

Chapter 4

Research Result

Results of Qualitative Data Analysis

1. Understand the social capital of dental hospitals in Changzhou City

1) Definition of social capital of Changzhou private dental hospital

The social capital of private dental hospitals in Changzhou refers to the intangible assets generated by the reputation, trust and relationships of private dental hospitals in the local community and the wider healthcare ecosystem. This definition is consistent with information obtained from key whistleblowers, who also express this definition

"In daily operations, social capital can feel the medical service attitude and medical technology capabilities of private dental hospitals during the patient's hospitalization, which is reflected in the process of contacting relevant government departments and the medical capabilities of private dental hospitals."

The 9 respondents agreed that the social capital to better serve patients should be reflected in the daily operations of private dental hospitals to ensure the continuity of their daily operations. Social capital includes patients' positive perception of the medical service attitude and technical capabilities of private dental hospitals during their medical treatment. It also extends to the ability of private dental hospitals to engage effectively with relevant government departments. Essentially, social capital represents the ability of private dental hospitals to build and leverage relationships, trust, and positive reputations to enhance the day-to-day operations of private dental hospitals to better serve patients.

"Since social capital is partly a factor in trust, private dental hospitals should maintain trust between stakeholders, such as staff and patients. The good degree of trust is reflected in the unconditional trust of patients in the diagnosis and treatment plans provided by doctors and private dental hospitals, as well as the good attitude and trust of medical staff; the trust of medical staff in private dental hospitals is reflected in the

spontaneous maintenance of the brand image of private dental hospitals and the fairness of solving problems with private dental hospitals. The trust of the management of private dental hospitals is reflected in the trust and non-intervention of doctors' autonomy in diagnosis and treatment, the protection of the interests of medical staff, and the importance of patient service awareness"

From the respondents' statements, social capital is a concept that has received significant attention in the context of healthcare management. In Changzhou, private dental hospitals are no exception as they play a vital role in providing quality dental care to local residents. In this context, social capital refers to the intangible assets owned by these private dental hospitals derived from their reputation, trust and relationships within local communities and the wider healthcare ecosystem.

Moreover, since medical services are often not limited to one department, multiple departments are often involved in order to provide a better medical experience for patients, which forms the social capital of trust between private dental hospitals and their employees.

"For example, when patients need surgery due to oral problems, they may need the cooperation of multiple departments such as anesthesiology and laboratories, and even face more complex cases. Multiple physicians need to work together to determine the medical plan. Therefore, when providing medical services to patients, different medical staff and departments are inevitably connected to each other, forming different diagnosis and treatment networks."

Therefore, in order to gain the social capital trusted by patients, the departments of private dental hospitals also need to cooperate behind the medical services to clarify and explain patients' doubts about medical costs, so as to form a service network within private dental hospitals. Therefore, for dental private dental hospitals, their social capital is not only reflected in the medical capabilities brought by their equipment and technology, but also in the mutual trust they build with their own staff and patients. This social capital is more important for private dental hospitals.

2) Determinants of social capital

Through interviews, it was found that the social capital elements of dental hospitals in Changzhou City include three types: internal social capital, external social capital and trust.

2.1) External social capital

External social capital is one of the components of the social capital of private dental hospitals, and it is a social capital that can be directly observed in front of society, patients and the government. Better external social capital means that private dental hospitals are more likely to be recognized by patients and more likely to receive government support. Therefore, if patients choose whether to seek medical treatment in a private dental hospital, the hospital's external social capital will be the primary factor influencing their choice. In response, respondents said:

"The primary influencing factor of the social capital of private dental hospitals is external social capital, that is, the diagnosis and treatment capacity, equipment level, service attitude and policy support of private dental hospitals, which will directly affect patients' intuitive perception of the medical capabilities of private dental hospitals, follow-up trust and willingness to pay for diagnosis and treatment, and then affect the income level of private dental hospitals."

In the interview, respondents said that external social capital such as diagnosis and treatment ability and service attitude will be an important factor that directly affects patients, and because the cost of diagnosis and treatment in private dental hospitals is generally higher than that of other public hospitals, the salary of medical staff will be relatively high, which means that compared with external social capital, the importance of internal social capital represented by employee compensation and the order of influencing patients will be lower than that of external capital. At the same time, private dental hospitals tend to invest more money in improving medical capacity and experience, such as medical equipment, infrastructure, etc., because they exchange better medical capacity for higher medical costs, which further promotes the formation of external social capital.

2.2) Internal social capital

Compared with external social capital, the internal social capital of private dental hospitals will not be perceived by patients at the first time, but it will affect the overall medical capacity of the hospital by affecting the relationship between employees, departments, medical staff and managers within the hospital, and then affect the patient's medical experience. Therefore, internal social capital is also important, and some respondents made the following comments on internal social capital:

"Internal social capital is another capability of the hospital that is invisible to patients, which has a potential impact on the daily operation of the hospital by affecting employee enthusiasm, employee relations, management efficiency, etc., and then has a non-negligible impact on the allocation of medical resources, the confirmation and implementation of medical plans, and the patient's medical experience." If the external social capital that patients see directly is the first factor influencing whether they choose to seek medical treatment, then internal social capital is the potential guarantee that they can receive good medical services, so internal social capital is equally important for private hospitals."

It can be seen that the influence and means of influence of internal social capital are completely different from those of external social capital. As for the ways in which internal social capital influences, the respondent expressed the following:

"Internal social capital affects the employees within the private hospital, so it mainly affects the employee salary and communication situation, and this communication situation does not simply refer to the employee exchanges between departments, but more refers to the communication between employees and private hospital management, including communication efficiency, communication frequency, etc., and the education level of employees will also make their attitude towards salary and communication different, so this factor is also the main factor affecting internal social capital."

