: What
contributions
have you made to
the department?
Contributions in
research, clinical
work, and
teaching. What
have you
contributed? We
understand that
everyone's
capabilities vary,
but I've noticed a
problem you just
mentioned.
Contributions,

		including the recruitment of PhDs, are significant investments for our hospital. This issue needs to be addressed and accurately reflected to the leadership."	
Source	Interviewee 18	Interviewee 2	-
Scientific Research Personnel	Conflicting Interests	Conflicting Interests	Conflicting Interests
	"Clinical doctors already have a multitude of job responsibilities. If we want to enhance their motivation for research, it's essential to simplify tasks, such as collecting clinical cases, which can consume a significant amount of time and effort. Additionally, when clinical doctors engage in research, the articles they write may not necessarily be research-oriented. For example, publishing high-quality case reports or sharing treatment experiences also contributes to raising the clinical research standards of our hospital. However, according to our current research reward system, these contributions may not be recognized. If they're not	"I've also heard that in some departments, certain directors, while most departments comply with GMUAH regulations and there's nothing particularly unusual, may not have the authority to prevent the GMUAH from recruiting PhDs. Once recruited, however, some department heads may not provide many opportunities to these individuals. Alternatively, in some cases, certain individuals may face obstacles and even suppression from specific department heads, making their work and life here very challenging."	"To strengthen communication and collaboration between clinical doctors and researchers, it's crucial to establish clear channels of communication and cooperative mechanisms. This will enhance the motivation and initiative of clinical doctors to participate in research. From my personal understanding, the connection between our hospital's clinical and research aspects seems insufficient. There's a disconnect because some clinical issues and resources, such as clinical cases, are not fully utilized. On the other hand, many of the research personnel we have recruited, whether they are high-end or mid-level talents,
Typical Example			-

	recognized, clinical doctors will have even less motivation, right? If all evaluations of clinical research by doctors are based on the same criteria used for basic research, some adjustments may be necessary."		haven't effectively integrated with clinical practice. As a result, they tend to work independently, each pursuing their own agenda."	
Source	Interviewee 11	Interviewee 3	Interviewee 11	-

4.1.2 Interviews analysis

As mentioned earlier, the GMUAH has two main shortcomings in the “national examination”: the low proportion of third and fourth-level surgeries and low research funding for a hundred people. There is a close relationship between the specific points of conflicts of interest and conflicting interests, as well as the shortcomings of the GMUAH in the “national examination”. To be more specific:

The first one is the conflict of interest between internal training and external recruitment within a department. Some department directors tend to prefer internal training, while others believe that external recruitment should be the main approach. The conflict of interest between internal training and external recruitment within a department is directly related to the issue of talent. The GMUAH needs to carry out high-level hospital construction and enter the top 100 hospitals in China, requiring talent support in level three and four surgeries and research funding for a hundred people. Therefore, internal training and external recruitment within a department are directly related to the effectiveness of level three and four surgeries and research funding for a hundred people.

The second one is the conflict of interest between internal medicine and surgical departments in resource allocation. The GMUAH has always been strong internally, especially before the opening of Building B, where there were more resources invested in internal medicine than those invested in surgery. In the third- and fourth-level surgeries, there is a greater need to lean towards surgery and allocate more resources to it. Therefore, the conflict of interest in allocating resources to internal medicine and surgery is directly related to the level of surgeries at the third and fourth levels.

The third one is the conflict of interest between the departmental operational revenue and the third and fourth-level surgeries. GMUAH administrators prefer to undergo more level three and four surgeries, while departments focus more on operational benefits. The more level three

and four surgeries performed, the lower the operational benefits of departments. Therefore, departments are not motivated to undergo level three and four surgeries. The conflict of interest between the departmental operational revenue and the third and fourth-level surgeries will directly affect the enthusiasm for performing level three and four surgeries.

The fourth one is the conflict of interest between self-cultivation and medical echelon cultivation. The relationship between the cultivation of medical echelons and self-cultivation in level three and four surgeries is related to whether the doctors performing level three and four surgeries work alone or in collaboration with the team.

The fifth one is the conflict of interest in the income of clinical and scientific research personnel at the same level. The characteristics of different departments in the GMUAH are different, and there are differences in income distribution between clinical and research personnel, which can lead to certain conflicts of interest and will, to some extent, affect the enthusiasm for research funding applications for a hundred people.

The sixth one is the conflicting interest between employees and the GMUAH in distributing benefits from the conversion of scientific research achievements. The profit distribution ratio for scientific research achievement conversion is 30% for the GMUAH and 70% for employees, which, to some extent, dampens employees' enthusiasm for scientific research achievement conversion and leads to a certain conflicting interest between employees and the GMUAH. There is a close relationship between the research funding for a hundred people and the benefits of research achievement conversion. The higher the benefits of research achievement conversion, the higher the enthusiasm for applying for research funding for a hundred people.

The seventh one is that the GMUAH and its departments focus on conflicting interests between scientific research and clinical practice. In the context of the "national examination", GMUAH administrators place more emphasis on scientific research. In comparison, departments place more emphasis on clinical practice, resulting in a certain conflicting interest between the two. At present, the direction of benchmarking the "national examination" is to tilt towards research funding for a hundred people, and the lack of emphasis on scientific research by departments will inevitably lead to a decrease in research funding for a hundred people, affecting the enthusiasm of scientific research project applications.

The eighth one is the conflicting interest between ordinary employees and highly educated individuals in allocating scientific research funds. Ordinary employees and highly educated individuals have different allocations of research funding, and highly educated individuals will receive more research funding. Uneven distribution of scientific research funds can affect the enthusiasm of ordinary employees to apply for scientific research projects and thus have a

certain degree of impact on the application of scientific research funds for a hundred people.

4.2 Survey results and analysis

4.2.1 Basic information of the sample

This study had 2439 valid survey respondents. Among them, 570 people aged 21-30 (23.4%), 963 people aged 31-40 (39.15%), 591 people aged 41-50 (24.2%), and 315 people aged 51 and above (12.9%); 458 people (18.8%) have worked for 1-3 years, 167 people (6.8%) have worked for 4-5 years, 518 people (21.2%) have worked for 6-10 years, and 1296 people (53.1%) have worked for more than ten years.

From the perspective of personnel categories, doctors account for 25.1%, nurses account for 36.4%, administrative logistics staff account for 19.8%, medical technicians account for 11.5%, full-time scientific researchers account for 1.6%, and other personnel account for 5.5%. Medical staff together account for 73%.

From the perspective of participating departments, departments of internal medicine account for 17.9%, surgery departments account for 19.1%, administrative and logistics departments account for 21%, medical auxiliary departments account for 11.2%, Department of Pediatrics accounts for 5.5%, Department of Obstetrics and Gynecology accounts for 3.8%, scientific research departments account for 1.6%, Department of Traditional Chinese Medicine accounts for 1%. The above analysis found that this survey's main respondents are surgical, internal medicine, and administrative logistics personnel.

From the perspective of specific roles, the proportion of GMUAH leaders is 0.01%, the proportion of GMUAH department directors is 10%, and those who do not assume roles account for 89.9%.

From the perspective of professional titles, the number of respondents with senior professional titles is 578, accounting for 23.7%. The number of respondents with intermediate professional titles is 689, accounting for 28.2%. The number of respondents with primary professional titles is 746, accounting for 30.6%. The number of respondents without professional titles is 426, accounting for 17.5%.

The data shows that the number of respondents with primary professional titles is the highest, accounting for the highest proportion, the number of respondents with intermediate professional titles accounting for the middle proportion, while the number of respondents with senior professional titles is the lowest. The number of respondents without professional titles

also has a certain proportion, which is relatively low.

From the perspective of educational level, among all the valid respondents, the proportion of respondents with a bachelor's degree is the highest, accounting for 59.6%, indicating that a bachelor's degree dominates the surveyed population. The proportion of respondents with a master's degree accounts for 20.8%, although less than the number of respondents with a bachelor's degree, it is still an indispensable part. The proportion of respondents with a college degree or below is 13.6%. The proportion of respondents with a doctoral degree is the lowest, accounting for only 5.1%, which reflects that the proportion of respondents with a doctoral degree in the overall population is relatively small.

4.2.2 Survey results and analysis

4.2.2.1 Understanding of the shortcomings of the GMUAH

In the main evaluation dimensions of the performance appraisal of national public hospitals, it asked "which evaluation dimension do you think the GMUAH should vigorously develop" to understand the respondents' understanding of the weakness of the GMUAH. The obtained data are analyzed as follows:

Table 4.4: Analysis of cognition and selection of short board in GMUAH (n=2439)

multiple choice items	n (count)	response rate (%)	penetration rate (%)	X^2	P
Medical quality	2232	29.48%	91.50%	177.709	< 0.001
Operational efficiency	1858	24.54%	76.20%		
sustained development	2036	26.89%	83.50%		
Satisfaction evaluation	1446	19.10%	59.30%		

The multiple response frequency analysis table shows that the significance of chi square goodness of fit test of the four analysis items is $p < 0.001$, showing significance at the level. Rejecting the original hypothesis means that the selection proportion of each item shows significant difference, which can be used for analysis. Among them, the four analysis items accounted for 91.50% of medical quality, 76.20% of operational efficiency, 83.50% of sustainable development, and 59.30% of satisfaction evaluation. It can be seen that most of the respondents, that is, the stakeholders related to the hospital, believe that medical quality and sustainable development need to be vigorously developed. At the same time, they are consistent with the theme of this paper, that is, around the "national public hospital assessment" index - the proportion of the third and fourth surgery in medical quality and the scientific research funds for 100 people in sustainable development, which proves that the content of this paper is consistent with the concerns of stakeholders. See Figure 4.1 for details.

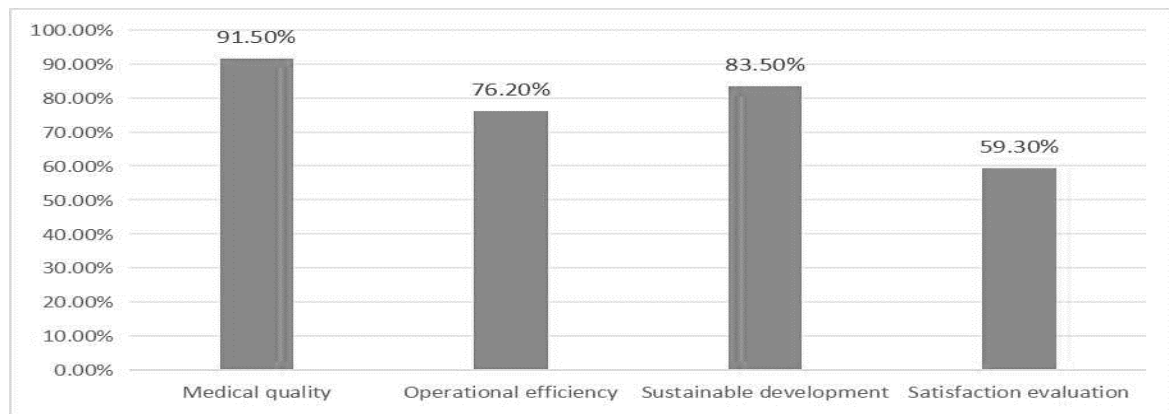


Figure 4.1 Understanding the shortcomings of the national examination

4.2.2.2 Understanding of the 14th five-year plan of the GMUAH

The questionnaire adopts the Likert 5 subscale, which is composed of a group of statements. Each statement has five options of "completely consistent", "relatively consistent", "unclear", "relatively inconsistent" and "completely inconsistent", and the options are assigned 5, 4, 3, 2 and 1 respectively. Please refer to the table below for details

Table 4.5 Stakeholder understanding of the strategic planning of the GMUAH

Items\Options	sample size	average value	median	variance	coefficient of variation (CV)
I know the GMUAH has a High-Level GMUAH Construction and Development Plan (14th Five Year Plan).	2439	4.198	4	0.619	0.187
I know the goal and contents of the High-Level Hospital Construction and Development Plan of the GMUAH.	2439	4.204	4	0.609	0.186
I think it is reasonable for the GMUAH to construct the high-level hospital with the main goal of entering the top 100 in the national public hospital performance evaluation.	2439	4.358	4	0.543	0.169
I think the high-level hospital construction of the GMUAH is beneficial for my personal development.	2439	4.367	4	0.583	0.175

The average value of the analysis item "I know the GMUAH has a High-Level GMUAH Construction and Development Plan (14th Five Year Plan)" is 4.198, with a median of 4, indicating that most respondents have a certain understanding of the "14th Five Year Plan" formulated by the hospital. However, its coefficient of variation (CV) is 0.187, which is greater than 0.15, indicating that there may be outliers in the current data. After analysis, it was found that 14.2% of the respondents still expressed "unclear", indicating that hospital managers need

to further strengthen the promotion and popularization of the "14th Five Year Plan" strategic plan of GMUAH, so that more employees can understand the hospital's development strategy.

The results of the analysis item "I know the goal and contents of the High-Level Hospital Construction and Development Plan of the GMUAH." are similar to the previous question, with an average value of 4.204 and a median of 4, indicating that most respondents have a clear understanding of the goal and contents of hospital construction. However, its coefficient of variation (CV) is 0.186, which is greater than 0.15, indicating that there may be outliers in the current data. After analysis, it was found that 13.9% of the respondents expressed 'unclear', indicating that the GMUAH needs to strengthen our communication of hospital construction goal and content.

In terms of the rationality evaluation of GMUAH's main goal of entering the top 100 performance evaluation of China's tertiary public hospitals, the average value is 4.358 and the median is 4, indicating that the vast majority of respondents agree with GMUAH's main goal of entering the top 100 performance evaluation of China's tertiary public hospitals. However, 8.5% of respondents still expressed "unclear", 1.5% of respondents stated "somewhat inconsistent", and 0.5% of respondents stated "completely inconsistent", indicating that further refinement and clarification are needed in goal setting and information transmission.

In terms of evaluating the benefits of high-level hospital construction for employees' personal development at GMUAH, the average value is 4.367 and the median is 4. The majority of respondents gave positive reviews. However, 6.7% of respondents still expressed "unclear", 1.8% of respondents said "somewhat inconsistent", and 0.9% of respondents said "completely inconsistent", indicating that more attention needs to be paid to the personal development needs and interests of employees in the hospital construction process.

By using one-way analysis of variance (ANOVA), it was found that there was a statistically significant difference ($P < 0.05$) in the scores of respondents' cognition of the hospital's 14th Five Year Plan among different age, work experience, personnel category, department, professional title, position, and education indicators. The results are shown in Table 4.6.

Table 4.6 Comparison of cognitive scores for high-level hospital construction

Items	Scores ($\bar{x} \pm s$)	F	P
Ages			
21~30	4.14±0.71	17.275	0.0001
31~40	4.26±0.68		
41~50	4.39±0.66		
>55	4.41±0.61		
Years of Working Experience			
1~3 Years	4.18±0.70	15.416	0.0001
4~5 Years	4.07±0.76		

6~10 Years	4.24±0.68		
Above Ten Years	4.36±0.65		
Personnel Categories			
Doctors	4.18±0.68		
Nurses	4.28±0.68		
Medical Technicians	4.19±0.67	9.563	0.0001
Full Time Scientific Researchers	4.26±0.68		
Administrative and Logistics Staff	4.45±0.64		
Others	4.30±0.75		
Departments			
Internal Medicine	4.20±0.71		
Surgery	4.25±0.70		
Obstetrics and Gyna ecology	4.37±0.60		
Pediatrics	3.98±0.67		
Chinese Medicine	4.32±0.53	9.555	0.0001
Medical Auxiliary	4.22±0.62		
Administrative and Logistics	4.46±0.63		
Scientific Research	4.14±0.83		
Other	4.32±0.68		
Professional Titles			
Senior	4.38±0.62		
Intermediate	4.26±0.65	7.318	0.0001
Primary	4.21±0.70		
None of the Above	4.31±0.75		
Roles			
GMUAH Leaders	4.25±0.85		
Department Directors	4.63±0.43	37.2	0.0001
Ordinary Employees	4.24±0.69		
Educational Level			
Doctoral Degree	4.39±0.63		
Master's Degree	4.16±0.66	9.41	0.0001
Bachelor's Degree	4.29±0.68		
College Degree or Below	4.38±0.70		

4.2.2.3 Survey of COI and CI among different stakeholders

Different stakeholders at the GMUAH have different points of conflicts of interest and conflicting interests, as detailed in Table 4.7.

