Study on the Relationship Between Medical Service Supply and Patient Satisfaction in The Construction of Medical Consortium

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Abstract. Taking a tertiary hospital consortium in Weifang City as the subject, an evaluation system for medical service provision is constructed based on the SERVQUAL model, incorporating four dimensions: tangibility, continuity, humanism, and economy. The patient satisfaction was assessed using a 5-point Likert (Likert scale) scale questionnaire. Through 913 valid survey responses, methods such as correlation analysis, stratified regression, and one-way ANOVA were employed to explore the impact mechanism of medical service provision under the consortium context on patient satisfaction. The results show that patients at the leading hospitals of urban consortia generally have higher satisfaction than those at primary institutions; the continuity and humanism of medical services significantly enhance patient satisfaction, while economic indicators exhibit a negative impact due to cost sensitivity issues; factors such as household registration, health status, medication use, and distance to healthcare facilities lead to significant differences in satisfaction among different groups, providing more comprehensive empirical support for improving the level of medical service provision under the consortium context.

Keywords: Medical consortium construction, Patient satisfaction, SERVQUAL model.

1. Introduction

As the reform of China's medical and health system deepens, innovation in healthcare service delivery models has become a key focus of national policy. The General Office of the State Council issued the "Key Tasks for Deepening the Reform of the Medical and Health System in 2024," which clearly states that efforts should be made to further improve the medical and health service system, deepen the reform of medical consortia, and vigorously promote pilot projects for closely integrated urban medical groups, exploring and improving corresponding management systems and operational mechanisms[1]. In this context, investigating the relationship between healthcare service provision and patient satisfaction in the construction of medical consortia is not only a practical need to implement national policy guidance but also a theoretical extension of the development philosophy centered on "people's health."

Currently, the supply of medical services in our country still faces structural contradictions. Although the construction of medical consortia has strengthened primary healthcare capabilities and promoted the allocation of high-quality resources to lower levels[2], a large number of high-quality resources remain concentrated in top-tier hospitals, leading to generally low overall healthcare service levels at primary health institutions. Meanwhile, with the deepening of population aging, the contradiction between people's demand for medical services and the capacity and level of medical care and insurance is becoming increasingly prominent[3]. The "14th Five-Year Plan for Healthy Aging" shows that one-fifth of China's population is elderly, among whom 78% suffer from chronic diseases, with the majority having two or more chronic conditions. It is projected that by 2030, the proportion of elderly people in China will approach 27%, and the number of elderly people with chronic diseases will triple, with the disease burden caused by chronic diseases expected to increase by at least 40%[4]. This increases the pressure on medical service supply, making it difficult to fully meet the healthcare needs of the population.

To address the aforementioned issues, this paper selects a tertiary hospital consortium in Weifang City for on-site research. Based on the SERVQUAL model, a service provision evaluation scale is

constructed to explore the relationship between medical service supply and patient satisfaction within the consortium using methods such as correlation analysis, stratified regression analysis, independent samples T-tests, and one-way ANOVA. This aims to promote the transformation of medical consortia from "formal integration" to "quality integration," ultimately achieving coordinated development of medical service supply-side reform and public health welfare.

2. Literature Review and Research Hypothesis

2.1. Theoretical principle

The Customer Perceived Service Quality Model (SERVQUAL model) was proposed by Berry et al. in 1982 [5]. The SERVQUAL model has been widely applied and validated by domestic scholars in the field of healthcare services, confirming its reliability. This paper refers to the evaluation scale [6] constructed by Zhang Mingming et al., and, considering the special context of tiered diagnosis and treatment within medical consortia, it revises and adds dimensions to the original ones. It forms four dimensions: tangibility, continuity, humanism, and economy, which serve as indicators for evaluating the provision of medical services.

2.2. Literature review

2.2.1. Medical service supply

Medical service provision is a special form of public service. In our country, medical services are primarily government-led, provided through public healthcare institutions. Scholars have varying views on the entities responsible for medical service provision. Wang Wenjuan and other scholars argue that the government plays a leading role in medical service provision, emphasizing its triple functions as an institutional designer (provider), fund payer (consumer), and quality regulator (consumer)[7]. Other scholars (Liu Ruiming) view general medical services outside of public health from the perspective of public goods, arguing that they neither satisfy non-rivalry nor non-excludability, making them purely private goods[8].

2.2.2. Patient satisfaction

Existing research primarily focuses on patient satisfaction evaluation scales (evaluation tools) and factors influencing patient satisfaction [9]. Wang Dan et al., based on the study by British scholar Ware, categorized outpatient patient satisfaction into four dimensions: doctor-patient communication, medical environment, convenience and continuity, and need fulfillment, adding pain management and medication management dimensions for inpatient patient satisfaction [10]. Guo Ran et al. focused on exploring the factors affecting patient satisfaction, conducting a patient satisfaction questionnaire survey at 48 district hospitals across 16 districts of Beijing, finding that overall outpatient patient satisfaction is influenced by hospital type, patient gender, family monthly income, registration method, and self-assessment of health [11].