2.3) Trust

From the respondents' perception of the social capital of private dental hospitals and the evaluation of internal and external social capital, it can be found that no matter what kind of social capital, the purpose of its existence is for private hospitals to have better service capabilities. To obtain more medical consultation fee income, and to achieve this goal, it is necessary to gain the trust of patients, because only if patients have a good trust in the hospital, they can have better cooperation in the medical process and post-evaluation, and they will be more willing to recommend the hospital to other friends to help the hospital get more potential income. At the same time, the good reputation brought by good patient trust will make the hospital obtain better social evaluation and government support, and will also

greatly promote the status of the hospital in the local and even national medical industry. Respondents commented on the social capital of trust:

"Unlike public hospitals, which have financial funds to cover their costs, for private dental hospitals, whether they can be trusted by patients, Social recognition and government support are key issues related to hospital fee income and future development, of which patient trust is the most important foundation, so no matter what type of social capital, it is to get this foundation to build and continue to strengthen, and only by gaining the trust and support of patients and the government, private hospitals can continue to develop, and can they stand firm in the entire industry and provide more help for the diversification of medical services."

It can be seen that trust is actually the most important social capital for private dental hospitals, and it is not only limited to the trust of patients, social recognition and government support are important aspects. Therefore, trust should also be studied as an important component of social capital.

3) The impact of social capital

The existence of social capital has an important impact on the daily operation of Changzhou Private Dental Hospital. Various:

3.1) Improve the patient experience

Private dental hospitals with strong social capital tend to offer a more patient-centric experience. Patients feel valued and respected, which increases patient satisfaction and loyalty. This, in turn, leads to higher patient retention and positive word-of-mouth (Adler & Kwon, 2002, pp. 17-40).

"Since the cost of diagnosis and treatment in private dental hospitals is generally higher than that of other public and private dental hospitals, private dental hospitals exchange higher medical expenses for patients in exchange for better medical capacity than public and private dental hospitals that have financial funds to pay for patients' medical expenses." Therefore, the operational efficiency of private dental hospitals is the cost of diagnosis and treatment for one year, and the stronger the social capital, the more expensive private dental hospitals are. The more people trust the medical capabilities of patients and doctors in private dental hospitals, the more efficient private dental hospitals will be."

It can be seen from the answers of respondents that the main source of income of private dental hospitals is the cost of patient diagnosis and treatment, so when the service attitude is better, the better the patient experience, and the better the economic benefits can be obtained, and improving the medical service experience of patients is a win-win for private dental hospitals.

3.2) Improvement in resource mobilization

Social capital can help private dental hospitals access resources, whether through financial support, volunteer assistance, or partnerships with other healthcare facilities. Private dental hospitals have strong social capital to better mobilize these resources, supporting their operations and community outreach.

Respondents cited medical devices as an example to illustrate improvements in resource mobilization:

"In public and private dental hospitals where the fiscal and related departments regulate revenue and expenditure, in order to obtain more advanced medical equipment, it often takes longer financial approval time to achieve this purpose, and the funds available are often limited. However, due to the influence of internal social capital (mutual trust between private dental hospitals and medical staff), private dental hospitals are more efficient in this decision-making than public and private dental hospitals, which makes private dental hospitals more likely to improve their medical standards, thereby more likely to attract patients with higher requirements for medical services and experience, and improve economic efficiency."

In this regard, after forming sufficient social capital, private dental hospitals will be more likely than public private dental hospitals to mobilize resources to improve their medical capacity, thereby improving their economic efficiency.

3.3) Solve problems more efficiently

In times of crisis or when faced with complex healthcare challenges, private dental hospitals with social capital can leverage their network of relationships to seek solutions. Collaboration with other healthcare providers, community-based organizations, and government agencies has become more effective, enabling more efficient problem solving.

"Because the internal social capital of economic benefits and the medical service capacity of private dental hospitals has increased, it is reflected in

the external social capital and social private dental hospitals are also improving because of the improvement of equipment and services, which is more likely to win the trust of patients, and also because of the improvement of staff compensation, it has formed better internal social capital.”

From this point of view, while improving its own social capital, private dental hospitals can not only improve the service capacity of patients, solve the problem of patients' trust in private dental hospitals and the economic operation of private dental hospitals whose income depends on diagnosis and treatment, but also better improve the treatment problems of internal employees and further optimize their internal capital. At the same time, improving internal problems can in turn enhance the patient experience, thus forming a complete closed loop in solving internal and external problems and promoting the long-term development of private dental hospitals:

“Medical staff can also provide better service and attitude during the diagnosis and treatment process, so that patients can form a friendlier attitude towards private dental hospitals and medical staff, which can not only improve the trust of patients, but also minimize medical problems, so as to form a better doctor-patient relationship.”

In addition, the formation of social capital can also help private dental hospitals increase their participation in policy and influence in the policy-making process, as respondents said:

“No matter how independent a private dental hospital is, it is essentially a medical institution that serves the society and the people, and should be regulated by the government. However, due to the essential difference between private dental hospitals and public hospitals, private dental hospitals can only further attract the government's attention to the private medical industry and gain more participation and voice in policy formulation after their own medical capabilities are strong enough.”