Table 4.7 CI and COI Points among different stakeholders

Items/Options	Strongly Agree	Agree	Unclear	Disagree	Strongly Disagree
Department directors favor students cultivated by themselves over the external recruitment of talents.	839 (34.4%)	764 (31.3%)	544 (22.3%)	214 (8.8%)	78 (3.2%)
Department directors favor talents cultivated by their own to take over their positions over recruiting talents externally.	835 (34.2%)	779 (31.9%)	578 (23.7%)	184 (7.5%)	63 (2.7%)
The GMUAH invests more resources in departments of internal medicine than in surgical departments.	1089 (44.6%)	562 (23%)	414 (17%)	271 (11.1%)	103 (4.3%)
The third and fourth level surgeries are more likely to cause losses to departments compared to general surgeries.	1305 (53.5%)	486 (19.9%)	377 (15.5%)	209 (8.6%)	62 (2.5%)

Department directors are more inclined to perform third and fourth level surgeries on their own rather than cultivating the medical echelon members.	1223 (50.1%)	529 (21.7%)	326 (13.4%)	268 (11%)	93 (3.8%)
Scientific research personnel receive higher salaries and benefits than clinical personnel of the same level.	965 (39.6%)	741 (30.4%)	574 (23.5%)	122 (5.0%)	37 (1.5%)
The distribution of benefits from the conversion of scientific research achievements between the GMUAH and employees is unreasonable.	1229 (50.4%)	553 (22.7%)	414 (17%)	181 (7.4%)	62 (2.5%)
Department directors pay more attention on clinical practice than scientific research.	827 (33.9%)	756 (31%)	434 (17.8%)	330 (13.5%)	92 (3.8%)
GMUAH leaders pay more attention on clinical practice than scientific research.	877 (36%)	584 (23.9%)	487 (20%)	344 (14.1%)	147 (6%)
The GMUAH favors high-level talents in the allocation of research funds over ordinary employees.	915 (37.5%)	716 (29.4%)	672 (27.6%)	99 (4.1%)	37 (1.5%)

The first one is the conflict of interest between internal training and external recruitment within a department. The vast majority of respondents believe that department directors prefer students they cultivate and prefer these students to take over their positions regarding their preferences for talent sources and job succession. This reflects the tendency of department directors to cultivate talent and inherit it.

The second one is the conflict of interest between internal medicine and surgical departments in resource allocation. Most respondents believe the GMUAH invests more resources in internal medicine than surgery.

The third one is the conflict of interest between the departmental operational revenue and the third and fourth-level surgeries. Most respondents believe that level three and four surgeries are more likely to cause departmental losses, which suggests that the GMUAH needs to be more cautious in surgical selection and resource allocation.

The fourth one is the conflict of interest between self-cultivation and medical echelon cultivation. Most respondents believe that department directors are more inclined to perform surgeries on their own than to cultivate the team to perform level three or four surgeries. This reflects their confidence in surgical operations and concerns about team capabilities. This also leads to a conflict of interest between the department directors and other department employees in performing level three and four surgeries.

The fifth one is the conflict of interest in the income of clinical and scientific research personnel at the same level. Most respondents believe that the income of scientific research personnel is relatively high, which can lead to a certain conflict of interest between clinical personnel and scientific research personnel in terms of income.

The sixth one is the conflicting interest between employees and the GMUAH in the

distribution of benefits from the conversion of scientific research achievements. Except for some respondents who are not particularly familiar with the issue, most of the remaining respondents believe that there is a certain degree of irrationality in the distribution of benefits from the conversion of scientific research achievements between employees and the GMUAH. This indicates that the GMUAH needs to further improve and adjust its mechanism for incentivizing scientific research personnel and converging achievements.

The seventh one is that the GMUAH's and departments' focus on conflicting interest between scientific research and clinical practice. Respondents generally believe that both department directors and hospital leaders place greater emphasis on clinical practice, leading to an obvious conflict of interest.

The eighth one is the conflicting interest between ordinary employees and highly educated individuals in the allocation of scientific research funds. In terms of research funding allocation, respondents generally believe that the GMUAH is more inclined towards highly educated individuals. This reflects the importance and advantages of highly educated personnel in scientific research work, but ordinary employees should also be provided certain support in scientific research funding, indicating the necessity for the GMUAH to allocate scientific research funding more fairly and reasonably.

4.2.2.4 Differences in COI among different stakeholders

One is the scores and analysis of COI. As for COI, the average score is 3.47, with a minimum score of 1 and a maximum score of 5, indicating a moderate to high level of conflict. By using one-way analysis of variance (ANOVA), it was found that there were statistically significant differences ($P < 0.05$) in the scores of COI levels among respondents of different age, work experience, personnel category, department/division, professional title, position, and educational background indicators. The results are detailed in Table 4.8.

Table 4.8 Comparison of COI scores among respondents

Items	Scores($\bar{x} \pm s$)	F	P
Ages			
21~30	3.36±0.75	7.161	0.001
31~40	3.47±0.80		
41~50	3.57±0.82		
>55	3.53±0.74		
Years of Working Experience			
1~3 Years	3.35±0.76	8.391	0.0001
4~5 Years	3.35±0.78		
6~10 Years	3.47±0.78		
Above Ten Years	3.54±0.80		
Personnel Categories			
Doctors	3.32±0.75	13.402	0.0001

Nurses	3.59±0.81		
Medical Technicians	3.38±0.66		
Full-Time Scientific Researchers	3.27±0.52		
Administrative and Logistics Staff	3.46±0.78		
Others (152)	3.72±0.98		
Departments			
Internal Medicine	3.39±0.76		
Surgery	3.56±0.82		
Obstetrics and Gynecology	3.56±0.83		
Pediatrics	3.28±0.67		
Chinese Medicine	3.45±0.89	3.974	0.001
Medical Auxiliary	3.46±0.69		
Administrative and Logistics	3.47±0.78		
Scientific Research	3.10±0.53		
Others	3.55±0.85		
Professional Titles			
Senior	3.43±0.75		
Intermediate	3.47±0.74	1.336	0.26
Primary	3.47±0.81		
None of the Above	3.53±0.88		
Roles			
GMUAH Leaders	3±0		
Department Directors	3.35±0.74	3.854	0.021
Ordinary Employees	3.47±0.79		
Educational Level			
Doctoral Degree	3.33±0.75		
Master's Degree	3.24±0.68	26.368	0.0001
Bachelor's Degree	3.51±0.78		
College Degree or Below	3.72±0.90		

The other is the scores and analysis of conflicting interests (CI). As for CI, the average score is 3.54, with a minimum score of 1 and a maximum score of 5, indicating a moderate to high level of conflict. By using one-way analysis of variance (ANOVA), it was found that there was a statistically significant difference ($P<0.05$) in the degree of CI scores among respondents of different age, work experience, personnel category, department/department, professional title, position, and educational background indicators. The results are shown in Table 4.9.

Table 4.9 Comparison of CI scores among respondents

Items	Scores($\bar{x} \pm s$)	F	P
Ages			
21~30	3.39±0.73		
31~40	3.51±0.76	19.61	0.0001
41~50	3.68±0.74		
>55	3.68±0.64		
Years of Working Experience			
1~3 Years	3.38±0.73		
4~5 Years	3.42±0.77	17.911	0.0001
6~10 Years	3.48±0.75		
Above Ten Years	3.64±0.72		
Personnel Categories			
Doctors	3.32±0.75	6.376	0.0001
Nurses	3.59±0.81		

Medical Technicians	3.38±0.66		
Full-Time Scientific Researchers	3.27±0.52		
Administrative and Logistics Staff	3.46±0.78		
Others (152)	3.72±0.98		
Departments			
Internal Medicine	3.55±0.68		
Surgery	3.58±0.78		
Obstetrics and Gynecology	3.48±0.82		
Pediatrics	3.45±0.66		
Chinese Medicine	3.77±0.84	2.496	0.011
Medical Auxiliary	3.54±0.63		
Administrative and Logistics	3.54±0.73		
Scientific Research	3.11±0.66		
Others	3.57±0.82		
Professional Titles			
Senior	3.63±0.64		
Intermediate	3.52±0.72		
Primary	3.50±0.76	3.573	0.013
None of the Above	3.54±0.74		
Roles			
GMUAH Leaders	3.1±0.42		
Department Directors	3.60±0.63	1.117	0.327
Ordinary Employees	3.54±0.74		
Educational Level			
Doctoral Degree	3.43±0.74		
Master's Degree	3.38±0.64		
Bachelor's Degree	3.56±0.73	20.95	0.0001
College Degree or Below	3.77±0.86		

Correlation analysis of COI and CI scores of respondents. The Pearson correlation analysis results show a positive correlation ($P < 0.05$) between the COI and CI scores of the respondents, with a correlation coefficient (r) of 0.538.

4.2.2.5 Reasons for the low proportion of third and fourth-level surgeries

Through investigating the reasons for the low proportion of third and fourth-level surgeries, it is found that 1438 respondents believe that the risk is higher than the return, accounting for 58.9% of responses; 1480 respondents believe that medical insurance payments are insufficient, accounting for 60.6%; 1567 respondents, accounting for 64.2%, believe that departments have insufficient capabilities; 1466 respondents hold the view that there are not enough doctors to perform level three and four surgeries, accounting for 60.1%; 1908 respondents, accounting for 78.2%, believe that the operating rooms are not sufficient; 1816 respondents thought that the operating room turnover rate is low, accounting for 74.4%. The above are all important reasons for the low proportion of third and fourth-level surgeries. Please refer to Figure 4.2 for details.

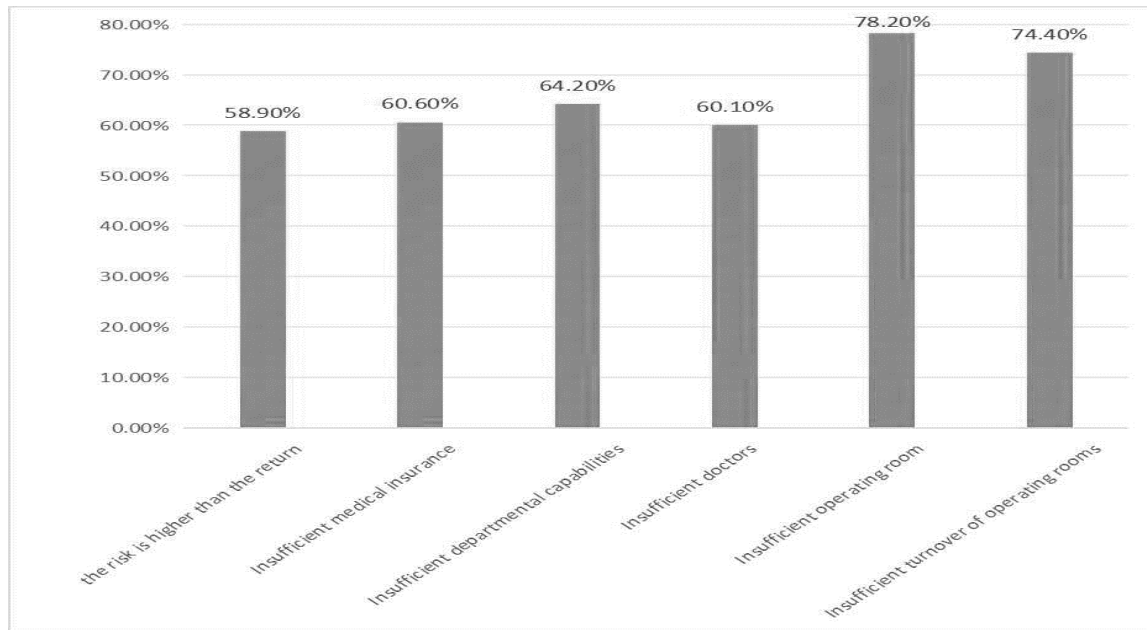


Figure 4.2 Reasons for the low proportion of third and fourth-level surgeries

4.2.2.6 Reasons for the low proportion of research funding for a hundred people

Through investigation, it is found that 1477 respondents (60.5%) believe that the GMUAH has not linked the application of scientific research projects to employee title evaluation, job promotion, and year-end assessment. 1501 respondents (61.5%) believe that the GMUAH's own scientific research capacity is insufficient, making it difficult to win in the application of highly competitive scientific research projects such as the National Natural Science Foundation. 1421 respondents (58.2%) hold the view that the GMUAH and departments place more emphasis on clinical practice that can bring more profits rather than scientific research. 1552 respondents (63.6%) think that the GMUAH does not have a clear mandatory assessment requirement for departmental research project applications. 1321 respondents (54.1%) believe that the GMUAH faces a shortage of scientific researchers. 1254 respondents (51.4%) think that the GMUAH did not provide enough scientific research facilities. Through analysis, it is found that the highest proportion lies in the fact that the GMUAH has inadequate scientific research capacity, which is close to two-thirds of all the reasons, indicating that the GMUAH needs to improve its overall scientific research strength. In addition, the different levels of emphasis placed on clinical practice and scientific research by the GMUAH, and its departments can also lead to a low proportion of research funding for a hundred people, and there are also some inherent constraints, such as research facilities. Furthermore, the shortage of research personnel and the lack of a mandatory assessment requirement for departmental research project applications are also the reasons that occupy a certain proportion in the survey.

Please refer to Figure 4.3 for details.

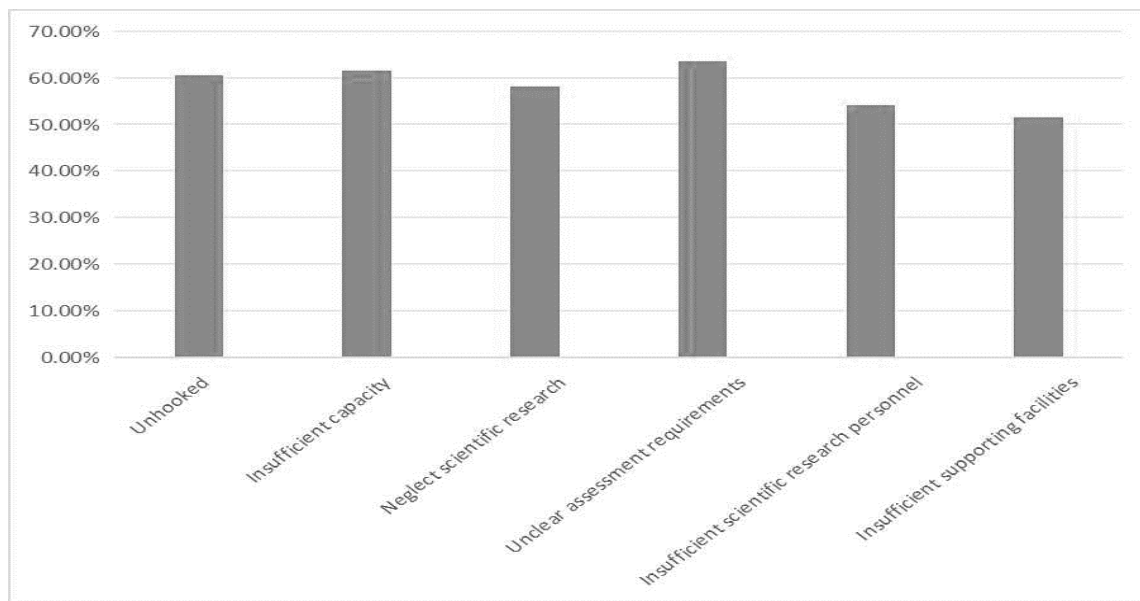


Figure 4.3 Reasons for the low proportion of research funding for per hundred people

4.3 The significance of results

The research results in this study are of great significance. The research results are consistent with the strategic management theory and stakeholder theory. This study has also applied the three stages of the strategic management process. To be more specific, strategic reviewing, performance measurement, and corrective actions in the stage of strategic evaluation are utilized (David, 2011). At the same time, this study combines the theoretical knowledge of stakeholders, identifies the stakeholders of the GMUAH, conducts interviews and questionnaire surveys, and identifies the specific reasons that affect the implementation of the GMUAH's strategy. This is of great significance for the high-level construction of the GMUAH and provides a solution for the high-level construction of the GMUAH, which is to adjust the conflicts of interest and conflicting interests of different stakeholders in the GMUAH.

This study is a concrete practice for strategic management theory and stakeholder theory in the research process, which further proves the important role of this theory in the study of hospital strategic management. Specifically, this study mainly focuses on the "14th Five Year Plan" strategic planning of the GMUAH, with the strategic management of high-level hospital construction as the entry point, attempting to guide the entire thesis through strategic management theory, stakeholder theory, and resource-based theory.