2.2.3. Medical services and patient satisfaction

Most scholars focus on the relationship between medical service quality and patient satisfaction. Zhou Lulin et al. deconstructed the mechanism by which medical service quality affects patient satisfaction, proposing that the seven dimensions of medical service quality-tangible, reliable, responsive, trustworthy, humanized, economical, and effective-are positively correlated with medical service quality[12]. Similarly, Wu Jiafeng et al. found that hospital environment satisfaction, service process satisfaction, treatment quality satisfaction, and medical ethics satisfaction have a positive correlation with overall patient satisfaction[13]. However, in different studies by various scholars, the indicators significantly associated with patient satisfaction show significant heterogeneity. For example, in Zhou Lulin's study, trust and reliability are core driving factors; whereas in Wu Jiafeng's study, patient-doctor communication satisfaction does not significantly impact overall patient satisfaction.

To sum up, previous studies have focused on the relationship between medical services and medical satisfaction. Scholars generally emphasize the relationship between the quality of medical services and medical satisfaction, as well as the influencing factors of medical satisfaction. However, less attention has been paid to how the supply of medical services under the background of medical consortium affects patient satisfaction. Therefore, the hypothesis is established as follows:

H1: The patient satisfaction of the leading hospital in the urban medical consortium is higher than that of the primary medical and health institutions.

H2: The supply of medical services has a positive impact on the patient satisfaction of primary medical and health institutions and the leading hospital of urban medical consortium.

H2a: The physical indicators have a positive impact on patient satisfaction.

H2b: Continuity indicators have a positive effect on patient satisfaction.

H2c: Humanistic care index has a positive effect on patient satisfaction.

H2d: Economic indicators have a positive effect on patient satisfaction.

H3: There are significant differences in satisfaction among different medical groups

3. Research Design

3.1. Data sources and study design

3.1.1. Questionnaire respondents

Using a convenient sampling method, we conducted an intercept survey of citizens who visited a tertiary hospital in Weifang City's medical consortium grid from October to December 2022. The study collected data through the "Wenjuanxing" platform, with staff at the lead hospital guiding citizens to scan codes and fill out questionnaires, ultimately recovering 913 completed questionnaires.

3.1.2. Questionnaire method

In terms of document design, by referencing previous research and considering the special background of medical service provision under the construction of medical consortia, the questionnaire is divided into the following four sections: (1) Basic Information, including the respondent's gender, age, household registration, whether they are a permanent resident, marital status, education level, per capita monthly family income, and health insurance participation status. (2) Health Status and Medical Information, including the respondent's health condition assessment, whether they have chronic diseases, and whether they take medication long-term. (3) The level of medical service provision at different levels of healthcare institutions under the construction of medical consortia. (4) Patient satisfaction with different levels of healthcare institutions under the construction of medical consortia. The evaluation of patient satisfaction with different levels of healthcare institutions under the construction of medical consortia mainly focuses on four aspects: basic hospital conditions, medical and nursing services, medical procedures, and medical costs. This is assessed through eight indicators: medical charges, medical standards, service attitude, treatment effectiveness, service scope, waiting time, medical environment, and medical procedures.

3.2. Analysis of the basic situation of the respondents

A total of 913 questionnaires were distributed in this study. After excluding invalid responses, 901 valid questionnaires were collected, with a recovery rate of 98.7%. Among the 901 respondents, 402 were male (44.6%) and 499 were female (55.4%). The majority of respondents, 34.9% (314 people), were aged between 30 and 40. The vast majority of respondents were local residents (780 people), accounting for 86.6% of the total number of respondents. In terms of education level, nearly half of the respondents had a bachelor's degree, making up 47.3% (426 people). Most respondents, 482 people (53.5%), had a per capita monthly household income of over 5000 yuan. The majority of respondents were covered by either urban employee basic medical insurance or urban-rural resident basic medical insurance, accounting for 57.3% (665 people) and 23.0% (267 people), respectively. Some respondents additionally purchased commercial medical insurance, accounting for 18.9% (219

people), while a few respondents had no medical insurance at all, totaling only 9 people, or 0.8%. The majority of respondents did not have chronic diseases or a history of long-term medication, accounting for 89.2% (804 people) and 90.7% (817 people), respectively. For more detailed information on the basic situation of the respondents, see Table 1.