Compared with the management of public and private dental hospitals by direct finance and relevant government departments, the influence of private dental hospitals in health-related aspects is relatively limited in the process of policy formulation, and only by strengthening external social capital, that is, strengthening

the optimization of equipment and medical technology, better social reputation, and gaining more patient recognition, can this be achieved, so that the government can pay more attention to the demands of private dental hospitals in the consultation of medical policy formulation. In this way, private dental hospitals can have more opportunities for their own development in terms of policy preferences, tax credits, and financial support.

So far, from the analysis of all the interview results, it can be seen that under the premise of taking Changzhou Private Dental Hospital as the interview background, social capital represents a set of tangible and intangible assets with important value, including external social capital mainly invested in medical equipment and medical technology optimization, and employee salaries. Internal social capital, which focuses on communication with managers, and trust capital, which is mainly based on patient trust and government support, together form the social capital structure of private dental hospitals, and these social capitals play a key role in strengthening the daily operations of private hospitals, improving the patient medical experience, and mobilizing resources so that hospitals can solve problems more effectively. Recognizing the importance of social capital in healthcare management is critical for private dental hospitals to thrive, better serve their communities, and continue to provide high-quality dental care.

2. Modify Conceptual Framework

From the literature review and the results of interview, we can modify the conceptual framework and related variables. According to the result of qualitative data. The determinant of social capital is summarized in Table 4.1:

Table 4.1 The determinant of social capital of dental hospitals in Changzhou City

Social capital	Determinant of social capital
Internal social capital	Employees' salaries
	Communication between employees and managers
External Social capital	Investment in medical equipment
	Input in medical technology
	External financial support
	Communication with the government
Trust	The patient's trust in the doctor
	Patients' trust in hospitals

According to the literature review and the overview of variables in relevant studies, there are three main types of variables and eight corresponding sub-variables in the determinants of social capital in private hospitals. Among them, the three main variables are internal social capital, external social capital and trust.

Due to these understanding, we can finally adjust the conceptual framework as figure 4.1:

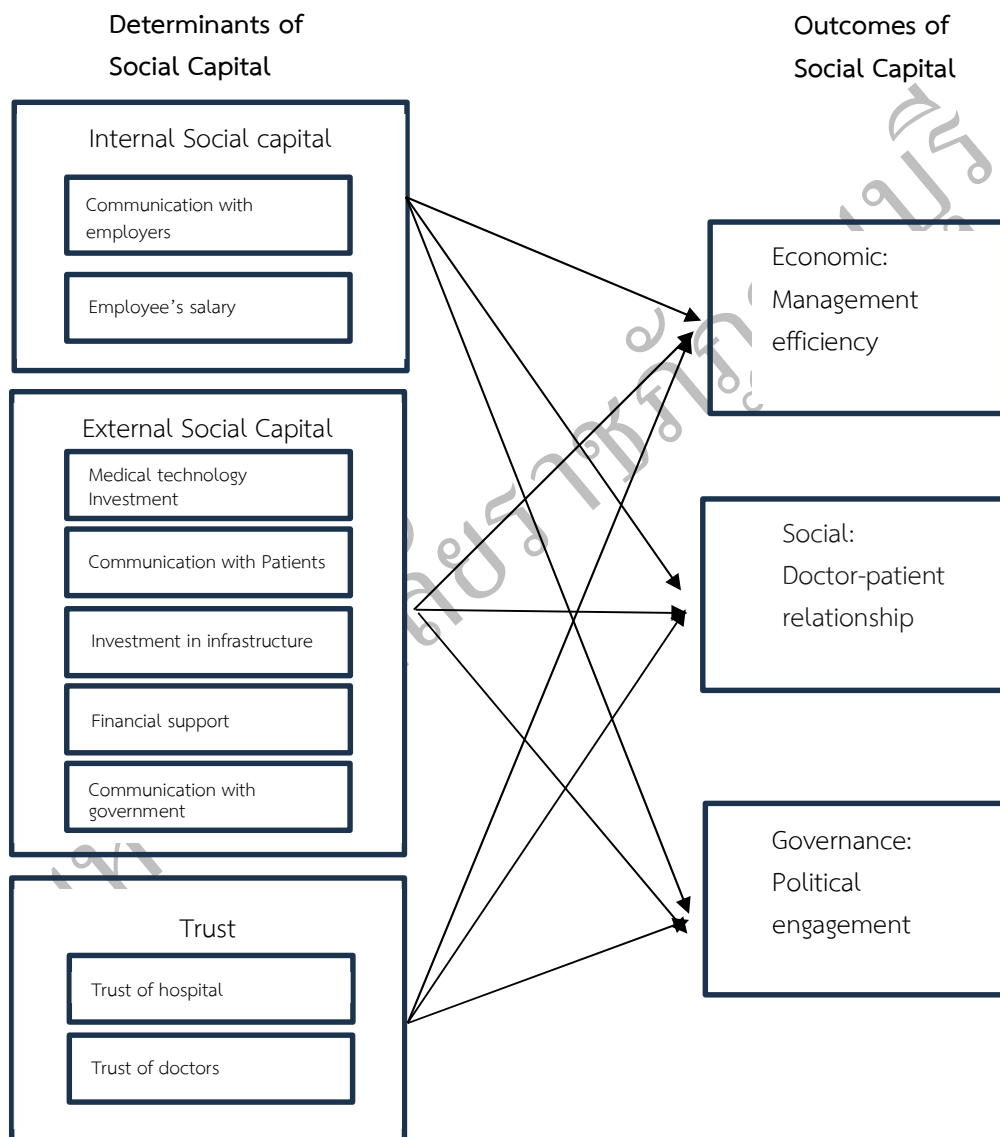


Figure 4.1 Adjusted Framework of Social Capitals

Determinants of Social Capital in Dental Hospitals in Changzhou City

Then, this study conducted interviews with experts in five related industries to supplement and identify the important variables. Then, according to these variables, the questionnaire used for interviews in this paper was determined, and the required sample number was selected from the target group by sampling method. Among them, the variables that were interviewed by experts are listed in Table 4.2.