As mentioned earlier, the strategic management process includes three stages: strategy formulation, implementation, and evaluation (Kabeyi, 2019). Strategy formulation includes

establishing long-term goals, proposing alternative strategies, and selecting specific strategic solutions (Parker, 2008). In the process of strategic formulation, the GMUAH has formulated a strategic plan that aligns with its current situation and has clearly proposed to strive to enter the top 100 of China's national tertiary public hospital performance evaluation rankings by 2025. Strategy implementation requires setting annual goals, formulating policies, motivating employees, and allocating resources to ensure the formulated strategy can be effectively implemented (Kaplan & Norton, 2005). Strategic implementation is often referred to as the action stage of strategic management (Bourgeois & Brodwin, 1984), and is often seen as the most difficult stage in the strategic management process (Hussey, 2007). In the strategic implementation process, the GMUAH in China benchmarks the performance evaluation indicators of China's national tertiary public hospitals. It is currently in a critical execution period of overcoming difficulties. Strategic evaluation is the final stage of strategic management, and managers need to know when the strategy they have formulated has gone wrong. Strategic evaluation is the basic means to obtain this information (Punt et al., 2016). The three basic strategic evaluation activities are: (1) Checking the external environment and internal conditions that serve as the foundation of the current strategy (reviewing the basis); (2) Measuring the performance of strategic implementation; (3) Taking corrective measures (David, 2011). The GMUAH has formulated the "14th Five Year Plan" strategic plan, and it is necessary to conduct a strategic evaluation of the "14th Five Year Plan" strategic plan of the GMUAH. By tracing the foundation, measuring performance, and identifying conflicts of interest and conflicting interests that affect the strategic implementation of the GMUAH, corresponding corrective measures will be taken to address these conflicts of interest and conflicting interests.

4.4 Discussion on research results

The research results suggest that the main reason the strategy of the GMUAH has not been implemented is the existence of conflicts of interest and conflicting interests.

Firstly, the research results indicate that different stakeholders at the GMUAH all significantly impact the GMUAH's strategic planning and implementation. It can be said that, to some extent, it explains the critical role of stakeholders in strategic management (Freeman, 1984). From another perspective, this research results support Ansoff's theory that in order to set ideal goals, it is necessary to comprehensively balance and consider the conflicts among various stakeholders, including managers, workers, shareholders, suppliers, and customers (Ansoff, 1957). Therefore, for this study, the most important method is to identify the

stakeholders of the GMUAH and adjust the conflicts of interest and conflicting interests among different stakeholders of the GMUAH, which can help with the execution of strategic planning (Freeman et al., 2010). Compared to the research of Blair and Whitehead et al., this study uses performance evaluation indicators for tertiary public hospitals in China. Taking a large public hospital in Guangdong Province, China as an example, it analyzes the shortcomings of the indicators and the conflicts of interest and conflicting interests behind them, which is innovative and deepens the theory and practice of stakeholders (Blair & Whitehead, 1988).

Secondly, the research results indicate that stakeholders at the GMUAH, especially clinical department directors or directors from other departments, are crucial to the GMUAH's strategic management. The director of the clinical department leads a department relatively independently, with strong professionalism and bridging the gap, directly serving patients. Practice has shown that the quality and ability of department heads directly determine the quality of a department's work, the speed of a discipline's development, and thus affect the overall development of the hospital. The ability and quality of GMUAH department directors are directly related to the implementation of hospital strategies and the degree of support for strategic execution. For example, the conflict of interest among department directors regarding internal training and external recruitment, the conflict of interest between the departmental operational revenue and the third and fourth-level surgeries, and the conflict of interest between self-cultivation and medical echelon cultivation are all directly related to department directors. It can be said that the department directors, as stakeholders, are particularly important for implementing hospital strategic planning. Freeman believes that in strategic decision-making, it is necessary to consider the influence of stakeholders and conduct stakeholder analysis, especially the interests of key stakeholders, which must be integrated into strategic goals. Strategy implementation also requires stakeholders' active participation (Freeman et al., 2010). Therefore, the department directors, as key stakeholders, of the GMUAH should be encouraged to actively participate in the specific implementation of the strategy and find ways to make them fully support the GMUAH's strategic planning and execution, especially focusing on the solutions of two shortcomings of the GMUAH, namely, the low proportion of level three and four surgeries, as well as the insufficient research funding per hundred people.

Thirdly, the research results indicate that the GMUAH strategic planning studied in this thesis is consistent with the concerns of GMUAH stakeholders. Through interviews and questionnaire surveys, most GMUAH stakeholders believe that the indicators of medical quality and sustainable development need to be vigorously developed in terms of the performance evaluation of China's tertiary public hospitals. This is also consistent with the

theme of this thesis, which is centered around the national examination indicators - the low proportion of third and fourth-level surgeries in medical quality and the insufficient research funding per hundred people in sustainable development. In addition, over 80% of the respondents have a certain understanding of the 14th Five-Year Plan formulated by the GMUAH. Nearly 90% of the respondents at the GMUAH recognized the rationality evaluation of entering the top 100 in the performance evaluation of China's tertiary public hospitals as the main goal. That is to say, the formulation of strategic planning for the GMUAH aligns with GMUAH stakeholders' interests.

Fourthly, the conflicting interests and conflicts of interest are fundamental conflicts between people within a hospital and departments. It is mainly reflected in differences in performance allocation, workload, labor intensity, and working hours among department teams. In contrast, differences in resource allocation, department performance, patient flow, and strategic positioning among departments are the main factors. Therefore, in hospital management, administrators should always pay attention to team dynamics, clarify possible causes of conflicts, prevent potential conflicts in advance, maintain team harmony and stability, and thus improve the overall operational efficiency of the hospital. All of these cannot be separated from the GMUAH performance management and the allocation of resource benefits behind them. Each department of the GMUAH has different resource investment needs at different stages of development. Therefore, in order to truly align resource allocation with the GMUAH's development strategy and play a supporting role in the development strategy, it is necessary to determine the allocation of resources in different departments and personnel. When the GMUAH allocate resources for various departments, it should take various aspects into consideration such as department development trends, department strength, medical diagnosis and treatment so as to determine the key investment links. Based on the above analysis, it is found that the resource-based theory plays an important role in this study.

The eight conflicts of interest identified in the previous chapter's survey results are important reasons for the low proportion of third - and fourth level surgeries and low research funding per 100 people at GMUAH.

Regarding the first conflict, the internal training and external recruitment of hospital departments mainly focus on the source of medical talents. Internal talent cultivation and external talent introduction are two important ways to build a talent pool. Internal talent cultivation is the hospital's own hematopoietic function, which can tap into the potential power of hospital development; The introduction of external talents is a way of blood transfusion, which can quickly introduce advanced concepts and technologies. The development of

GMUAH cannot do without talent. With the rapid development of medical technology and the increasing demand for patients, the hospital's demand for talent is becoming increasingly urgent, and the high-quality development of the hospital cannot be separated from the support of a high-quality talent team. At present, the GMUAH is limited by factors such as geographical location, salary and benefits, and industry competition. It is still difficult to directly recruit talents and talents based on its own attractiveness. In the context of difficulties in talent introduction and long-term retention, the two-way loss of talents has become increasingly serious. Both internal training and external recruitment have their own advantages and disadvantages. External recruitment of talents can help improve the level of third - and fourth level surgery and scientific research in hospitals, bring advanced medical technology and experience, and promote the development of hospitals in a short period of time. Internal training can help stimulate the enthusiasm of existing employees, improve their initiative in participating in the development of the department, and promote the level of third - and fourth level surgery and scientific research. However, internal training requires a certain training period and has slow output. In addition, GMUAH lacks corresponding systems and mechanisms for cultivating and exploring internal talents.

Regarding the second conflict, the main issue between internal medicine and surgery in hospitals is the allocation of hospital resources. The GMUAH has always had a stronger development in internal medicine than in surgery. Overall, compared to surgery, the GMUAH invests more resources in internal medicine, whether in terms of funding support, overall medical technology strength, or overall hospital attention. In the process of building key departments, based on the characteristics of the hospital and market demand, internal medicine with development potential is selected for key cultivation, and internal medicine is recruited as a key department to ensure the construction and development of key specialties. The GMUAH focuses on the development of internal medicine and highlight the hospital's characteristics. The more resources are invested in the internal medicine department of a hospital, the higher the level of development of internal medicine. For example, the nephrology department of a hospital is led by the hospital president as the discipline leader. Nephrology has always been a key discipline of the hospital and has been approved as a national clinical key specialty construction project. The overall strength of the discipline has reached the advanced level in China, leading the medical industry in western Guangdong. However, surgery plays an irreplaceable role in the field of medicine, especially in the development of modern medicine. The comprehensive strength and level of surgery are indispensable for the third and fourth level surgeries in hospitals. To achieve the level and success rate of third and fourth level surgeries,

a strong and technically proficient surgical medical team is indispensable. Therefore, in order for the GMUAH to achieve its strategic goals and enter the top 100 performance evaluation of China's tertiary public hospitals, it must allocate more resources to the hospital's surgical department and promote the ability and level of tertiary and tertiary surgeries.

Regarding the third conflict, it mainly concerns the economic benefits brought by third - and fourth level surgeries in hospital departments. Third - and fourth level surgeries are generally more complex and high-risk surgeries, with much higher risks than other surgeries. Once the surgery fails, not only will the hospital have corresponding economic punishment mechanisms, but it may also face complaints from patients and their families. Meanwhile, in recent years, the DRG medical insurance payment model implemented in China has also led to low enthusiasm among doctors in hospital departments for third - and fourth level surgeries, mainly because the DRG medical insurance payment model affects the distribution of economic benefits among departments. The implementation of the DRG model is mainly aimed at preventing excessive medical treatment, and the medical insurance department has formulated corresponding payment standards. However, if the doctors in the hospital department exceed the payment standard set by the medical insurance department during the third or fourth level surgery, it means that the hospital will incur economic losses in treating the patient. Correspondingly, the hospital's operating department will allocate the portion of the hospital's losses to this surgical department, and the economic benefits obtained by this department during the third or fourth level surgery will also decrease. In fact, it is difficult to standardize the treatment process and ensure that the treatment costs do not exceed the payment standards of medical insurance for third - and fourth level surgeries. The doctors in hospital departments who perform difficult and highly skilled third - and fourth level surgeries cannot earn sufficient performance income. On the contrary, they have to bear the risk of medical insurance exceeding payment standards and the risk of patient complaints. This will inevitably lead to doctors in hospital departments being unwilling to perform third - and fourth level surgeries, and their enthusiasm for doing so will be affected. The leaders of GMUAH hope that hospital department doctors can perform more third - and fourth level surgeries, because third - and fourth level surgeries will improve the ranking of GMUAH in the assessment of third level public hospitals in China. However, the practice of hospital department doctors performing more third - and fourth level surgeries may not necessarily bring economic income, and there are significant contradictions and conflicts in this regard.

Regarding the fourth conflict, it mainly focuses on the issues of individual doctors and medical teams. Building an excellent medical team is not an easy task. It requires condensing

culture, building platforms, capturing opportunities, and constantly innovating. At the same time, teams need to cooperate with each other, learn from each other's strengths and weaknesses, and unite and collaborate. In recent years, although the GMUAH has made certain progress in the construction of its medical team and correspondingly established a disciplinary team, there are still shortcomings overall, and the overall level of the medical team needs further improvement. Some doctors have very strong medical technology and enjoy a high reputation both domestically and internationally. They have excellent surgical skills and research abilities at the third and fourth levels. However, in this medical team, the strength of the team members is relatively weak, which can to some extent affect the highly skilled doctors and even their immediate interests. Sometimes, these highly skilled doctors are even needed to handle disagreements and conflicts within the team. Of course, a highly skilled medical team cannot do without doctors with technical expertise, and capable doctors also need the support of a strong team. The two complement each other. The importance of medical team building is self-evident. It can not only improve doctors' professional abilities and work efficiency, but more importantly, through the power of the team, the development and overall efficiency of the hospital can be elevated to a new level. But if the medical team itself has poor strength, some individual doctors are unwilling to entrust third - and fourth level surgeries to this team. Firstly, the medical team will allocate a portion of the economic benefits obtained from third - and fourth level surgeries. Secondly, if the team strength is poor, it will affect the performance of these technically skilled doctors in diagnosis and treatment. Thirdly, the formation of an excellent medical team requires a certain period of time, effort, and cultivation.

Regarding the fifth conflict, it mainly focuses on the issue of income distribution between clinical doctors and researchers. Due to the fact that the income distribution of GMUAH tends to be more towards scientific researchers, that is to say, compared to clinical personnel, the income of scientific researchers at the same level will become higher. This will lead to dissatisfaction among clinical staff, who may perceive income inequality. Firstly, clinical doctors may believe that they have put in more effort than researchers in surgery and other treatments and have also brought direct economic benefits to the hospital, so they should receive more compensation. Secondly, in the medical field, the skills and knowledge of clinical doctors are crucial for the treatment of patients. Clinical doctors believe that they need to receive long-term medical education and training and accumulate rich experience in practice. Therefore, the salaries of clinical doctors are usually higher than those of researchers. Thirdly, clinical doctors believe that researchers cannot bring direct economic benefits to hospitals, but instead use the economic benefits brought by clinical doctors to conduct scientific research. At the same time,

conducting scientific research activities may not necessarily lead to success. Therefore, clinical doctors may be dissatisfied with the high income of researchers, and there may be conflicts in income distribution with them. Clinical doctors' enthusiasm for diagnosis, treatment, and surgery will become low. In addition, some clinical doctors may believe that scientific research activities are the responsibility of researchers and have little to do with clinical doctors, and they are busy with diagnosis and treatment, lacking time to do scientific research. The enthusiasm of clinical doctors for scientific research activities is not high.

Regarding the sixth conflict, it mainly focuses on the distribution of scientific research benefits between hospitals and hospital staff. The transformation of scientific research achievements is one of the important ways for the application and implementation of scientific research results. However, the application and transformation rate of scientific research achievements at GMUAH is still not high. One of the reasons for the low conversion rate of scientific research results is the problem arising from the distribution of scientific research benefits between hospitals and hospital staff. The distribution of benefits from scientific research achievements is a key issue in the transformation of hospital scientific research achievements. A reasonable mechanism for the distribution of benefits is an important guarantee to stimulate the enthusiasm of scientific research personnel for the transformation of scientific and technological achievements and promote the transformation of scientific and technological achievements into real productivity. At present, the conversion rate of scientific research achievements at GMUAH is not high, and the most important reason is that researchers have not been fully guaranteed in the distribution of benefits. Among them, the highest scientific research achievement income of hospital employees can only reach 70% of the overall scientific research achievement conversion income, while GMUAH needs to take a 30% share of the overall scientific research achievement conversion income. Therefore, the employees of GMUAH have low enthusiasm for the transformation of scientific research achievements and believe that there is a certain degree of irrationality in the distribution of benefits between employees and the hospital in the transformation of scientific research achievements. In addition, the transformation of scientific research achievements at the GMUAH often involves researchers actively contacting and contacting enterprises, or enterprises contacting and connecting researchers through authorized patent websites. Due to the lack of a technical evaluation system and market-oriented evaluation methods, coupled with limited expertise and energy of researchers to conduct market-oriented research, the price of patent transformation is usually not high, which affects the enthusiasm for achievement transformation. Some companies often have doubts about the use of new technologies. Under the premise of existing

profitability, few companies are willing to try out new technologies or achievements, which further undermines the enthusiasm of researchers and affects the implementation of scientific research results. The GMUAH itself does not have much profit from the transformation of scientific research achievements, and the issue of income distribution will to some extent affect the enthusiasm of employees to carry out scientific research transformation. From another perspective, the enthusiasm of employees at the GMUAH of Science and Technology to apply for research funding will also be affected to some extent.

Regarding the seventh conflict, it mainly focuses on the level of importance that hospital leaders and department heads place on scientific research and clinical practice. As a large tertiary medical institution, the main function of GMUAH is to treat and save patients. Only by treating patients well can we effectively improve the satisfaction of the people's medical treatment. Hospital leaders and department directors believe that the job of clinical doctors should be to treat and save patients, and they need to invest a lot of time in actual medical work. Continuously improving the quality of hospital medical care and providing treatment services for more patients is the key. Moreover, by treating and saving patients, we can improve the patient experience, enhance patients' trust in GMUAH, increase the hospital's economic benefits, and promote the hospital's high-quality development. The administrators of GMUAH believe that clinical physicians should be patient-centered and able to provide optimal treatment for patients. If clinical physicians devote a lot of time to scientific research work and do not prioritize diagnosis and treatment services for patients, it goes against the original intention of medical care. However, clinical medicine is a highly practical discipline, and the improvement of clinical doctors' technology and business progress cannot be separated from scientific research; Without solid clinical knowledge and accumulated experience, discussing scientific research will only become empty talk. A good clinical doctor must understand the basics, be good at thinking, conduct scientific research in clinical work, and guide clinical work in scientific research. Therefore, how to balance clinical and scientific research at GMUAH is one of the important conflicts facing the hospital.

Regarding the eighth conflict, it mainly focuses on the conflict between employees with lower education and those with higher education in the allocation of research funds. In recent years, GMUAH has attached great importance to the research funding of some highly educated medical talents in order to attract them to join. GMUAH classifies highly educated talents into different categories and provides certain research start-up fees according to different categories to encourage them to engage in scientific research activities. It vigorously supports the scientific research activities of highly educated talents and opens up various channels to actively support

their application for various national level project topics, including both horizontal and vertical projects. However, the GMUAH has relatively less investment in research funding for low educated personnel and does not attach enough importance to it. It believes that the research ability of low educated personnel is generally inferior to that of high educated personnel, and the research output level of low educated personnel is also significantly different from that of high educated personnel. Therefore, the GMUAH is unwilling to invest more research funding resources into low educated personnel, which has led to conflicts in the allocation of research funding between low educated and high educated personnel. Although education to some extent reflects a doctor's learning ability, it does not represent everything. Low educated individuals can also engage in scientific research and produce valuable results. It is necessary for the GMUAH to allocate research funds more fairly and reasonably and provide appropriate support for low educated personnel in research funding.

Chapter 5: Recommendations

This study attempts to strengthen the two shortcomings and promote the GMUAH to enter the top 100 in China's tertiary public GMUAH performance evaluation rankings by resolving conflicts of interest and conflicting interests. In the process of formulating and implementing the strategy of the GMUAH, it is necessary to face those conflicts, conduct detailed stakeholder analysis, strengthen the management of conflicts, and strive to seek a balance of interests among different stakeholders such as GMUAH administrators, medical personnel, and research personnel, ultimately promoting the implementation of the strategic plan of the GMUAH. The next subsections detail some recommendations to address these challenges based on the research conducted.

5.1 Improve the proportion of third and fourth-level surgeries

5.1.1 Reasonably allocate internal and external departmental resources

At present, generally speaking, the internal medicine departments are stronger than the surgical departments in the GMUAH. The departments of internal medicine have relatively more resources compared to the surgical departments, especially the Department of Nephrology. As a sub-center of the National Clinical Research Center for Kidney Disease, a National Drug Clinical Trial Base, and a National Resident Physician Training Nephrology Professional Base, the comprehensive strength of the Department of Nephrology is undoubtedly very strong. In addition, the Department of Neurology and the Department of Cardiovascular Medicine in the GMUAH are also at the forefront. However, benchmarking against the national examination indicator system, it was found that the surgical strength of the GMUAH is relatively weak compared to the departments of internal medicine, especially the proportion of third- and fourth-level surgeries, which ranks relatively low. One of the more important reasons is the uneven distribution of resources between internal medicine and the surgical departments. In the context of normalising the national examination, GMUAH administrators obviously cannot only consider the immediate results and rankings. How to make a good choice between gains and losses so that the national examination can truly play a role in promoting high-quality development of hospitals, which tests the wisdom of hospital administrators. Therefore, the

administrators of the GMUAH should re-examine and adjust the allocation of existing resources from the perspective of GMUAH strategic development. It is important to establish a fair mechanism to evaluate and allocate resources, ensuring that internal and external departments have access to fair opportunities and resources to improve work efficiency and meet patient needs.

5.1.1.1 Strengthen top-level design and allocate internal and external departmental resources reasonably

Although the GMUAH has always had strong internal medicine capabilities, it has had to tilt towards surgery under the background of the national examination. Therefore, it is necessary to establish a sound management system for the national examination work, with the GMUAH leader in charge of the overall deployment of the national examination work. It is necessary to make great efforts to tilt towards surgical level 3 and 4 surgeries and invest more resources to increase the intensity of these surgeries. Develop annual target values for the proportion of third and fourth-level surgeries in the GMUAH, and the medical department should combine clinical practice to set departmental target values. Every month, based on the completion status of departmental indicators, multiple departments such as the Medical Department, Pharmacy Department, Medical Record Department, and Quality Management Office jointly develop plans and carry out training related to the national examination, strengthen the attention and importance of clinical departments to the national examination work, especially for level three and four surgeries, assist departments in analyzing the reasons for non-compliance with level three and four surgical data, formulate following improvement measures, and do a good job of "looking back" to form effective closed-loop management.

The surgical and minimally invasive development of internal medicine has become a trend in modern medicine. The GMUAH has strengthened its technological development from both internal and external aspects, further enhancing the surgical capabilities of internal departments such as nephrology, cardiovascular medicine, neurology, and gastroenterology. The surgical and minimally invasive development of internal medicine encourages internal medicine departments to carry out surgeries in various aspects, especially for some difficult endoscopic and interventional surgeries, ensuring a significant increase in the number and proportion of internal medicine surgeries. Intensify the performance evaluation of third and fourth-level surgeries for "external" patients, increase the evaluation scores for third and fourth-level surgeries, encourage the development of new surgical techniques, and guide the continuous improvement of surgical abilities for third and fourth-level surgeries. This is clearly an

adjustment of the GMUAH's internal structure under the guidance of factors such as performance evaluation. Although the internal medicine department does not have an advantage in performance evaluation, its position in medical development cannot be underestimated. Internal medicine is the mother of medicine, and the development of surgery cannot be separated from the support of internal medicine. Today, with the integration of multiple disciplines, the key role of internal medicine cannot be ignored. This requires hospital managers to balance internal surgery and allocate internal and external department resources reasonably.

5.1.1.2 Resource tilt towards surgery: compressing hospitalization days, improving surgical bed turnover, wards and operating rooms

Due to the presence of more medical service projects, surgical procedures are more likely to generate profits compared to internal medicine treatments. However, factors such as high labor costs and multiple equipment in surgery results in high operating costs, and long hospital stays can easily backfire profits. Therefore, efficiency is a key focus in operating and managing surgical diseases. At the same time, a structure of "large outpatient clinics and small hospitalizations" should be gradually formed. With the permission of medical insurance payment, the outpatient nature of surgical procedures should be gradually promoted, performance allocation models should be improved, and surgical departments should be encouraged to increase the total number of surgeries. At the same time, it is necessary to rely on the inpatient service center and encourage daytime diagnosis and treatment of third and fourth-level surgeries based on the actual situation of each clinical department while ensuring safety to effectively reduce the average length of hospital stay and the overall proportion of first and second level surgeries. Guide the department to focus on treating diseases that reflect the value of the discipline and increase the proportion of third and fourth-level surgeries in the surgical department. In addition, the adjustment of the number of beds and disease structure is crucial, and the proportion structure of internal surgical patients should be gradually adjusted, reducing the number of patients undergoing conservative treatment in internal medicine and increasing the number of surgical wards and operating rooms. Provide guidance on the direction of disease treatment in clinical departments, allocate high-quality medical resources to or serve difficult and critically ill patients, promote the rational allocation of medical resources, continuously promote the development of the hospital system, improve the level of hospital services, and provide better medical services for patients.

5.1.1.3 Diversion of resources: Utilize the advantages of regional medical communities to carry out referral work for third and fourth-level surgeries

To perform such surgeries well, the first thing to solve is the problem of the source of certain complex and miscellaneous diseases. At present, the GMUAH, as a level three public hospital and a leading hospital in western Guangdong Province, China, should fully play the leading role of the medical community, promote the development of close medical community work, and achieve the sharing of medical resources. The GMUAH should focus on treating difficult and miscellaneous diseases and carry out surgeries toward the third and fourth levels. Meanwhile, the first- and second-level surgeries should be carried out by grassroots hospitals to prevent resource waste. Therefore, it is urgent to implement on-site graded diagnosis and treatment, timely divert mild symptoms, and especially transfer some internal medicine patients to lower-level medical consortia hospitals. Fully leverage the role of medical consortia to achieve disease differentiation. The GMUAH should send senior attending physicians or resident physicians to the community medical consortium for long-term residency and provide technical assistance and guidance through various forms such as daily rounds, centralized theoretical lectures, clinical skill training, and remote consultations, truly achieving "short-term surgeries in hospitals, postoperative recovery in communities" and "difficult and critical care in hospitals, chronic disease recovery back to communities". To integrate regional medical and health care resources and strengthen resource sharing and information exchange, the GMUAH should establish a two-way referral channel and referral platform, formed a people-oriented closed-loop service chain work deployment, constructed a close county-level medical and health community with two-way referral, linkage between upper and lower levels, and differentiation of urgent and slow treatment, and ensured high-quality medical and health services and appropriate technology sinking through deposit and other measures to address the mild disease symptoms that can be dealt by the first and second level surgeries to the grassroots hospitals. At the same time, send the patients with difficult and complicated symptoms who need to be resolved through level three or four surgeries to the GMUAH for treatment through the medical community's two-way referral green channel. Therefore, a service channel for referral has been opened up, ensuring that patients do not need to arrive at the GMUAH. Still, their disease information is provided beforehand so as to better meet the public's needs for health care.

In deepening the reform of the medical and health system, the GMUAH should always adhere to a problem oriented approach, focus on solving patients, meet the needs of the public

for medical treatment, fully integrate high-quality medical and health resources of the hospital, strive to improve the ability and level of medical services, actively explore the construction of a medical and health service system and a new pattern of hierarchical diagnosis and treatment that is in line with the actual situation of the GMUAH, and strive to break through the bottleneck that restricts the high-quality development of medical services at GMUAH through the implementation of multiple measures, so that the public can receive more timely, reasonable, and optimized medical services in the implementation of two-way referral services, and continuously enhance their sense of medical satisfaction.

One is to combine the existing human resources, medical equipment, and technology of the GMUAH, clarify the functional positioning of grassroots hospitals and the GMUAH, study and formulate measures and long-term mechanisms for two-way referral work, fully utilize advantages, identify breakthroughs, optimize service processes, improve service efficiency, and provide safe, effective, convenient, and economical basic medical services for urban and rural residents. Third - and fourth level surgeries will be referred to the GMUAH. Secondly, the GMUAH is continuously strengthening its guidance and assistance to grassroots medical institutions, improving their service capabilities. At the same time, it has further clarified the six principles of two-way referral work, including "voluntary patients, graded management, reasonable diagnosis and treatment, scientific guidance, shared responsibility, and referral filing", to ensure that some patients with mild symptoms can receive timely and effective diagnosis and treatment services at the grassroots level, reducing unnecessary referrals. Of course, for those who require third or fourth level surgery, they should be promptly referred to the GMUAH. The third is to establish a leading group for two-way referral work at the GMUAH, led by the Dean of the GMUAH, with two vice deans in charge of relevant business coordinating and implementing daily work. The core management departments such as the Clinical Management Center, Information Management Center, Medical Insurance Management Center, Financial Management Center, and two-way referral center of the GMUAH, as well as grassroots hospitals and entrusted hospitals, are responsible for comprehensively implementing and implementing the specific goals and requirements of two-way referral work. The fourth is to establish two-way referral regional service centers in the GMUAH and the grassroots hospital under its custody. Implement the specific responsibilities of the dual regional service center to individuals, clarify the liaison officers for two-way referral services in each branch, optimize the two-way referral workflow, open green channels, implement 24-hour two-way referral services, ensure service quality and efficiency, and better meet the needs of nearby convenience and efficient referral services. The fifth is to establish and improve the two-way referral system

of county-level medical communities, refine the two-way referral policies and operating procedures, clarify the referral conditions, procedures, responsibilities, and rights protection, and ensure the standardization and institutionalization of two-way referral work. Sixth, the GMUAH should establish a two-way referral information guarantee mechanism, improve the two-way referral information system, set up dedicated telephone lines, two-way referral WeChat groups, and build a convenient and efficient two-way referral information channel to facilitate patients' smooth referral and ensure service quality and efficiency. Seventh, the GMUAH should formulate the "Implementation Plan for Performance Assessment of Bilateral Referral at the GMUAH to support the implementation of work assessment and incentive mechanisms, promote the steady development of bilateral referral services, effectively link the implementation of work responsibilities with the annual assessment of branch leaders, cadre appointment, job adjustment, and performance assessment of grassroots entrusted medical and health institutions, fully encourage grassroots medical and health institutions and medical staff to actively play their roles, and form a coordinated and efficient two-way referral medical service guarantee system and long-term measures.

5.1.2 Implement the strategy of internal training and external talent recruitment

Internal training and external introduction have a specific impact on the interests of departments, but the two are not entirely opposed. How to adjust the relationship between the two and coordinate the conflicting interests and conflict of interests between internal training and external recruitment is a problem that needs to be solved next. Discipline construction is the soul, and talent is the key. The GMUAH should steadily implement the talent strategy of "external recruitment and internal training, with training as the main focus", adhere to the principle of "external recruitment" driving "internal training", strengthen external recruitment and optimize internal training, and make every effort to forge a high-level talent team, adhering to the parallel promotion of "blood transfusion" and "hematopoiesis". The GMUAH should continue strengthening its talent pool construction and focus on forging a composite talent team. It can be said that solid talent and technical advantages have become a strong support for promoting the high-quality development of a hospital. If a hospital wants to achieve long-term development and enter the top 100 hospitals in China, it cannot achieve this goal without talent. In recent years, the GMUAH has attached great importance to talent work, resolutely implementing the Guangdong Medical University's decision-making and deployment on talent work and the spirit of the GMUAH's Talent Work Meeting and actively promoting the GMUAH talent work. The GMUAH sticks to the principle of the Party managing talents, always upholds

the development concept of "strengthening the GMUAH with talents", adheres to the principle of gathering talents from all over the world, and continuously develops a new situation where high-level talents are "quality" and "quantity" balanced, both "excellent" and "gathered". To further enhance the third and fourth-level surgical capabilities, measures such as "going out" and "bringing in" should be taken to attract more talent.

The GMUAH should establish a reasonable salary incentive system to motivate talents to work actively through salary, benefits, and other means. At the same time, hospitals should also strengthen their care and concern for medical staff, increase their sense of belonging and identity, and enhance their work enthusiasm and sense of responsibility. Hospitals should establish good career development channels to provide medical staff with clear career planning and promotion paths. Hospitals can establish scientific talent evaluation standards and promote medical staff based on their performance and abilities, making them feel valued and supported by the hospital, thereby enhancing their sense of belonging and loyalty. Only by truly valuing talents can it help promote their development and improve their surgical abilities at the third and fourth levels.

The GMUAH should attach great importance to talent work, give priority to talent attraction and education, incorporate it into the overall development strategy of the hospital, adhere to the concept of "simultaneous attraction and education, focusing on training", strengthen the exploration and cultivation of talents, and strive to cultivate a first-class talent team. The GMUAH should establish a talent work leadership group to clarify the responsibilities of each functional department. Based on the overall development strategy and business development goals of the hospital, clarify the talent needs of different levels and types, analyze the current situation of the talent team, identify talent shortcomings and advantages, formulate systematic and forward-looking medium - and long-term talent training plans, and continuously innovate talent training mechanisms. The GMUAH should make every effort to do a good job in the work of new era talents, focusing on the introduction and cultivation. The GMUAH systematically enhances the professional, scientific research, and management capabilities of hospital talents, thereby strengthening the hospital's core competitiveness and service level, providing a stable foundation for high-quality development of the hospital, and better serving the health of the people and the development of medical and health care.

5.1.2.1 Adopting the approach of "going out"

Incentive policies are tailored to the needs of different stages of talent development, forming a complete chain. Internationally, the talents of the GMUAH are sent out, and an "international exchange fund" is provided to support young and middle-aged talents in going to the top 100

universities, hospitals, and research institutions of the international rankings for scientific research and clinical further education. After returning to China, a "start-up fund for returning overseas personnel" is provided to ensure that talents can effectively link up research projects after returning to China. Domestically, The GMUAH should require all disciplines to benchmark against first-class hospitals, with the goal of introducing characteristic medical technologies such as solving difficult and complex diseases. A group of young backbone personnel with solid business skills, active innovative thinking, and excellent comprehensive qualities should be selected to go out for learning and training. At the same time, the GMUAH should select key personnel from departments to go out to learn new technologies and projects, strengthens communication and cooperation with well-known domestic hospitals, invites expert teams to come to the GMUAH for technical assistance and guidance, and continuously improves medical technology level and surgical abilities of the third and fourth level.

The GMUAH encourages young and middle-aged clinical technical backbone to conduct in-depth research on advantageous diseases, participate in specialty construction, and build a reasonable technical team. Establish a nationally renowned key hospital key discipline training resource library to support young and middle-aged medical and nursing professionals to study at well-known medical institutions both domestically and internationally; Allocate funds for training and further education, and dispatch personnel to study abroad according to the annual plan, in order to continuously improve the professional and technical level of medical talents.