Table 4.2 Variables supplemented and finally determined by expert interviews

Social Capital	Determinants
Internal social capital	Employee salaries
	Frequency of communication between employees and managers
	Employee education
External social capital	Investment in medical equipment
	Whether to participate in medical insurance designated point
	Investment in medical technology
	Favorable tax policy
	Subsidies from financial funds
	Frequency of communication with the government
Trust	The patient's trust in the doctor
	The patient's trust in the hospital

From Table 4.2, some variables were supplemented by interviews with experts, and then the research instrument was prepared as a five-point rating scale questionnaire. The quality of the questionnaire has been verified by content validity and reliability. For the content validity of the questionnaire, the researchers have sent the questionnaire to five experts for verification, evaluating the items of the questionnaire based on a score range of -1 to +1. Items with scores below 0.5 were modified. On the other hand, items with a score higher than or equal to 0.5 are kept. The results are shown in the table above. For the reliability of the questionnaire is one way to assess the quality of the measurement procedure used to collect the data. Researchers have sent out 200 questionnaires to collect data from non-samples to consider the reliability of the results. Cronbach's α coefficient equal to or higher than 0.70 means that there is sufficient reliability to determine the internal consistency or average correlation of the

items in the research instrument to measure the reliability of the questionnaire. As a result, Cronbach's α coefficient was at 0.86. This can be used to describe the reliability of the questionnaire. At the same time, the relevant data of public hospitals published online and corresponding dental clinics were introduced for comparison, so as to obtain better analysis results.

Population Data and Statistical Results

Table 4.3 Population information of the survey sample (n = 200)

Demographic information	Number	Percentage (%)
Gender		
Male	113	56.7
Women	87	43.3
Job titles		
Senior	20	10
Intermediate	67	33.3
Low	113	56.7
Education		
Junior college	57	28.7
College undergraduate	83	41.3
Masters	40	20
Dr	20	10
Work experience		
1-5 years	47	23.3
5-10 years	113	56.7
More than 10 years	40	20

It can be concluded from Table 4.3 that in the sample selected in this paper, there are 20 senior titles, 67 intermediate titles and 113 junior titles. It can be seen that the reserve of junior talents in private dental hospitals is relatively sufficient, and the backbone needs to be strengthened. Although there are 20 senior professionals, a certain proportion of them are rehired experts and professors. Although they have rich clinical experience, they are older, so the hospital urgently needs to introduce or cultivate a group of high-level discipline leaders with rich clinical experience. Therefore, the hospital urgently needs to introduce or cultivate a group of clinical experience and

high-level discipline leaders. The benign docking of leading advantage projects with high-end talents and cultivating excellent and cutting-edge talents in advantage projects will drive the rapid development of medical work.

The analysis of educational background reflects the professional level of the medical team in private dental hospitals to a certain extent. Although there is still a certain gap compared with the talent echelon in public hospitals, the hospital attaches great importance to the cultivation and continuing education of talents. Every year, there are external training plans, and regular professional knowledge training and professional ability training for in-service doctors, medical technicians, nurses and other positions are organized. Medical staff are encouraged to study for master's degree and doctor's degree in well-known medical universities, medical institutions and research institutes at home and abroad, and certain educational allowances and educational subsidies are given. In addition, private dental hospitals have spared no effort in the introduction of high-end management talents. In recent years, the hospital has hired senior human resource managers and marketing elites with high salaries to give advice for the efficient and sustainable development of the hospital.

The stability of employees in private dental hospitals is generally good. There are 40 employees who have worked for more than 10 years. 113 employees with 5-10 years of employment, accounting for 56.7% of the total number of employees; And 47 employees in 1-5 years, accounting for 23.3%. The reason is that there has been less recruitment in the past two years, which has a lot to do with the development of the epidemic. Among them, the stability of medical and technical personnel is better, the loss of talents is less, and the mobility of marketing personnel is the largest, which is mainly related to the recent establishment of marketing teams, imperfect systems, and immature marketing channels.

Questionnaire Survey of Private Hospitals in Changzhou

In order to further understand the influence of social capital formation factors of private dental hospitals and their influence on hospital management efficiency, this study selected 200 persons in charge, employees and patients of 41 private dental hospitals in Changzhou by sampling method to conduct a questionnaire survey. The survey was conducted in the survey of the management status of private dental hospitals in Changzhou (including interviews with hospital directors) and the survey of medical staff in private hospitals in Changzhou. Among the 41 private dental hospitals, 34 were covered by designated hospitals, 8 by provincial hospitals, 21 by municipal

hospitals, 17 by county-level medical insurance or agricultural insurance, and some hospitals were covered by two or more of the above.

In 2023, there were 21 hospitals with an investment scale of more than 80,000 yuan, accounting for about 50%, and most of them were general hospitals. Among the 19 general hospitals, 12 will have an investment scale of more than 80,000 yuan. There are 15 enterprises with an investment scale of less than CNY 50,000, accounting for about 37% (see Table 4.4 for details).