Efforts should be made to increase internal training, encourage the staff to further their studies and pursue higher degrees, and develop international exchange programs for discipline leaders, excellent medical talent programs, and excellent nursing talent programs. At present, although the GMUAH has jointly established an advanced training program for clinical medicine doctoral degrees with the First Clinical School of Jinan University in China, and jointly organized a doctoral training program with the Macau University of Science and Technology, more training programs should be further expanded. In addition, it is also possible to cultivate a group of local high-level talents, actively promote the integration of high-level talent resources between hospitals, universities, and research institutes, continuously release new impetus and vitality for talent cultivation through policy and financial support and improve the level of independent talent cultivation.

Talent selection has its periodicity. The GMUAH should develop a talent training plan based on actual work, break down tasks into years, conduct annual evaluations, and cultivate a team that meets its own information technology construction needs over the years. Proactively establish various forms of strategic cooperation with well-known universities and research

institutes, fully expand the source of master's and doctoral students, assist in the construction of key disciplines and management leadership teams, establish and improve a talent training system that conforms to educational laws and has distinctive characteristics, cultivate more talented individuals with emotions, vision, pattern, and expertise, and cultivate comprehensive management abilities for existing hospital staff based on results, completing the transformation from skilled experts to management experts. The GMUAH is deeply implementing the talent cultivation and introduction system project, putting people first, introducing and cultivating talents, and discovering and scientifically utilizing talents. Evaluate the capabilities of hospital personnel, analyze their potential, develop training plans, and conduct classified training to build a multi-level, comprehensive, systematic, and unique work system for the growth of various talents. This ensures that talent plans are interconnected, talent policies are interconnected, and talent growth paths cover the entire chain.

The GMUAH should launch a renowned physician training program, receive hands-on training from top experts in close proximity and real-time, cultivate an international perspective in disciplines, rapidly enhance disciplinary capabilities, and build expert brands and brand influence. Hiring experts from top domestic hospitals and third-party training institutions to conduct systematic training at the hospital and selecting management backbones to follow up with higher-level hospitals for further training, among other methods, to enhance the overall quality of middle-level management cadres by profession and hierarchy. The GMUAH cultivates versatile talents. The hospital will continue to select young backbone or clinical department deputy directors with high education, high professional titles, and certain management experience from clinical departments to serve as deputy positions in functional departments. While enhancing administrative management capabilities, the GMUAH should also leverage its professional advantages to inject vitality into functional departments and gradually build a high-quality, high-level, and sustainable management team. Encourage young and middle-aged technical experts in clinical practice to conduct in-depth research on advantageous diseases, participate in specialized disease construction, and build a reasonable technical team. Establish a nationally renowned key hospital key discipline training resource library to support young and middle-aged medical and nursing professionals to study at well-known medical institutions both domestically and internationally.

In short, internal talent cultivation is an important way for hospitals to enhance their soft power. By appropriately allocating resources, it can send a clear signal to excellent medical staff within the organization, enabling them to be included in the key training scope. Strengthen the optimization and design of institutional mechanisms, support newcomers to take on the

main role, establish a selection mechanism that prioritizes decision-making and selects candidates later, and select a group of talented individuals with potential, good organizational skills, strong professionalism, and a sense of mission and responsibility without any constraints. Provide platforms and funding to support them to pursue further education at home and abroad, increase the happiness and sense of achievement of employees, and strive to build a strong reserve leadership team with comprehensive strength.

5.1.2.2 Adopting the method of "bringing in"

Medical care is a technology intensive and high-risk industry. Scientific research on the prevention and treatment of major diseases, the development of advanced medical technologies, and the use of high-end equipment all rely on senior talents. Senior talents are the most important factor supporting the high-quality development of hospitals. Each hospital compares discipline construction, scientific research achievements, and ultimately competes for talent. This is also an important reason why major hospitals compete for senior talents.

Efforts have been made to build a high-level talent introduction and training chain that "selects talents through open channels, sincerely attracts talents, wholeheartedly cultivates talents, and uses talents without any constraints". The talent team should be continuously strengthened. A hospital talent work leadership group with a high-level talent dedicated management institution and service positions has been established. Besides, the GMUAH also launches global recruitment for disciplinary leadership positions, fully implements talent team building systems such as the "Management Measures for High-level Talents", steadily promotes the reform of talent work system and mechanism, and targets the introduction of a group of leading talents and innovative teams who are active in academic and clinical frontlines, master key technologies, and expands talent attraction channels through various methods such as open recruitment at home and abroad and new media promotion. The GMUAH grasps precise talent attraction, tries to attract high-level talents globally and locally, and also focuses on solving the problem of weak surgical abilities at the third and fourth levels. According to the work arrangement of "regular registration, regular warehousing, and review on demand", the GMUAH introduces excellent high-level talents nationwide and globally through "cloud recruitment" and "cloud talent introduction", breaks down regional, registered residence registration, and industry barriers, highlights performance orientation, and opens up the flow channel of "two-way selection" of high-level talents. At the same time, the GMUAH should focus on retired senior expert talents, introduce the "Management Measures for Returned Experts", improve the incentive mechanism for retired experts to pass on guidance, and stabilize

the talent team. The GMUAH needs to continuously strengthen the introduction and cultivation of high-level and high-quality talents such as disciplinary leaders, disciplinary technical backbones, and doctoral students, explore new measures for expert talent management, strive to make the best use of expert talents, further consolidate the talent foundation of GMUAH construction of medical centers, and provide high-quality medical services and better medical experiences for patients.

For example, the Urology Department of the GMUAH could not perform a single da Vinci surgery in a year. However, in 2023, a discipline leader was introduced, and more than 100 da Vinci surgeries were performed in just six months. Leveraging technological advantages as a brand, it attracted many patients, and the proportion of fourth-level surgeries rapidly increased.

There are three aspects that should be paid attention to in order to do a good job in the GMUAH's talent work. The first aspect is the planning of talent work. In the construction of national and provincial regional medical center and key hospital work, overall planning should be reasonably done beforehand. The second is to provide a guarantee for the development of talent work, which requires a good budget for talent work to ensure its progress. The third is to conduct a thorough assessment of the implementation of various goals and tasks in the GMUAH's talent work. All departments of the GMUAH should work together to improve the accuracy and depth of talent services, making the talents be affected by the sincerity of the GMUAH and continuously create a good ecosystem for talent development. In short, by strengthening the "internal training" and "external recruitment" of GMUAH talents, not only has a first-class and structurally reasonable talent team been built for the GMUAH, but more importantly, it is conducive to the improvement of the ability level of the third and fourth level surgeries.

In addition, the GMUAH not only needs to introduce high-level talents, but also needs to retain them for a long time. Firstly, hospital managers should give full respect and trust to high-level talents, hold an understanding and supportive attitude towards their medical work, stimulate their inherent potential and work enthusiasm, and make the hospital their second home. Only in this way can high-level talents voluntarily contribute their efforts to the development of the hospital. On the premise of complying with the hospital management system, the managers of GMUAH are emotionally close to high-level talents, trust high-level talents in their work, and care about high-level talents in their daily lives, so that high-level talents can fully feel the trust and respect of the managers for themselves. Secondly, a strong incentive mechanism can effectively stimulate the enthusiasm of high-level talents in GMUAH, fully tap into their subjective initiative, and greatly mobilize their enthusiasm. The GMUAH aims to

improve the efficiency of high-level talents in creating social value by meeting their needs. Of course, hospitals must establish a flexible incentive mechanism for different high-level talents, so that each high-level talent can obtain what they truly need through hard work. By establishing and improving incentive mechanisms, GMUAH strengthens the incentive role of managers for high-level talents, fully unleashes their work enthusiasm, and does their job better. The work of high-level talents in GMUAH is recognized and their needs are met, which will lead to more energy being invested in their work and further promote the long-term development of the hospital. Thirdly, the GMUAH should strengthen communication and exchange with high-level talents. Through communication, solving problems in hospital management can not only reduce the difficulty of hospital management and improve management efficiency, but also invisibly enhance the relationship between high-level talents and GMUAH, bringing an intangible driving force for the development of the hospital.

5.1.3 Develop a performance evaluation reward and punishment mechanism

The development and proportion of third and fourth-level surgeries are important indicators for measuring the level of medical services in a hospital, which can directly reflect the hospital's diagnosis, treatment level and functional positioning. Compared to first- and second-level surgeries, the complexity of the surgical process, the difficulty coefficient of surgical operations, and the risk of surgery for third- and fourth-level surgeries significantly increase. For the GMUAH, to maximize the departmental enthusiasm for level three and four surgeries, it is necessary to use performance evaluation as a baton, target indicators, identify gaps, gradually improve, and fully adjust the conflicting interests and conflicts of interest among different stakeholders. Formulating performance evaluation plans for third and fourth-level surgeries and improving the departmental performance evaluation reward and punishment mechanism can help stimulate clinical doctors' work enthusiasm. The vast majority of doctors also benefit from the high-level construction and high-quality development of the GMUAH. In short, the GMUAH should establish a public hospital performance evaluation system with comprehensive assessment as the main focus and special assessment as the auxiliary. It should increase the incentive and tilt towards the third and fourth-level surgeries in departments to maximize the work enthusiasm and initiative of clinical doctors.

5.1.3.1 Fully link level three and four surgeries with departmental reward performance

One is to revise the comprehensive performance evaluation plan for clinical departments, incorporating the absolute value and proportion of level three and four surgeries into the

departments' overall goals. Performance evaluation rewards can be fixed as a minimum reward based on personnel category, ensuring that each on-duty employee benefits. Based on this, personalized reward measures can be set according to the specific surgery and surgical volume level in each department. The second is to improve the method for determining the total amount of performance-based pay at the GMUAH, improve the performance-based pay system, and achieve more pay for more work and excellent performance. The focus should be on personnel such as surgical backbones who can perform surgeries at the third and fourth levels and reasonably widen the income gap. Methods and experiences can be drawn, such as disease diagnosis-related grouping (DRGs) and resource-based relative value ratio (RBRVS), to truly reflect the labor and technical value of medical staff's income in level three and four surgeries, achieving excellent performance and remuneration. The third is to establish special funds for evaluating and rewarding surgical performance at the third and fourth levels. The GMUAH should guide the allocation of hospital performance towards the third and fourth-level surgeries. The internal medicine departments can focus on the Case Combination Index (CMI), and the surgery departments should establish a resource-based Relative Value System (RBRVS), focusing on key diseases and specialties, optimizing the structure of disease admission, and strictly controlling the types of admissions in the surgical department. At the same time, performance evaluation should be regarded as an important reference for resource allocation and implementation of rewards and punishments. By setting up special funds for surgical performance evaluation rewards at the third and fourth levels, corresponding reward standards should be established according to the evaluation level, which would serve as an important basis for determining the total hospital salary and major project approval decisions. In summary, the GMUAH should have "5 tilts" in performance allocation - inclined towards high-tech, high-risk, high-intensity, high contribution, and high expenditure.

5.1.3.2 Using the proportion of third and fourth-level surgeries as an important reference for department evaluation, cadre promotion, and professional title evaluation

On the other hand, the GMUAH should consider the proportion of third and fourth-level surgeries as an important reference for evaluating each department leadership team, promoting the performance of cadres, and evaluating professional titles. An appropriate and effective incentive mechanism is one of the means to enhance employee motivation and promote improving enterprise work efficiency. Providing employees with opportunities for promotion is an indispensable motivating factor. It not only brings employees a more appropriate salary and a wider desk but also indicates recognition, identity, honor, and respect. It brings satisfaction

and responsibility to employees. Therefore, improvement has strong motivation and cohesion at all times. The Guiding Opinions on Deepening the Reform of the Professional Title System for Health Professionals and Technicians in China (2021) clearly proposes to deepen the reform of professional titles and break the evaluation system that emphasizes papers and neglects clinical practice. Hence, the GMUAH also needs to break the previous professional title evaluation conditions. Clinical doctors, especially surgeons, should be fully linked to the difficulty and quality of surgeries, and the proportion of third and fourth-level surgeries should be one of the important conditions for professional title evaluation and job promotion. At the same time, corresponding punishment measures should be established for medical staff, and a special performance evaluation plan for the proportion of discharged patients undergoing the third and fourth-level surgeries should be formulated. Scientific departmental target values should be set, and data should be used to guide departmental management. Use the self-historical value estimation method, calculate the target value of the proportion of surgeries in each surgical department, to quantify the department's target value. Conduct a monthly special analysis on the proportion of third and fourth-level surgeries and impose corresponding performance penalties on departments that do not meet the standards for every one percentage point decrease. According to the monthly ranking of indicators, turn on the warning lights for each department. For indicators with a risk of deduction and unsatisfactory completion, turn on the yellow and red light, respectively. Departments are required to conduct horizontal comparative analysis, study the reasons for backwardness, and take effective measures to cancel the number in a timely manner. Carry out "supervision reminders". Send supervision letters to departments with red and yellow indicators, remind department directors of their work, urge departments to analyze the situation, identify problems, and strive to catch up, ensuring that each department knows the focus of their efforts and the direction of their work under the warning light. In addition, the management method of performance evaluation plus and minus points should be strictly implemented, and the results of performance evaluation should be fully applied to the promotion, evaluation, and job adjustment of doctors, as well as department leadership evaluation. In particular, the year-end evaluation results of surgical skills and level improvement in each department should be included as the annual assessment and performance evaluation indicators of the GMUAH's middle-level cadres. It is important for the GMUAH to give encouragement and support to the responsible staff. In order to break through the bottleneck of the low proportion of third and fourth-level surgeries, excellence is judged based on actual performance, and performance is used to evaluate the "transcript" to make the difference between real and fake work, the difference between more and less work, and the

difference between good and bad work, and to maximize the enthusiasm of department doctors.

5.1.4 Cultivate a talent echelon of different disciplines

With the continuous development of healthcare, the cultivation of hospital talent pool has become an important issue. In order to avoid talent gaps, GMUAH needs to develop effective talent training plans and establish a sound talent management mechanism. The cultivation of hospital talent pool is an important guarantee for the sustainable development of hospitals. Only by strengthening the cultivation and introduction of talents, establishing a sound talent pool management mechanism, enhancing incentives and care for talents, and establishing a good career development channel, can we avoid talent gaps, improve the overall level and competitiveness of hospitals, and provide better medical services for patients. At the same time, this also requires long-term planning and firm determination from the hospital management. Only by persistently promoting the construction of talent pool can strong talent support be provided for the sustainable development of the hospital.

By utilizing the directional function of the national examination and examining the weak disciplines, the GMUAH should promote supply-side reform in accordance with the new demands generated by the development of the times and elevate the construction of disciplines related to the third and fourth-level surgeries to a higher level. While improving the quality of basic medical care, the GMUAH should focus on the diagnosis and treatment of difficult and severe diseases, improve the disciplinary evaluation system, guide the transformation and development of disciplines towards difficult and miscellaneous diseases and level three and four surgeries, as well as make the development of level three and four surgeries the main focus of disciplinary construction. It helps to overcome difficulties and make breakthroughs in disease diagnosis and treatment, accelerate technological innovation, and bring hope for the treatment of many patients. Adjusting the structure of specialized departments, integrating the advantageous resources of disciplinary development, cultivating a talent echelon of disciplines, strengthening the construction of key disciplines, actively carrying out new technologies, projects, and therapies, and strengthening one's shortcomings. A first-class hospital should have first-class disciplines. Only by continuously strengthening discipline construction can the medical quality and technical level of public hospitals be continuously improved, thereby enhancing the comprehensive strength of the entire public hospital. Clinical key specialties are the "culmination" of a hospital's scientific and educational strength. Disciplines should closely focus on the development goals of national and provincial clinical key specialties and continue to make efforts to improve the workflow of level three and four surgeries, innovating clinical

technologies, enhancing the scientific and educational capabilities of level three and four surgeries, and strengthening the construction of the talent echelon for level three and four surgeries, playing a leading role in the construction of the disciplinary system. The GMUAH should not only attach importance to the cultivation and selection of discipline leaders and successors, but also focus on the overall quality formation of the medical team and the rational structure of the medical team.

5.1.4.1 Adhere to innovative thinking and focus on the construction of talent disciplines in the field of third and fourth-level surgeries

One is to adhere to innovative thinking and vigorously promote the construction of talent disciplines in surgery at the third and fourth levels. The GMUAH should not only build a discipline center based on the advantage of internal medicine, strengthen the joint cooperation ability of multiple disciplines, but also concentrate efforts to increase the tilt towards the surgical departments with more third and fourth-level surgeries, integrate disciplinary resources related to the third and fourth level surgeries, and form a regional discipline center with both characteristics and complete functions, to continuously improve the ability to treat critically ill patients and the third and fourth level surgeries. For the construction of key specialties, the GMUAH should provide bonus points and special rewards for annual performance and prioritize guarantees in talent cultivation, equipment configuration, and special funds. In order to promote the continuous development of disciplines, strengthen interdisciplinary integration, create a three-dimensional disciplinary group, establish a disciplinary group led by national key clinical specialties, organically integrate and connect internal disciplines, and form a highly comprehensive and distinctive benchmark disciplinary group. The GMUAH should not only rely on its traditional advantages but also strengthen its own discipline construction based on the current development status of different disciplines and the national examination requirements. Moreover, the GMUAH should strive to be precise, detailed, strong, systematic, long-term, and scientific enough to form its distinctive specialties, especially in the third and fourth-level surgeries, and create its unique brand image.