Table 4.4 Enrollment of 41 private hospitals (Family)

Hospital type	Whether to be included in medical insurance			Investment scale in 2023		
	yes	deny	Admito 200,000	> 200 Thousand, 500000-Endynia	> 500 Thousand, Endovirus 800,000	> 800 Thousand
synthesize traditional Chinese medical science junior college education amount to	16	3	2	3	2	12
	6	0	0	3	1	2
	12	4	4	3	2	7
	34	7	6	9	5	21

For the main uses of investment funds, the 41 hospitals surveyed chose the most to pay staff salaries and buy medical equipment, with 31 hospitals choosing both options separately. Twenty-six hospitals used the funds for hardware facilities. Seventeen hospitals used advertising investment as one of the main uses of funds, accounting for 41.46% of the surveyed hospitals (see Table 4.5 for details).

Table 4.5 Analysis of fund use of 41 private hospitals

Purpose of funds	Quantity (home)	constituent ratio (%)
Employee compensation	31	75.61
Housing rental	22	53.66
Purchase medical equipment	31	75.61
Hardware facilities transformation	26	63.41
advertisement expenditure	17	41.46
other	9	21.95

By comparing the ratio of the total number of outpatient visits of private dental hospitals (including public hospitals and private hospitals) to the average number of dental visits of corresponding types of general hospitals in 2023, it was found that the average number of outpatient visits of private dental hospitals was quite different from the average number of general hospitals in the whole city. The average number of outpatient visits of traditional Chinese medicine hospitals in the whole city was 12.78 times that of the average number of outpatient visits of private traditional Chinese medicine hospitals. The average number of outpatient visits in the city's specialized hospitals was 4.83 times that of the private specialized hospitals, and the average number of outpatient visits in the city's general hospitals was 3.20 times that of the private general hospitals (see Table 4.6).

Table 4.6 Statistics of average outpatient volume of 41 Private hospitals and municipal hospitals in 2023 (Person-times)

Type of hospital	Private hospitals	Municipal hospitals
Synthetic	91850	294315.596
TCM Science	30295	387114.069
Junior college degree	20597	99572.984

The average value of registered medical practitioners, nurses, pharmaceutical personnel, testing personnel, other medical technicians and administrative personnel in 41 private hospitals was calculated, and compared with the corresponding data, the number of medical practitioners, nurses and pharmaceutical personnel in Hangzhou was higher than the national level; The number of administrative personnel was slightly lower than the national level, and the difference was statistically significant (see Table 4.7).

Table 4.7 Staff mean statistics of 41 private hospitals and national private hospitals (person)

Area	practicing doctor	Practice nurse	medicament	checkout	Other medical skills	administration staff
In country	15.47	21.32	3.01	3.37	6.17	5.25
Chang Zhou	24.41	32.19	4.85	3.24	7.34	3.88
t	2.79	2.16	3.09	0.29	1.54	4.44
P	0.0081	0.0369	0.0036	0.7745	0.1313	< 0.0001

In different types of private hospitals, the average number of personnel also varies greatly. There were more doctors, nurses, pharmacy departments, laboratory departments, other medical skills and administrative personnel in general hospitals and fewer in traditional Chinese medicine hospitals, but the differences were not significant (see Table 4.8 for details).

Table 4.8 Staff mean statistics of 41 different types of private hospitals (person)

type	practicing doctor	R.N.	medicament	checkout	Other medical skills	clerical staff
synthesize	30.26	42.47	5.84	3.84	10.58	4.05
traditional Chinese medical science	17.17	16.17	2.83	1.67	2.50	3.00
junior college education	20.19	26.00	4.44	3.13	5.31	4.00

If the advertising and marketing departments of private hospitals are classified as publicity and marketing departments, the number of publicity and marketing personnel in general hospitals and specialized hospitals is significantly more than that in TCM hospitals, but the difference is not statistically significant (see Table 4.9 for details).

Table 4.9 Statistics of personnel in Publicity and marketing departments of 41 different types of Private hospitals (persons)

	General hospitals	Traditional Chinese Medicine Hospital	Special hospitals
Advertising Department	2.37	0.50	3.31
Marketing Department	2.05	0.50	1.63
Finance Department	4.42	1.00	4.94

The composition ratio of high, medium and low professional titles of 41 registered doctors in private hospitals was calculated, and compared with that of medical practitioners in China, it was found that the proportion of professional physicians with senior professional titles in private hospitals in Changzhou was higher than that of medical practitioners with senior professional titles, and the proportion of intermediate and primary professional titles was lower than that of the national figure.

Table 4.10 Proportion and comparison of medical practitioners in 41 private hospitals (%)

Region	Advanced	Intermediate grade	Elementary
Across the country	18.9	34.1	40.2
Changzhou City	24.7	31.2	33.8

Factors that Affect the Formation of Social Capital in Private Dental Hospitals and their Impact on the Operational Efficiency

In order to further understand the factors that can affect the formation of social capital in private dental hospitals and their impact on the operational efficiency of hospitals, this study also interviewed 13 presidents or heads of private dental hospitals. The main contents of the interview include the factors affecting the formation of hospital social capital, the development of private hospitals and the competition between public hospitals, the operation and development of private hospitals, and the development and strategy of private hospitals.

In the interview form, 19 factors affecting hospital management development, including "medical service attitude", were listed (see Table 4.11 for details). The survey found that 78.05% and 19.51% of the principals, respectively, believed that the level of medical technology had a great or significant impact on hospital development. In addition, more than 50% of the principals believed that medical insurance policy, medical service attitude, hospital brand image, business philosophy, leadership quality, public opinion orientation and medical market positioning had a great impact on hospital development, while tax preferential policies had a "moderate impact", "little impact" or "no impact".

Table 4.11 Analysis of the factors affecting the development of hospital operation by the heads of private hospitals (%)

Factor	Influence giant	Influence more	Influence same as	Influence less	Not have Influence
Medical technology level	78.05	19.51	0	2.44	0
Medical insurance policy	73.17	17.07	7.32	2.44	0
Medical service attitude	68.29	26.83	0	2.44	2.44
Hospital brand image	68.29	24.39	0	4.88	2.44

Table 4.11 Analysis of the factors affecting the development of hospital operation by the heads of private hospitals (%) (Cont.)

Factor	Influence giant	Influence more	Influence same as	Influence less	Not have Influence
Business management	68.29	21.95	7.32	2.44	0
Leadership quality	60.98	31.71	4.88	0	2.44
Public opinion orientation	56.10	34.15	7.32	2.44	0
Medical market positioning	53.66	36.59	7.32	2.44	0
Stability of personnel flow	43.90	46.34	7.32	2.44	0
Residents' concept of medical treatment	41.46	43.90	9.76	4.88	0
Salary and welfare level	39.02	48.78	9.76	2.44	0
Armamentarium	39.02	48.78	9.76	2.44	0
Self-discipline of medical institutions	39.02	48.78	9.76	0	2.44
Government regulation	34.15	51.22	9.76	2.44	2.44
Medical environment	34.15	51.22	9.76	0	4.88
Academic status of medical staff	26.83	51.22	19.51	0	2.44
Preferential tax policy	26.83	29.27	31.71	7.32	4.88
Personnel promotion and learning opportunities	24.39	41.46	29.27	2.44	2.44
External Publicity	21.95	46.34	24.39	7.32	0

According to the survey results of whether private hospitals have advantages in the competition between private hospitals and public hospitals, it is found that 2 people think that the advantages are obvious, accounting for about 18% of the respondents, and 10 people have a greater advantage, accounting for about 77%, that is, about 95% of the hospital leaders have confidence in the competitiveness of private hospitals. Among these 13 leaders, 66.67% and 61.90% respectively believed that the advantages of private hospitals were mainly reflected in the streamlining of institutions and flexible employment, as well as more detailed diagnosis and treatment services.

As for the current development trend of private hospitals, there are statistically significant differences in the attitudes of hospital leaders (fisher exact probability method, $P < 0.05$). Among them, 56.25% of the hospital leaders think that the current development trend of private hospitals is good or good; 33.34% of the hospital leaders thought that the development was good; 15.79% of the hospital leaders thought that the development was good. There was statistical significance in the attitude difference

of heads of private hospitals (fisher exact probability method, $P < 0.05$). Among them, the proportion of "hope private hospitals to develop vigorously" accounted for 21.05%, 66.67% and 25% of general hospitals, traditional Chinese medicine hospitals and specialized hospitals, respectively (see Table 4.12 for details).

Table 4.12 Analysis of the development trend and future development by the heads of various types of private hospitals (%)

	The current development trend of the hospital will develop in the future							
	Type is very good	good	generally	poor	very poor	development		
	Vigorously,	planned	development,	careful	development			
synthesize	0	15.79	68.42	15.79	0	21.05	68.42	10.53
traditional Chinese								
medical science	16.67	16.67	16.67	50	0	66.67	16.67	16.67
monopolize	Section	43.75	25	12.50	6.25	25	75	0
	12.50							
amount to	7.23	26.83	43.90	19.51	2.44	29.27	63.41	7.32

According to the interview results in Table 4.11, most of the principals of the 13 private dental hospitals interviewed believed that the factors affecting the social capital of private dental hospitals were more concentrated in external social capital, namely, policy environment, medical technology and service of the hospital, etc., and social capital in this aspect could also have a greater impact on the operation and development of the hospital. Internal social capital, such as employee salaries, is considered relatively unimportant by most respondents. The results of this interview show the factors influencing the formation of social capital in private dental hospitals and their importance from a qualitative perspective, that is, under the current environment and industry development trend, the role and importance of external social capital are greater. In order to better analyze the accuracy of this result, this paper further adopts a multiple regression model from a quantitative perspective. Quantitative analysis was carried out on the related influences of internal and external social capital, and variables of patients' trust score on hospitals and doctors were added to better simulate the role of social capital in the operation and development of private dental hospitals.

The Influence of Social Capital on the Management Efficiency of Dental Hospitals

Through the above questionnaire interview, combined with the relevant variables obtained from the literature and expert interview results given above, this paper further adopts the multiple stepwise regression model analysis, and takes the hospital operation efficiency (that is, the annual revenue of the hospital) as the dependent variable. Medical equipment investment, medical technology investment, whether medical insurance is fixed, the number of talents introduced, the frequency of communication between employees and hospitals, tax incentives, the number of government policy discussions, the amount of financial subsidies and other influencing factors were used as independent variables. After the independent variables were screened by the multiple linear stepwise regression model, the statistically significant factors were finally entered into the model. According to the results of multiple regression analysis, the regression model has a good prediction effect on hospital operation. The correlation coefficient $R^2 = 0.775$, indicating that about 77.5% of the operational efficiency can be explained by the model. In the results of variance analysis of the regression model, the regression equation showed that the multiple regression model using all independent variables to predict the social capital formation of private dental hospitals and its impact on hospital operating efficiency had a good degree of fitting with the data.