5.1.4.2 Cultivate a talent pool of third and fourth level surgical related disciplines and continuously expand the GMUAH's influence

The other is to cultivate a talent echelon of the third and fourth-level surgical-related disciplines and continuously expand the GMUAH's influence. The construction of a talent echelon is very important in developing hospitals. It is crucial for improving the professional level and service quality of hospitals, not only for improving the professional level and service quality of

hospitals but also for improving the overall level of medical and health undertakings. At the same time, the construction of talent echelons in hospitals also reflects hospitals' core competitiveness. Strengthening the talent echelon construction of third and fourth level surgeries can not only meet the needs of the treatment of difficult diseases but also help to strengthen the shortcomings of the GMUAH in the national examination. The GMUAH should build a reasonable talent echelon based on its current situation, strengthen training and learning in level three and four surgeries, improve medical service levels, and pay special attention to the training and learning of young physicians in level three and four surgical abilities. At the same time, medical personnel with moral integrity and talent can be selected in batches for further training or on-the-job continuing education, forming a reserve talent pool.

In addition, the GMUAH should stick to an equal emphasis on medical education, research and management, promote medical technology innovation, and lead the integration and development of disciplines. Discipline construction is based on the concept, guaranteed by the system, efficient by management, core by talents, and inherited by the echelon. While focusing on the construction of advantageous disciplines, the GMUAH should continuously promote the publicity work of "famous GMUAH, famous departments, and famous doctors" and form a new pattern of the GMUAH with focus and departments with characteristics, especially striving to form its own unique brand in the influence of third and fourth level surgeries. The GMUAH should continuously accelerate the construction of key specialties, continuously promote the improvement of disciplinary construction capabilities, and, even more importantly, continuously make efforts in the talent echelon of surgical disciplines at the third and fourth levels. In addition, the GMUAH should take the guidance of high-level talents as the starting point, support the cultivation of young backbone talents, and use the selection of disciplinary directors as a means to accelerate the construction of excellent talent training bases, consolidate the foundation of talent establishment, and further accelerate the pace of disciplinary construction. In short, disciplinary construction is the top priority of the GMUAH's 14th Five Year Plan. The GMUAH should always persist in using discipline construction as the engine to enhance its core competitiveness, stimulating the internal driving force of discipline construction, expanding the development space of disciplines, and making efforts to improve the related disciplines of third and fourth-level surgeries, comprehensively promoting the high-quality development of the GMUAH itself.

5.2 Improve research funding for per hundred people

Research projects are a quantitative reflection of disciplinary construction at the academic level and are also a key link between basic research and clinical translation. Research and innovation capability is an important component of the performance evaluation index system for national tertiary public hospitals, and possessing high-level research and innovation capability is also a basic requirement and an important symbol for the high-quality development of public hospitals. The research funding for one hundred people in a GMUAH is influenced by various factors such as hospital management measures and incentive and constraint mechanisms. Hospitals should fully grasp the guidance and requirements of the national examination, grasp the latest policy spirit of China on the high-quality development of public hospitals, keep up with the new trends in medical research development at home and abroad, continuously improve policies and systems, strengthen management measures and mechanisms, and effectively increase research funding for one hundred people.

5.2.1 Optimize the reward and punishment performance evaluation system

The current internal assessment system of public hospitals focuses more on the quality and safety of medical care, the implementation of medical insurance policies, and cost control, while research funding is basically stimulated through the reward of research achievements. Although the GMUAH has corresponding requirements for the scientific research achievements of medical personnel in the evaluation and appointment of professional titles, it has not been directly linked to the research funding. To solve this problem, the GMUAH must make great efforts in the following areas.

5.2.1.1 Improve the incentive and constraint system for scientific research performance and funding

Faced with the new trend and requirements of high-level construction in public hospitals, hospitals should continue to optimize the rules and regulations for scientific research and innovation assessment, shape a robust scientific research atmosphere where all levels of the hospital participate, improve the incentive and constraint mechanism for scientific research performance and funding, and further develop the GMUAH Department Scientific Research Performance and Funding Assessment Method (Hereafter referred to as the Assessment Method). The Assessment Method fully links the assessment of scientific research funds with the department directors' tenure assessment and the departments' comprehensive assessment. In

assessing the tenure of department directors, and the inclusion of assessment goals for scientific research capabilities and funding helps strengthen the importance of scientific research in each department and further improve the overall scientific research level of the GMUAH. When evaluating professional titles, it is also necessary to link them fully with the department's scientific research funds and make clear regulations on scientific research projects and funds. If the task requirements for corresponding scientific research funds cannot be met, the application for corresponding professional title evaluation should be affected to a certain extent. The assessment results serve as the main indicator of high, renewal, low, transfer, and dismissal employment. Different levels of personnel are classified and assessed by standardizing the talent situation. For those with poor scientific research foundations and newly introduced personnel, a certain amount of time is given for scientific research accumulation, and research funding assessment indicators that align with their development are set.

5.2.1.2 Incentives for increasing research funding

Not only should vertical scientific research projects be rewarded, but horizontal scientific research projects should also be rewarded according to the approved amount and other standards. In terms of professional title evaluation and appointment, horizontal scientific research projects should also account for a certain proportion of the assessment, forming a diverse range of research projects and fully stimulating scientific research vitality. At the same time, for different types of projects at the national, provincial, and municipal levels, hospitals should allocate corresponding performance allocation to the received funds to varying degrees and provide corresponding supporting funding for different project initiation funding. At the summary meeting of the entire hospital, departments with outstanding scientific research performance should be rewarded to motivate each department to attach importance to scientific research work, fully mobilize the enthusiasm of the general medical staff, and truly drive the discipline construction of departments through scientific research. Set corresponding assessment standards for the per capita research funding of clinical medical technology departments, formulate incentive measures for the income distribution of scientific and technological innovation talents based on actual contributions, implement distribution policies guided by increasing knowledge value and research funding, and give corresponding rewards and punishments in performance distribution. Continuously improving the assessment level of research funding, enhancing the quality of performance evaluation, and making the assessment results an important basis for decision-making in hospitals' high-level construction and development.

The GMUAH should establish, improve, and strengthen various forms of research funding incentive mechanisms to motivate the research enthusiasm of researchers and medical staff in the department. It can be roughly divided into two types of measures. The first type is to increase incentives for scientific researchers and medical staff in departments. Specific measures include: increasing the proportion of indirect costs, expanding the pilot scope of stable support for scientific research funding extraction and rewards, expanding the scope of labor expenses, reasonably determining the total amount of performance-based pay, and increasing incentives for the transformation of scientific research achievements. The second type is incentive measures tilted towards outstanding contributors and top leading scientists. The GMUAH should tilt the indirect costs of project departments towards teams and individuals with outstanding innovation performance. When allocating performance-based pay, it should tilt towards scientific researchers who have undertaken more national research tasks and achieved outstanding results. It should explore the implementation of an annual salary system for a very small number of high-level talents who are urgently needed, recognized in the industry, and have outstanding performance, as well as provide continuous and stable research funding support for selected top global leading scientists. The GMUAH should implement a lump sum system for research funding and no longer prepare project budgets. This includes the project leader making independent decisions on the use of project funds based on their commitment to abide by research ethics, conduct, and integrity requirements, and using all funds related to the research work of this project. The GMUAH should effectively strengthen performance management for the teams and individuals undertaking projects, and guide research resources to be tilted towards outstanding talents and teams. In particular, it is important to ensure that limited research resources are given priority to truly "capable researchers", and to minimize the negative consequences of "position advantage" and "title advantage". The GMUAH should tilt towards researchers who have undertaken more national and provincial research tasks and achieved outstanding results, forming a positive guidance and incentive mechanism of "doing more, earning more, and developing more".

The effectiveness of incentive mechanisms depends not only on the intensity of incentives, but also on the way and degree of linkage with outcome orientation. The role of incentive mechanisms is not only reflected in improving the enthusiasm of researchers and project units, but also in motivating relevant parties, especially project leaders and teams who play key roles, to coordinate and make substantial contributions to improving the quality of scientific research results and expanding their application prospects.

The scientific research achievements of medical staff not only affect the improvement of

personal academic reputation, but also reflect the overall strength and competitiveness of the hospital. Through a reasonable performance evaluation mechanism and diversified incentive measures, hospitals can effectively stimulate the research enthusiasm of medical staff and promote the dual improvement of medical service quality and research level. Under such a mechanism, the scientific research efforts of medical staff have formed a positive cycle with the realization of personal value and salary growth, promoting the continuous progress and development of the entire medical industry.

5.2.1.3 Linking research funding with department director assessment, promotion of job titles

Through investigation, it was found that department heads play a significant role in applying for research funding. Therefore, in the assessment of the tenure of department directors, the inclusion of assessment goals for scientific research capabilities and funding helps to strengthen the importance of scientific research in each department and further improve the overall scientific research level of the GMUAH. Encourage departments with richer research achievements and more research funding to allocate more personal performance to them. Gradually establish a salary system that stimulates innovation vitality, guides knowledge value, manages effectively and ensures incentives in order to fully mobilize the enthusiasm of medical staff in the department to focus not only on clinical practice but also on scientific research. The assessment method fully links the assessment of scientific research funds with the department directors' tenure assessment and the departments' comprehensive assessment.

When evaluating professional titles, it is also necessary to fully link them with the scientific research funds of the department and make clear regulations on scientific research projects and funds. If the task requirements for corresponding scientific research funds cannot be met, the application for corresponding professional title evaluation should be affected to a certain extent. The assessment results would be the leading indicator of high, renewal, low, transfer, and dismissal. Of course, hospitals should also use their departments' comprehensive scientific research score as one of the criteria for selecting key disciplines and assessing department heads. Medical staff and researchers with outstanding scientific research abilities and high research funding should also be appropriately given preferential treatment in the promotion and other aspects. In addition, the GMUAH Professional and Technical Personnel Direct Recruitment System" can be formulated, which fully links the recruitment conditions with personal academic, scientific research achievements, and research funds, thereby significantly improving the importance of scientific research by the GMUAH medical staff. In short, it is necessary to

continuously optimize the performance evaluation system for scientific research funding rewards and punishments and fully mobilize the enthusiasm of clinical departments and researchers to participate in scientific research.

In short, scientific research achievements, especially high-quality paper publications, research projects, and patents, are often regarded as sources of academic status improvement and indirect economic benefits for hospitals. Therefore, in the performance evaluation system, scientific research achievements usually account for a certain proportion. One is the linkage between salary and bonuses: direct economic rewards are the most intuitive way of motivation, and the monthly or annual bonuses of medical staff will be adjusted based on their research performance scores. Those with high scores can receive a higher proportion of bonuses. The second priority is the promotion of professional titles: In the evaluation of professional titles, scientific research achievements are one of the important factors to consider. Medical staff with significant scientific research achievements have an advantage in the competition for promotion, and the promotion is accompanied by an increase in salary and benefits (including basic salary, treatment salary, and retirement salary). Thirdly, research funding and resource support: Hospitals should provide research funding support based on research achievements, including project start-up funds, equipment purchases, subsidies for attending conferences, etc., to create better research conditions for medical staff. Fourthly, honor and career development: establish research awards, excellent research talent programs, etc., enhance the sense of honor of researchers through recognition conferences, internal and external publicity, and provide them with more opportunities for domestic and international academic exchanges and further learning.

5.2.2 Improve the "triple" salary System for talent income

Talents are the first element of scientific research and innovation, the core competitiveness of disciplinary construction, and the most important resource for the high-quality development of hospitals. Both clinical and research personnel are valuable talent resources for hospitals. All along, the GMUAH not only needs to do basic research well, but more importantly, it needs to focus its research energy on clinical research, discover, study, and solve problems in clinical practice, apply its research results to and serve clinical practice, promote the improvement of medical level, and truly "use them for the people". The GMUAH should strengthen scientific research and technological innovation guided by clinical issues and encourage clinical research to meet the clinical needs of major diseases. For the GMUAH, clinical medicine and scientific research are complementary, mutually reinforcing, and inseparable. So, whether it is clinical

personnel or scientific researchers, the stable income of both is an essential factor related to the healthy development of the GMUAH. There is an income gap between clinical and research personnel. More specifically, the income of clinical personnel is not as high as that of research personnel. It is more important to motivate clinical personnel to not only do clinical work well but also to combine clinical work with scientific research tasks, make breakthroughs in scientific research projects, leverage their strengths in the construction of the project of “one department, one speciality”, strengthen preaching activities for clinical personnel, and improve the participation of clinical specialties in GCP projects, trying to deeply integrate clinical trial professional registration and undertaking GCP projects with the overall goal of “one speciality, one breakthrough” in the GMUAH. It not only helps to improve the salary and benefits of clinical personnel, but also helps to enhance the overall level of science, education, and research in the GMUAH.

Specifically, the main goal is to establish a “triple” salary system consisting of basic salary, performance-based salary, and income from technology transfer, that is, basic salary performance and research allocation. In terms of basic salary, it would be gradually increased according to the unified national system arrangement. In terms of performance-based pay, it is clear that by expanding the autonomy of departmental allocation, the GMUAH and departments should make allocation systems and framework arrangements in accordance with relevant national systems and laws. Research allocation mainly refers to the incentivized allocation of funding and research achievements for clinical and research personnel in research projects. Whether it is researchers or clinical personnel, as long as they can increase the funding and achievements of scientific research projects, they should receive corresponding scientific research rewards, and this part of the reward should widen a certain income gap, reflecting a large income difference. Establish a “triple” salary and compensation system that rewards the best, rewards the capable, and eliminates the inferior so that the capable can have a position and more benefits. The GMUAH should implement income distribution policies guided by increasing knowledge value, explore modern public hospital salary management systems and mechanisms, pilot and summarize replicable experiences and practices, reform distribution mechanisms, optimize the talent growth environment, motivate clinical and research personnel to utilize their knowledge and technology, promote the transformation of “knowledge base” into “capital”, make development achievements benefit all personnel, and closely link the income, job responsibilities, work performance, and actual contributions of clinical and research personnel together. The GMUAH should also strengthen long-term incentives for clinical and research personnel through scientific and technological achievements and funding and explore

the implementation of equity, options, and dividend incentives for clinical and research personnel. Clearing the bottleneck of talent management, allowing those who are capable to benefit and those who do more to benefit more, plays an important guiding role in cultivating a talent development environment with more work and more benefits. The release of these policies further stimulates the endogenous motivation of clinical personnel and scientific researchers. Not only should basic research be done well, but more importantly, the focus of scientific research should be on clinical research. Problems should be discovered, studied, and solved in clinical practice. The research results should be applied and served in clinical practice, promoting the improvement of the medical level and truly serving the people.

In addition, it is possible to strengthen the matching and collaboration of different types of talents according to actual needs. We should not only continuously cultivate clinical research-oriented physicians but also pay attention to the construction of a dedicated research team, gradually build a high-level professional research team, and fully achieve efficient collaboration between the two in research management, reduce income gaps, and better increase research funding.

5.2.3 Support full participation in scientific research

The biggest gap that troubles the low research funding of one hundred people in Chinese public hospitals is the shortage of talent. High-level research talents are scarce, and talent resources have become the focus of competitive strength. In order to implement the strategy of building a strong country with talent, China has issued and implemented the Outline of Talent Development Plan. To change the current talent shortage situation, building a high-quality medical talent team is necessary. The key to a high-quality medical talent team lies in constructing a high-level medical talent team. Stimulating the enthusiasm for scientific research among other staff and increasing their research funding are also problems that the GMUAH needs to solve. As a university-affiliated hospital, the three carriages of scientific research, medical treatment, and teaching must go hand in hand to achieve balanced development. Other staff who are important members of the GMUAH also need to make efforts in scientific research. Therefore, it is urgent to build a scientific research talent system with the full participation of all staff, especially in allocating research funds, which should be scientific and reasonable, truly reflecting their level and ability. The GMUAH should not only strengthen the critical training of highly educated personnel, especially disciplinary leaders, to enhance their research capabilities but also further cultivate the research abilities and levels of other staff. This not only helps to increase the research funding of other staff but also helps to integrate various

effective human resources and form new vitality and synergy.

5.2.3.1 Fully support the application and project development of research funding for other staff

The GMUAH encourages mutual learning and assistance among employees to reach common improvement. The main measures are to establish various learning and exchange platforms, provide funding for internal research projects, and effectively enhance the scientific research and innovation capabilities of other staff through paired construction, symposiums, and cross inspections, providing sufficient talent support for the sustainable development of the GMUAH. The GMUAH can also proactively assist other staff in applying for project topics, invite experienced experts within the GMUAH to guide them in the application and application of project proposals, strengthen the promotion of horizontal and vertical project applications, improve the quality of applications, improve one-on-one expert guidance mechanisms, and carry out diversified application training/lectures. The direction of medicine and the development of disciplines cannot be separated from collaboration, intersection, and integration. For other staff, it is necessary to communicate and collaborate more with highly educated personnel to adapt to future trends. The GMUAH can also organize future medical scientist salons to create platforms for ordinary employees. In addition, the GMUAH should also take standardizing continuing medical education as the starting point, pay attention to the reasonable allocation of scientific research funds for other staff, and further promote the increase of scientific research funds for other staff through various measures based on their own scientific research innovation and development actual situation. The GMUAH should follow the law of medical talent development and carry out it in a planned manner when cultivating other staff and reserve talent echelon. For example, innovate disciplinary management methods and strengthen the dynamic management of scientific research for other staff; build a highland of academic talents for other staff; establish a reasonable academic echelon; and enable other staff to enhance their overall advantages in scientific research ability and level.

The GMUAH should deepen the reform of talent training system and mechanism, and build a platform for other talents to start their own businesses. Based on the characteristics and responsibilities of employees in different fields, positions, and levels, establish a scientifically reasonable and focused evaluation system for the use of scientific research funds. At the same time, provide practical and feasible research funding support for other employees, and give them sufficient innovation and fault tolerance space.

5.2.3.2 Emphasis on scientific research for highly educated talents

An outstanding talent can drive discipline and establish a brand. A group of outstanding talents can drive a hospital. It can be said that the lifeline of the hospital's leapfrog development has been seized by seizing highly educated and high-level talents. Therefore, it is necessary to strengthen the introduction of high-level talents according to the goals of disciplinary construction, inject high-level scientific research and innovation resources, and drive the development of related disciplinary research. The strategic goal of achieving the Top 100 public hospitals in China relies on special specialties. The GMUAH has proposed to do a good job in implementing the "one speciality, one breakthrough" project, achieving breakthroughs in national and provincial clinical key specialties, making collaborative plans for medical education, research and management, and strengthening discipline construction. The breakthrough of specialties relies on talents, and all aspects of GMUAH medical education and research work require high-level talents to play their due roles, especially in the application and approval of some vertical projects, such as natural sciences in China, which cannot be separated from the vital role of highly educated talents. Tertiary public hospitals highly value and strive for vertical research projects at all levels. Establishing more vertical research projects provides an advantage in obtaining research funding and brings a higher reputation and recognition to hospitals and researchers. Therefore, the GMUAH should accelerate the cultivation of highly educated talents as the starting point and promote the growth of advantageous disciplines. The GMUAH needs to improve the conditions for scientific research support based on the scientific research management of continuous refinement. In the face of pressure and challenges, it is necessary to implement a combination of internal and external factors, broaden training channels, establish a long-term mechanism, leverage the construction of advantageous disciplines, and strive to build a high-quality talent team.

5.2.3.3 Actively seek government support in scientific research

Competition for national-level scientific research projects such as the National Natural Science Foundation of China is fierce. Only hospitals with strong scientific research capabilities have the advantage of obtaining a corresponding number of project approvals. However, due to factors such as local financial investment, the relevant provincial and municipal authorities need to strengthen their support for medical research. Provincial natural science fund projects, provincial medical research projects, and municipal medical research projects are all subject to quota application, resulting in a relatively small number of project approvals and a low amount of funding for project approvals. According to the analysis report of the National Health

Commission on the results of the national examination, it can be seen that provinces with high local financial investment also have better average scores in the assessment of "research funding per 100 medical technicians" in hospitals within the province, such as Shanghai, Zhejiang, Beijing, and other places. The fundamental purpose of hospital scientific research innovation is to explore better methods for treating diseases, which has sufficient public welfare attributes. Still, like other scientific research innovations, it requires high investment. Government regulatory departments at all levels are responsible for the management and investment of public hospitals. They should actively seek government support in scientific research, further increase support for research and innovation investment in public hospitals, to better stimulate medical innovation achievements and ensure the people's health level. At the same time, it is necessary to improve government departments' support policies and management mechanisms. In addition to providing direct financial support for scientific research innovation in public hospitals through the establishment of scientific research projects or talent projects, government regulatory departments can also closely follow the new trends in medical research development, strengthen inter-departmental policy coordination in a timely manner, optimize management mechanisms and measures, lead the innovation of scientific research models in public hospitals, and fully stimulate the vitality of all parties involved. It not only reduces the pressure of financial investment but also creates more sufficient research resources and a relaxed environment for public hospitals, improving the innovation efficiency of public hospitals and even the entire medical research system. For clinical drug or device trials conducted by hospitals, multiple departments should collaborate to study relevant policies and explore providing more support in medical insurance policies, fee prices, and other aspects for the included cases in the study. Alternatively, government departments may lead the selection and construction of research-oriented wards, providing comprehensive policy support in areas such as medical insurance policies, fee prices, medical management, and development funds to selected wards, establishing and improving dynamic selection and elimination mechanisms, and other assessment systems to stimulate the hospital's research enthusiasm.

5.2.4 Scientifically develop a distribution mechanism for conversion benefits

The conflict of benefits from the conversion of scientific research achievements is due to the diversity of forms and the complexity of participants and institutions involved in the conversion and promotion of scientific research achievements. Sometimes, issues related to the ownership of achievements, payment of fees, and usage agreements can cause serious harm to one party's interests. As mentioned earlier, specifically for the GMUAH, it would extract 30% of the profit

from the conversion of scientific research achievements, which would significantly reduce the enthusiasm of clinical and research personnel in the GMUAH. In the context of encouraging innovation and promoting transfer and transformation, the GMUAH should increase the distribution mechanism of benefits from scientific research achievement conversion, fully support employees in opening up the channel of combining scientific research and economy and encourage and improve the scientific research achievements of the GMUAH.

5.2.4.1 Scientific formulation of research achievement transformation and distribution mechanism

The scientific formulation of the distribution mechanism for the conversion of scientific and technological achievements mainly refers to an incentive mechanism that distributes the benefits to the personnel participating in the conversion of scientific research achievements in a scientific proportion after converting them into actual productivity. This mechanism helps to stimulate the enthusiasm and creativity of clinical and research staff and promote the conversion of scientific research achievements.

By scientifically formulating an implementation plan for the conversion of scientific research achievements, including the distribution method, proportion, scale, and cycle of scientific research achievements, the GMUAH aims to maximize the benefits obtained by clinical and scientific research personnel from the conversion of scientific research achievements.

The GMUAH should focus on solving key core technological problems in the industry, reforming the mechanism for forming and implementing major scientific research tasks, and establishing the GMUAH Research Achievement Transformation Committee. The GMUAH Research Achievement Transformation Committee formulates a scientific implementation plan for the transformation of scientific research achievements, including the allocation method, proportion, scale, and cycle of scientific research achievements, in order to maximize the benefits that clinical and scientific researchers can obtain from the transformation of scientific research achievements. Employees can organize their teams and determine the transformation methods of scientific research achievements based on actual situations to implement achievement conversion. The GMUAH can provide full support with resources such as venues and equipment and establish research achievement conversion funds to provide financial support for research achievement conversion. Actively cooperate with platforms such as the technology market, actively promote scientific and technological achievements, register scientific and technological achievements and related intellectual property information, and

promote transactions through platform effects. After scientifically formulating a profit distribution mechanism for transformation, The GMUAH should also vigorously expand its research platforms, accelerate the construction of various medical laboratories and biological sample libraries and other research innovation platforms to gather more cutting-edge technology and advanced instruments, provide more comprehensive conditions for scientific research work, and provide sufficient information flow support to help employees better match suitable partners for their own research projects, actively promote medical enterprise cooperation, medical industry intersection, medical conversion and other research projects. The GMUAH converts the scientific and technological achievements held by hospital researchers through market-based methods such as agreement pricing, listing and trading on the technology trading market, and auctions. Improve the mechanism for distributing benefits from the transformation of scientific and technological achievements. In accordance with laws and regulations, rewards and remuneration such as cash, shares, or contribution ratios can be given to the main contributors of job-related scientific and technological achievements and other personnel who have made significant contributions to the transformation of scientific and technological achievements. Specific distribution methods and ratios should be agreed upon based on fully listening to the opinions of scientific research personnel in the unit. The cash rewards for the conversion of personal technological achievements shall be included in the total performance-based salary of the current year's unit but shall not be limited by the approved total performance-based salary and shall not be used as the base for the next year's total performance-based salary.

At the same time, the GMUAH should accelerate the transformation of scientific and technological achievements, establish a joint research and development platform with major institutions and leading enterprises, strengthen project-based cooperation and collaborative research, promote the integration of industry, academia, research and medical fields, and open up the entire chain of achievement transformation, promoting the transformation of scientific research achievements into industrial applications. Jointly carrying out breakthrough and original clinical technology research and development has also become a way for public hospitals to promote clinical innovation and successful transformation to ensure the smooth progress of scientific research achievement conversion. In addition, it can also highlight the evaluation of the quality, original value, and actual contribution to the economic and social development of research results and make the economic and social benefits achieved by scientific research achievements an important content of professional title evaluation. The benefits obtained from the conversion of achievements should be scientifically distributed, and

the benefits should be returned to employees and their research teams as much as possible to increase employee conversion benefits and enthusiasm for participating in scientific research and further activate new impetus for scientific research innovation.

The GMUAH should attach great importance to the cultivation and incubation of scientific research projects and new technologies and provide multi-dimensional platform support. In order to meet the timely development of new clinical medical technologies and encourage the application of leading technologies, the hospital's medical department has carried out top-level design from the management system and process of medical technology clinical application, opened a fast review channel and new technology level recognition, and improved the efficiency of pre-approval. The GMUAH should strengthen process quality supervision for projects approved by departments.

Specifically, firstly, the GMUAH should carry out a special action to jointly build an innovative platform. Promote the high-quality development of existing innovation platforms. Promote the joint construction of research achievement transformation centers or industrial technology research institutes between hospitals and various cities. The GMUAH should carry out a special action to incubate and expand scientific research achievements. The GMUAH should promote the construction of high-level new research and development institutions and support the hospital to establish its own new research and development institutions. Promote the construction of incubation bases and industrialization bases for scientific research achievements. Thirdly, the GMUAH should establish a comprehensive technology transfer institution. Benefit distribution of research results is carried out annually based on indicators such as the number and transaction volume of technology transactions facilitated by technology transfer institutions both domestically and internationally. In addition, the GMUAH can also carry out pilot projects for the professional title evaluation of technical personnel in technology transfer. Fourthly, the GMUAH should contact the special action of financial support for the transformation and efficiency improvement of scientific and technological achievements. Contact and support commercial banks and other institutions to establish technology finance specialized institutions or technology branches, providing more services for the scientific research transformation of GMUAH.

5.2.4.2 Scientific formulation of assessment mechanism for scientific research achievement transformation and talent sharing mechanism

High-quality scientific research projects are expected to produce more transformable and innovative achievements. Therefore, it is also necessary to assess the transformation of

scientific research achievements and establish a supervision and management mechanism for the transformation of scientific research achievements. This helps promote high-quality scientific research and accumulates more funds for subsequent scientific research and innovation, achieving a virtuous cycle. Empower the project team with autonomy in allocating surplus project funds. The surplus funds can be used for related scientific research business expenses or to apply for project team performance rewards, further stimulating the enthusiasm of scientific researchers for the transfer and transformation of achievements. The GMUAH should establish an evaluation system guided by quality, contribution, and performance. Guide researchers to carry out scientific research and development for the market and enterprises, and regard the horizontal projects undertaken by researchers as equivalent to provincial key research and development projects and scientific and technological achievements transformation income. At the same time, it is necessary to strengthen the assessment feedback and incentive mechanism. Assessment should not only be an evaluation of the transformation of scientific research achievements but also a means of motivation and guidance, providing rewards and financial support for the transformation of excellent scientific research achievements.

In addition, warnings and improvements should be given to the transformation of inefficient and unreasonable scientific research achievements. Categorize incentives for scientific researchers and those engaged in the transformation of scientific and technological achievements and implement separate assessments and evaluations for those involved in the transformation of scientific and technological achievements. Guiding all personnel to care and support the transformation of scientific and technological achievements and striving to create a social atmosphere that values and focuses on the transformation of scientific and technological achievements. The GMUAH should refine the evaluation and assessment index system, promote the development of new technologies, and do a good job in post evaluation and assessment of technology. In addition, the GMUAH can also establish an annual Medical New Technology Award to select a group of innovative, clinically applicable, and socially beneficial medical new technologies for key support and rewards. should refine the evaluation and assessment index system, promote the development of new technologies, and do a good job in post evaluation and assessment of technology. In addition, the GMUAH can also establish an annual Medical New Technology Award to select a group of innovative, clinically applicable, and socially beneficial medical new technologies for key support and rewards. The GMUAH should refine the evaluation and assessment index system, promote the development of new technologies, and do a good job in post evaluation and assessment of technology. In addition, the GMUAH can also establish an annual Medical New Technology Award to select a group of

innovative, clinically applicable, and socially beneficial medical new technologies for key support and rewards.

The GMUAH can deepen the exploration of talent co-introduction, co-training and sharing mechanisms with medical universities, innovate talent utilization models, and use outstanding talents from universities to conduct scientific research in hospitals, promoting deep integration of clinical and basic medicine, deep cross-disciplinary research, effectively creating new growth points for scientific research, and maximizing the efficiency of talent resources, to truly promote the sharing of scientific research achievements. In summary, regarding the benefits of scientific research achievements transformation, rewards should be increased for employees, and innovative teams who have made outstanding contributions, and the proportion of employee benefits sharing should be increased.

In terms of recommendations, corresponding measures have been taken based on the assessment requirements of China's tertiary public hospitals, and around the demands of stakeholders regarding the proportion of third and fourth-level surgeries; At the same time, corresponding measures have been taken to address the current shortcomings of GMUAH by addressing the demands of stakeholders for research funding for every hundred people. The managers of GMUAH hope to promote the development of the hospital by addressing shortcomings.

Chapter 6: Conclusions

6.1 The main conclusions

Hospital strategic planning is the blueprint for the long-term of a hospital, which comprehensively plans and arranges the hospital's development direction, goals, and resource allocation. Hospital strategic planning helps a hospital to gather consensus, clarify its mission and vision, and promote its development to a higher level. Hospital strategic planning also helps enhance a hospital's competitiveness, ability to respond to market and environmental changes, and lay a solid foundation for a hospital's sustainable development. It can be said that hospital strategic planning is a process that results in a strategic plan formulated by medical institutions to achieve long-term development goals. Hospitals must actively respond to challenges and seize opportunities in the constantly changing medical environment.

The GMUAH has reviewed the situation and formulated a "14th Five Year" strategic plan aligned with its actual situation. It has clearly stated that by the end of the "14th Five Year" period, which is 2025, it would comprehensively build one of the top 100 hospitals in China that leads the western Guangdong region, radiates the Beibu Gulf, and connects with the Guangdong, Hong Kong, Macao Greater Bay Area, striving to enter the top 100 performance evaluation rankings of China's national tertiary public hospitals. In this regard, this study mainly focuses on the "14th Five Year Plan" strategic planning of the GMUAH, taking the strategic management of high-level hospital construction as the entry point, attempting to guide the entire research through strategic management theory, stakeholder theory, and resource-based theory. It provides suggestions for the GMUAH to enter the top 100 in China's national public hospital performance evaluation as soon as possible. Also, it provides valuable experience for the strategic management of other large hospitals.

This study takes the GMUAH in China as a case study. Firstly, based on strategic management theory, it focuses on three aspects: strategic planning formulation, strategic planning execution, and strategic planning evaluation of the GMUAH. During the development of this thesis, the GMUAH has formulated the "14th Five Year Plan" strategic plan and is currently in a critical execution period of overcoming difficulties. Therefore, it is necessary to conduct a strategic evaluation of the "14th Five Year Plan" strategic plan of the GMUAH. By

tracing the foundation and measuring performance, corresponding corrective measures would be taken to address the conflicting interests and conflicts of interest that affect the strategic implementation of the GMUAH.