Table 4.13 Regression analysis results of social capital of dental hospitals influencing hospital management efficiency

Social capital	Determinants of social capital	Partial regression coefficient	Standardized coefficient	Standard error of	t-value	p-value	Tolerance	VIF
Internal social capital	Employee salaries	0.936	0.875	0.196	7.37	0.026	0.698	1.159
	Communication between employees and managers	0.673	0.571	0.513	8.34	0.011	0.163	1.692
	Employee education	0.434	0.315	0.579	3.46	0.088	0.125	1.745
External social capital	Investment in medical equipment	1.273	0.978	0.473	6.75	0.045	0.535	1.634
	Participate in Medicare fixed point	0.964	0.896	0.104	9.26	0.009	0.649	1.268
	Investment in medical technology	1.183	0.485	0.067	9.59	0.003	0.216	1.748
	Favorable tax policy	0.983	0.912	0.079	12.46	0.000	0.405	1.956
	Subsidies from financial funds	1.396	0.649	0.478	7.35	0.029	0.364	1.732
Trust	Communication with the government	1.276	0.593	0.112	8.36	0.034	0.943	2.014
	The patient's trust in the doctor	2.465	0.946	0.513	7.16	0.031	0.752	1.096
	Patients' trust in the hospital	2.923	0.984	0.079	9.46	0.008	0.642	1.465

The significance test results of the 11 selected predictors were all good (P values less than 0.05), and they had a significant effect on the regression model. The standardized partial regression coefficients were used to judge the relative importance of the predictor variables. The larger the absolute value was, the greater the contribution to the model was and the more important it was to the predictor. Among the 11 predictive variables, the largest partial regression coefficient was the patient's trust score for hospitals and doctors, financial subsidies, the hospital's investment in medical technology and equipment, and the frequency of communication between hospitals and the government (that is, the number of policy discussions). These variables had a relatively large impact on the formation of social capital and the efficiency of hospital operation and management.

In addition, according to the classification of variables, among the three types of internal social capital, external social capital and trust, trust has the greatest impact on the formation and management efficiency of hospital social capital, while the formation and impact of external social capital are generally greater than that of internal social capital, among which investment in medical equipment and technology, financial subsidies and tax incentives have the greatest impact. This indicates that private hospitals should make greater efforts to strengthen their ability to show themselves to the outside world and gain the trust of the government. In other words, in the context of the current development of the medical industry, the main development direction of private hospitals should be to gain the trust of the outside world (including patients and the government) by strengthening themselves. In addition, obtaining the government's trust is consistent with the trend of trust's influence on the operational efficiency of private hospitals, because the greater the tax incentives private hospitals receive from the government, the stronger the government's trust in private hospitals, and the stronger the social capital of the trust type, so that the operational efficiency of private hospitals can be improved.

It is worth noting that although the impact of internal social capital on operational efficiency is smaller than that of external social capital, the results are still significant, indicating that internal social capital is equally important. In addition, among the formation of internal social capital and its impact on hospital operation efficiency, the salary level of employees has the greatest impact, followed by the communication frequency between employees and hospitals. This shows that while strengthening the formation of external social capital and further improving patients' trust in hospitals, hospitals should also consider appropriately raising the salary level of medical staff. At the same time, more communication channels should be opened to facilitate the communication

between medical staff and hospital management personnel, so as to strengthen the formation of social capital within the hospital and improve the operation efficiency of the hospital.

From this point, it can be seen that under the current development background of the medical industry and policy guidance, private dental hospitals should first gain the trust of patients as much as possible, and the impact of patient trust score on the further formation of hospital operation efficiency and social capital is greater than the impact of patient trust score on doctors. This shows that the hospital must first establish a good reputation among patients, and then further improve the ability of medical staff. At the same time, the result that the influence of external capital is greater than that of internal social capital also shows that private dental hospitals should pay more attention to the formation of external social capital, increase investment in medical technology optimization, medical facility updating, and participation in government policy discussions on the medical industry, so as to better form external social capital. This can further strengthen the trust of patients in the hospital and doctors, thus improving the operational efficiency of the hospital.

The Influence of Social Capital on the Doctor-patient Relationship of Dental Hospitals.

As can be seen from Table 4.14, when the dependent variable is the doctor-patient relationship, the variables that have a greater impact on the doctor-patient relationship are the employee salary in internal social capital (its P-value is 0.046, or 4.6%, less than 5% but greater than 1%, so it is significant at the 5% level) and the communication frequency with employees (its P-value is 0.061, or 6.1%). Less than 10% but more than 5%, and therefore significant at the 10% level). External social capital includes investment in medical equipment (whose P-value is 0.065, i.e. 6.5%, less than 10% but greater than 5%, therefore significant at the 10% level), investment in medical technology (whose P-value is 0.027, i.e. 2.7%, less than 5% but greater than 1%, therefore significant at the 5% level), and investment in medical technology (whose P-value is 0.027, i.e. 2.7%, less than 5% but greater than 1%, therefore significant at the 5% level). And patient trust in doctors and hospitals (both significant at the 5% level).

This means that if a hospital wants to strengthen its relationship with patients, then from the perspective of internal social capital, an increase in employee treatment and frequency of communication will help, and the coefficient shows that for every

1% increase in employee compensation and frequency of communication, the doctor-patient relationship score will increase by 0.676% and 0.352%, respectively. At this time, the staff will feel the attention of the hospital and will be more dedicated to the treatment of patients, thus strengthening the internal social capital of the hospital. At the same time, the hospital can also strengthen the investment in medical technology and equipment. At this time, every 1% increase in investment, the doctor-patient relationship score will increase by 0.785% and 0.812% respectively, so that patients can directly feel the strengthening of medical experience, thus effectively strengthening the external social capital of the hospital. At the same time, hospitals can also improve the communication between patients, doctors and hospitals, and further improve patients' medical experience by giving patients more feedback channels, and enhance patients' trust in hospitals and doctors' medical services. In addition, every 1% improvement in patients' trust in doctors and hospitals will bring 0.946% and 0.874% improvement in doctor-patient relationship, respectively. Through strengthening these three aspects, hospitals can achieve the purpose of strengthening the doctor-patient relationship.