Firstly, the bases of strategic planning are reviewed. In the strategic evaluation of the GMUAH, the main focus was on retrospective analysis of its strategic planning. It was found that its strategic planning and objectives were in line with the current policy guidelines of China, Guangdong Province, Zhanjiang City, and Guangdong Medical University. Both the national and government levels have clearly expressed their support for the high-level construction and high-quality development of the GMUAH. In particular, Zhanjiang City and Guangdong Medical University have clearly proposed to support the GMUAH's strategic planning in the 14th Five Year Plan and help the GMUAH enter the top 100 of China's tertiary public hospital performance evaluation ranking. Meanwhile, through conducting surveys, it was found that the vast majority of stakeholders at the GMUAH support the GMUAH's strategic planning and goals, indicating that the strategy itself is perceived by the participating stakeholders as correct, supported and affirmed and does not require excessive adjustment.

Secondly, the performance measurement of strategic planning execution. The main focus is to comprehensively measure the performance of the GMUAH in the process of strategic planning implementation, benchmark the performance evaluation indicators of China's tertiary public hospitals, and combine the scores and rankings of the GMUAH in the national examination. It is found that there are obvious shortcomings in the two indicators of medical quality and sustainable development. There is a problem with low proportion of third and fourth-level surgeries in medical quality indicators. Another problem is low funding for scientific research projects with a hundred people in the indicator of sustainable development. Based on stakeholder theory and benchmarking against the national examination indicators, it is found that the main stakeholders of the GMUAH include GMUAH administrators, department directors, scientific research personnel, and other employees. The author further conducted interviews with stakeholders of the GMUAH through empirical research methods and distributed survey questionnaires based on the interview results to further determine the specific points of conflicting interests and conflicts of interest that have affected the implementation of strategic goals of the GMUAH, which is not entering the top 100 of China's tertiary public hospitals in the performance evaluation, as well as the reasons for those conflict points.

Thirdly, the adjustment of conflicting interests and conflicts of interest in implementing strategic planning. Based on the stakeholder theory, measures such as resolving conflicting

interests and conflicts of interest and reallocating resources for departments of internal medicine and surgical departments are taken to strengthen these two shortcomings in order to achieve the strategic goals of the GMUAH to enter the top 100 of China's tertiary public hospitals in the performance evaluation as soon as possible. Specifically:

One is to adjust conflicts among different stakeholders regarding the proportion of third and fourth-level surgeries. Firstly, it is recommended to allocate departmental resources for internal medicine and surgery reasonably and increase the tilt towards third and fourth-level surgeries. Secondly, cultivate a talent echelon in the discipline and incorporate level three and four surgeries into the main focus of discipline construction. Thirdly, a performance evaluation reward and punishment mechanism should be established to maximize the departments' enthusiasm for performing the third- and fourth-level surgeries. Fourthly, The strategy of internal training and external recruitment of talents should be implemented to enhance the ability of level three and four surgeries.

In the process of resource allocation in internal and external departments, top-level design should be strengthened, and the "Implementation Plan for Improving National Hospital Performance Assessment Results of the GMUAH" should be formulated to encourage the professionalization of internal medicine and surgery, with a strong focus on third and fourth level surgery, and comprehensively promote the development of hospitals towards third and fourth level surgery. At the same time, it is necessary to compress the length of hospital stay, improve the turnover rate of surgical beds, increase the number of surgical wards and operating rooms, use high-quality medical resources for or serve difficult and critical patients, and promote the rational allocation of medical resources. In addition, taking advantage of regional medical communities helps to enhance the referral of the third and fourth-level surgeries. Besides, for some difficult and complicated diseases that require third and fourth-level surgeries, the green channel of two-way referral of medical communities would be used so as to further increase the number of third and fourth-level surgeries of the GMUAH.

In terms of internal training and external recruitment, hospitals should steadily implement the strategy of "external recruitment and internal training, with training as the main focus", adhere to the principle of "external recruitment" driving "internal training", strengthen external recruitment and optimize internal training, and make every effort to forge a high-level talent team. It is important to both go out and bring in and comprehensively improve the ability of the GMUAH to perform level three and four surgeries.

A performance evaluation reward and punishment mechanism should be established between the operating income of the department and the level three and four surgeries. The

level three and four surgeries should be fully linked to the department's rewarding performance as an important reference for department evaluation, cadre promotion, and professional title evaluation to maximize the enthusiasm of department doctors to perform level three and four surgeries.

In the self-cultivation of department directors and the construction of subject talent echelons, the focus should be on incorporating level three and four surgeries into the main direction of subject construction. Adhere to innovative thinking, vigorously promote the construction of talent disciplines in the field of third and fourth level surgeries and cultivate a talent pool related to third and fourth-level surgeries. Of course, the department director's surgical ability also needs to be strengthened to lead the development of the entire team.

The other is to adjust conflicts among different stakeholders in terms of research funding for a hundred people. Increase the departments' emphasis on scientific research: optimize the reward and punishment performance evaluation system. Adjust the income conflict between clinical and scientific research talents: establish a sound triple salary system for talent income. Adjust the conflict of research funding between other staff and highly educated talents: support full participation in scientific research. Finally, a mechanism for distributing conversion benefits must be scientifically formulated.

Establish a sound talent income triple salary system for clinical and research personnel at the same level. Increase the proportion of research funding in salary and implement income distribution policies guided by increasing knowledge value. Whether it is researchers or clinical personnel, as long as they can increase research project funding and results, they would receive corresponding research rewards. As an important component of compensation, research rewards help fully mobilize all staff's enthusiasm to participate in scientific research, achieving more capable individuals. The mechanism system prioritizes the superior, rewards the capable and eliminates the inferior.

Hospitals and departments should increase their emphasis on scientific research and clinical practice and optimize the reward and punishment performance evaluation system. Improve the incentive and constraint system for scientific research performance and funding and increase incentive measures for scientific research funding. It should be linked research funding with department director assessment, promotion of job titles.

In the allocation of research funds between other staff and highly educated individuals, we should fully support the application and project development of research funds for other staff, as well as pay attention to the research of highly educated talents, which helps to integrate various effective human resources and form new vitality and synergy. Of course, it is also

necessary to actively seek government support in scientific research.

In terms of the distribution of benefits from the transformation of scientific research achievements between employees and hospitals, it is necessary to increase the distribution mechanism of benefits from the transformation of scientific research achievements, scientifically formulate assessment mechanisms and talent sharing mechanisms for the transformation of scientific research achievements, fully support employees in opening up channels for the integration of scientific research and economy, and encourage and improve the scientific research achievements of GMUAH.

It can be said that the monitoring indicators of the proportion of third and fourth-level surgeries and the research project funding per hundred health technicians are not only important indicators that the GMUAH needs to focus on improving but also important aspects that tertiary public comprehensive hospitals in China need to pay close attention to. Among them, the third and fourth-level surgeries belong to the category of functional positioning of medical quality. The research project funding per hundred health technicians belongs to the scope of hospital discipline construction. At the national level in China, tertiary public comprehensive hospitals are required to focus on their functional positioning and key discipline construction. The national examination has made public hospitals unable to return to the era of scale expansion in the past. How to find the main conflicting interests and conflicts of interest, as well as prominent problems in the high-level construction and high-quality development of public hospitals through performance evaluation and do a good job in solving and responding to these conflict points is the top priority in achieving the current strategic goals of hospitals.

This study combines strategic management theory, stakeholder theory, and resource-based theory, and through various measures such as resource adjustment and interest adjustment, aims to promote the transformation of interest conflicts between different stakeholders into a balance of interests. By coordinating the conflicting interests and conflicts of interests of the GMUAH, a reasonable optimization state can be achieved based on the coexistence and compatibility of the interests of all parties involved. Compare the interests and conflicts of various stakeholders, find a response measure that can balance the two, and then use this response measure to achieve stakeholder management and strategic management goals. By applying stakeholder theory to adjust the conflicting interests and conflicts of interests among different stakeholders in the GMUAH, a state of relatively peaceful coexistence and the relative balance of interests in a certain pattern and system of interests can ultimately emerge. On this basis, it would eventually contribute to the strategic management of the GMUAH, thereby promoting its early entry into the top 100 hospitals in China, striving to build a high-level hospital and a healthy China. At

the same time, it will also provide certain reference value for other large public hospitals' strategic planning and goal realization. Achieving strategic goals to promote the high-level construction and high-quality development of hospitals helps to comprehensively and continuously promote the construction of a "Healthy China", thus providing comprehensive and complete cycle health protection for the people.

6.2 The main limitations

In addition, there are still certain limitations in thesis writing.

The first limitation is that in the process of empirical investigation, the interviews and questionnaires are all aimed at employees within the GMUAH, including GMUAH administrators, department directors, scientific research personnel, and medical staff. The scope of the research itself is not broad, and there have been no interviews or questionnaire surveys with relevant government officials. The preliminary research found that one of the reasons that has affected the low proportion of third and fourth-level surgeries at the GMUAH is insufficient medical insurance payment. The GMUAH has economic losses, which leads to low enthusiasm among medical staff in departments to perform third and fourth-level surgeries. The more these surgeries are performed, the more economic losses the GMUAH would suffer due to insufficient medical insurance payments. The reason for insufficient medical insurance payment is directly related to the government.

The second limitation is that this study does not pay more attention to the stakeholders of pharmaceutical equipment suppliers. In the research process of this study, the stakeholders are mainly concentrated within the GMUAH's internal staff. However, one of the reasons for the low proportion of third and fourth-level surgeries is that many high-value consumables need to be used during surgeries, which would increase the GMUAH's costs. The high cost of consumables by medical suppliers is one of the reasons why the enthusiasm for third and fourth-level surgeries in the GMUAH is not high. However, in this study, there is insufficient attention paid to the stakeholder of medical suppliers, and the consumables of medical suppliers have not been fully considered, nor has there been too much attention and research given to this stakeholder.

Regarding the first limitation, government and other stakeholders should be taken into account in future research. Interviews and questionnaire surveys with government officials such as medical insurance officials should be conducted to listen to their views on the high-level hospital construction process of the GMUAH, analyzing the conflicts of interest and conflicting

interests that constrain the strategic implementation of the GMUAH, and analyzing their specific reasons, and proposing corresponding solutions.

Regarding the second limitation, the stakeholders of pharmaceutical equipment suppliers should be taken into consideration in future research. When analyzing the reasons for the low cost of third and fourth-level surgeries in the GMUAH, efforts should be made to minimize the cost of medical consumables. By controlling the consumables cost of the third- and fourth-level surgeries in the GMUAH, it is beneficial to increase the enthusiasm of departments to perform those surgeries and reduce the financial burden on the GMUAH.

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Annex A: Interview outline

I. Interview on High-level Hospital Construction and Development Plan

1. Do you know the GMUAH has a 14th Five Year Development Plan (High-level GMUAH Construction and Development Plan)?
2. Do you think it is reasonable for the GMUAH to make entering the national top 100 in the public GMUAH performance evaluation as the main goal?

II. Interview on the Performance Evaluation of public hospitals

1. Do you know the main evaluation dimensions of the performance evaluation in national public hospitals?
2. At present, the GMUAH is benchmarking against the performance evaluation of national public hospitals. What are the main dimensions that have problems, and what are the specific manifestations? What are the reasons?
3. Which evaluation dimensions do you think the GMUAH should vigorously develop and how to develop them specifically?

III. Interview on the Specific Situation of the GMUAH

1. Do department directors prefer internal training or external recruitment when selecting/cultivating successors? What is the reason? How to solve it?
2. What are the impacts of the third and fourth-level surgeries on GMUAH management (system development, decision-making.)? Is there a conflict of interest or conflicting interest? What is the reason? How to solve it?
3. Will there be an income gap between clinical personnel and scientific research personnel at the same level? Will there be a conflict of interest or conflicting interest? What is the reason? How to solve it?
4. Do GMUAH leaders or department directors place more emphasis on scientific research? What is the reason? How to solve it?
5. Before 2022, compared to surgery, did GMUAH leaders pay more attention to internal medicine and invest relatively more resources in internal medicine? What is the reason? How to solve it?
6. Is there an uneven distribution of surgical resources among doctors within a department? What is the reason? How to solve it?

7. Is there a conflict between employees and the GMUAH in the distribution of benefits from the conversion of scientific research achievements? What are the performances? What is the reason? How to solve it?

8. Are the GMUAH more inclined towards highly educated individuals in terms of research funding allocation compared to ordinary employees? What is the reason? How to solve it?

Annex B: Survey

In order to promote the research on high-level hospital strategic management in the GMUAH, some relevant issues will be investigated. Filling out this survey is not related to any evaluation and assessment, and there is no right or wrong choice. Please answer based on objective circumstances. The survey is anonymous and confidential. Thank you for your support and assistance.

I. Basic Information

1. Your Age: _____
2. Years of Medical and Health Working Experience: _____
3. Personnel Category:
 - ☐ Doctor
 - ☐ Nurse
 - ☐ Medical Technician
 - ☐ Full Time Scientific Research Personnel
 - ☐ Auxiliary Scientific Research Personnel
 - ☐ Administrative and Logistics Personnel
 - ☐ Other
4. Department:
 - ☐ Department of Internal Medicine
 - ☐ Department of Surgery
 - ☐ Department of Obstetrics and Gynaecology
 - ☐ Department of Pediatrics
 - ☐ Department of Chinese Medicine
 - ☐ Medical Auxiliary Department
 - ☐ Administrative and Logistics Department
 - ☐ Scientific Research Department
 - ☐ Other
5. Leadership Role:
 - ☐ GMUAH Leader
 - ☐ Department Director
 - ☐ None of the above
6. Professional and Technical Title:
 - ☐ Senior
 - ☐ Intermediate
 - ☐ Primary
 - ☐ None of the Above
7. The Highest Educational level:
 - ☐ Doctoral Degree
 - ☐ Master's Degree
 - ☐ Bachelor's Degree
 - ☐ College Degree or Below

II. Survey on the High-level GMUAH Construction and Development Plan

After each entry, there are five numerical options. Please mark a "√" on the number you think best matches your own perceptions.

Serial Number	Items	Option				
		Strongly Agree	Agree	Unclear	Disagree	Strongly Disagree
8	I know the GMUAH has a High-level Hospital Construction and Development Plan (14th Five Year Plan).					
9	I know the goals and contents of the High-level Hospital Construction and Development Plan of the GMUAH.					
10	I think it is reasonable for the GMUAH to make entering the national top 100 in the public Hospital performance evaluation as the main goal.					
11	I think the high-level hospital construction of the GMUAH is beneficial for my personal development.					

III. Survey on the Situation of the GMUAH

After each entry, there are five numerical options. Please mark a "√" on the number you think best matches your own perceptions.

Serial Number	Items	Option				
		Strongly Agree	Agree	Unclear	Disagree	Strongly Disagree
12	Department directors favor students trained by themselves rather than recruiting talents from outside.					
13	Department directors favor their own trained talents to take over their positions rather than recruiting talents from outside.					
14	The GMUAH invests more resources in departments of internal medicine than in departments of surgery.					
15	The third and fourth level surgeries are more likely to cause losses to departments compared to general surgeries.					
16	Department directors are more inclined to perform the third and fourth level surgeries on their own rather than cultivating the medical echelon members.					
17	Scientific research personnel receive higher salaries and benefits than clinical personnel of the same level.					
18	The distribution of benefits from the conversion of scientific research achievements between the GMUAH and employees is unreasonable.					
19	Department directors pay more attention on clinical practice than scientific research.					
20	GMUAH leaders pay more attention on clinical practice than scientific research.					

21	The GMUAH favors high-level talents in the allocation of research funds than ordinary employees.					
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22. Which evaluation dimension do you think Guangdong Medical University Affiliated Hospital should vigorously develop in the performance evaluation of national public hospitals? (Multiple Choice)

A. Medical quality B. Operational efficiency C. Sustainable development D. Satisfaction evaluation

23. What do you think is the reason for the insufficient number of third - and fourth level surgeries?

A. Risk exceeds return B. Insufficient medical insurance payment C. Insufficient departmental capacity D. Insufficient doctors capable of performing third - and fourth level surgeries E. Insufficient operating rooms F. Low operating room turnover G. Others

24. What do you think is the reason for the insufficient research funding for 100 people? (Multiple Choice)

A. The hospital did not link the application for scientific research projects with the professional title evaluation, promotion, and year-end assessment of employees

B. The hospital's own research capabilities are insufficient, making it difficult to win in highly competitive research project applications from external sources such as China

C. Hospitals and departments place greater emphasis on clinical services that can generate more revenue rather than scientific research

D. Hospitals do not have clear mandatory assessment requirements for departmental research project applications

E. Shortage of scientific researchers

F. Insufficient supporting facilities for scientific research

G. Others