Table 4.14 Regression analysis results of social capital of dental hospitals influencing doctor-patient relationship

Social capital	Determinants of social capital	Partial regression coefficient	Standardized coefficient	Standard error of	t-value	p-value	Tolerance	VIF
Internal social capital	Employee salaries	0.762**	0.676	0.196	6.37	0.046	0.605	1.159
	Communication between employees and managers	0.416*	0.352	0.219	7.24	0.061	0.486	1.692
	Employee education	0.325	0.126	0.482	2.46	0.178	0.379	1.145
External social capital	Investment in medical equipment	1.019*	0.812	0.265	8.75	0.065	0.254	1.634
	Participate in Medicare fixed point	0.625	0.476	0.104	2.26	0.112	0.862	1.068
	Investment in medical technology	1.169**	0.785	0.067	9.59	0.027	0.745	1.451

Table 4.14 Regression analysis results of social capital of dental hospitals influencing doctor-patient relationship (Cont.)

Social capital	Determinants of social capital	Partial regression coefficient	Standardized coefficient	Standard error of	t-value	p-value	Tolerance	VIF
	Favorable tax policy	0.745	0.512	0.102	1.42	0.103	0.962	1.527
	Subsidies from financial funds	0.946*	0.719	0.142	5.35	0.061	0.713	1.762
	Communication with the government	0.276	0.893	0.139	1.36	0.124	0.632	1.814
Trust	The patient's trust in the doctor	2.239**	0.946	0.067	7.19	0.011	0.851	1.796
	Patients' trust in the hospital	1.943**	0.874	0.179	9.47	0.019	0.764	2.124

The Influence of Social Capital on the Political Engagement of Dental Hospitals.

As can be seen from Table 4.15, when the dependent variable is hospital political participation, the variables that have a significant impact on it are medical technology input (whose P-value is 0.014, that is, 1.4%, less than 5% but greater than 1%, so the significance value is 5%), tax preferential policies (whose P-value is 0.018, that is, 1.8%, less than 5% but greater than 1%, so the significance value is 5%), tax preferential policies (whose P-value is 0.018, that is, 1.8%, less than 5% but greater than 1%, etc.). Therefore, the significance value is 5%) and the frequency of communication with the government (whose P-value is 0.024, i.e. 2.4%, less than 5% but greater than 1%, so the significance value is 5%). The degree of patient trust in the hospital (whose P-value is 0.084, or 8.4%, less than 10% but greater than 5%, so significant at the 10% level). This means that if a hospital wants to strengthen its own policy participation and improve its voice in the policy making process, it must first strengthen its external social capital, demonstrate its strong medical strength to the government by increasing investment in medical equipment technology, and consider actively complying with the government's existing tax policies. Moderately improve the frequency of communication with the government to give the government a positive impression of obeying management and actively participating in policy communication. From the coefficient, for every 1% increase in medical technology investment and tax

incentives, the corresponding improvement range of political participation of private hospitals is 0.785% and 0.572%.

At the same time, by enhancing patients' trust in themselves, hospitals can also improve their image in terms of social reputation, so that the government can take more consideration of the needs of private dental hospitals when formulating policies, and thus improve their political participation. At this time, every 1% increase in patients' trust score of private hospitals will increase the political participation score of private hospitals by 0.782%.

It should be noted that although internal capital and patient trust in doctors are relatively insignificant in regression results at this time, it does not mean that they are not important in reality for private hospitals. Excessive neglect of the needs of staff can lead to a lower evaluation of the hospital by staff, and the effect may be even greater if it is known that staff have a lower evaluation of the hospital. At the same time, if patients trust hospitals but don't trust doctors, this will force hospitals to devote more resources to screening doctors, resulting in more unnecessary spending. Therefore, while improving relatively significant social capital, hospitals should also pay attention to these non-significant social capital factors to avoid unnecessary troubles.

Table 4.15 Regression analysis results of social capital of private dental hospitals influencing political engagement

Social capital	Determinants of social capital	Partial regression coefficient	Standardized coefficient	Standard error of	t-value	p-value	Tolerance	VIF
Internal social capital	Employee salaries	0.136	0.065	0.181	1.37	0.246	0.985	1.039
	Communication between employees and managers	0.176	0.071	0.213	1.34	0.121	0.461	1.622
	Employee education	0.139	0.065	0.579	0.46	0.138	0.986	0.945
External social capital	Investment in medical equipment	1.167	0.648	0.263	3.75	0.105	0.535	1.454
	Participate in Medicare fixed point	0.745	0.896	0.104	9.26	0.012	0.629	0.468
	Investment in medical technology	1.264**	0.785	0.167	4.59	0.014	0.224	2.748

Table 4.15 Regression analysis results of social capital of private dental hospitals influencing political engagement (Cont.)

Social capital	Determinants of social capital	Partial regression coefficient	Standardized coefficient	Standard error of	t-value	P-value	Tolerance	VIF
	Favorable tax policy	0.761*	0.572	0.189	4.46	0.018	0.415	1.956
	Subsidies from financial funds	0.586	0.241	0.378	7.35	0.138	0.374	1.122
	Communication with the government	1.387**	0.895	0.072	8.36	0.024	0.351	2.325
Trust	The patient's trust in the doctor	0.661	0.347	0.213	2.16	0.161	0.635	1.084
	Patients' trust in the hospital	1.323*	0.782	0.079	5.46	0.084	0.762	2.294