Table 1. Basic information of respondents

base situation	project	Number (per 100,000)	percentage (%)
sex	man	402	44.6
	woman	499	55.4
Age (years)	Under 20	54	6.0
	20-30	188	20.9
	30-40	314	34.9
	40-50	255	28.3
	50-60	79	8.8
	60-70	9	1.0
	More than 70	2	0.2
domicile	this locality	780	86.6
	other places	121	13.4
Educational attainment		6	0.7
	Primary school and below	53	5.9
	junior middle school	140	15.5
	High school (secondary vocational school, secondary vocational school, vocational high school)	152	16.9
	junior college		
	undergraduate course	124	13.8
	Master's degree or above	426	47.3
Per capita monthly household income (yuan)			
	Under 1500	45	5.0
	1500-3000	107	11.9
	3000-5000	267	29.6
	More than 5,000	482	53.5
Medical insurance payment method	Basic medical insurance for urban workers	665	57.3
	Basic medical insurance for urban and rural residents	267	23.0
	Commercial health insurance	219	18.9
	No health insurance	9	0.8
Prevalence of chronic diseases	He has a chronic illness	97	10.8
	No chronic disease	804	89.2
Medication use	Take medication long-term	84	9.3
	No long-term medication	817	90.7

3.3. Investigation tools

3.3.1. Medical service supply evaluation scale

Research is based on the Customer Perceived Service Quality Model (SERVQUAL model) and existing literature studies [12][14][15][16], combined with the actual needs of patients under the background of medical consortium construction, to revise previous evaluation scales, forming an evaluation scale for medical service provision under the context of medical consortia. The scale includes four primary indicators: tangibility, continuity, humanism, and economy, and nine secondary indicators such as facility completeness, environmental comfort, and service continuity, totaling 24

questions. The reliability of the scale is shown in Table 2, with good reliability and high internal consistency; factor analysis was used to evaluate the validity of the scale, with a KMO result of 0.828 and a Bartlett's test of sphericity being significant (P<0.05); principal component analysis was used to extract seven factors, with a cumulative variance contribution rate of 61.266%, indicating that the scale has good validity.

Table 2. Evaluation scale of medical service supply

Primary indicators	Secondary indicators	Cronbach'sα
The tangible	Facility completeness	0.716
	Environmental comfort	
continuity	Service continuity	0.654
	Effectiveness of referrals	
Humanistic care	attitude towards customers	0.718
	Policy awareness	
economical efficiency	cost justification	0.624
	Medical insurance compatibility	
	Service efficiency	

3.3.2. Patient satisfaction evaluation scale

Patient satisfaction is assessed using an existing evaluation scale, which has been revised based on the literature and research content of scholars such as Zhang Mingming [6] et al. The scale consists of four primary indicators (basic hospital conditions, medical services, patient flow, and medical costs) and eight secondary indicators. The questionnaire is developed using the 5-point Likert scale (Likert scale), categorizing patients 'satisfaction with medical service provision into very satisfied, fairly satisfied, somewhat satisfied, not very satisfied, and dissatisfied, with scores assigned as 5, 4, 3, 2, and 1, respectively. This evaluates patient satisfaction with primary healthcare institutions and the leading hospitals of urban medical consortia. Confirmatory factor analysis shows that the Cronbach's α for patient satisfaction with primary healthcare institutions and urban medical consortia leading hospitals are 0.954 and 0.981, respectively; KMO results are 0.929 and 0.943, respectively, and Bartlett's test of sphericity is significant (P<0.05), indicating that the scale has excellent reliability and validity. The reliability of the primary indicators is shown in Table 3.

Table 3. Patient satisfaction evaluation scale

Primary indicators	Secondary indicators	Cronbach'sα
Basic hospital conditions	medical level	0.923
	Medical environment	
Medical services	attitude towards customers	0.951
	treatment effect	
	grade of service	
The process of visiting the doctor	stand-by time	0.926
	Medical treatment process	
hospitalization costs	Medical charges	0.816

4. Results and Analysis

4.1. Descriptive analysis

To investigate patient satisfaction with different medical institutions, a descriptive analysis was conducted on the patient satisfaction scale data in the questionnaire. The results are shown in Table

4. The average satisfaction score for basic conditions at primary healthcare institutions was 3.83, with a standard deviation of 0.885, indicating that their hardware facilities were moderately satisfactory; scores for medical services and patient flow were similar, while the average satisfaction score for medical costs was 3.86, slightly lower than other dimensions. The overall satisfaction score was 3.87, with a standard deviation of 0.830, indicating that the services provided by primary institutions generally meet patient needs but still have room for improvement.

The satisfaction of various dimensions at the leading hospitals of urban medical consortia generally surpasses that of primary healthcare institutions. The average score for basic hospital conditions is 3.99, with a standard deviation of 0.827, approaching the "fairly satisfied" level; the scores for medical services and patient flow are higher than those of primary healthcare institutions, indicating greater recognition of service efficiency and professionalism. The average medical cost is 3.91, slightly lower than the score for medical services, but the standard deviation is slightly lower than that of primary institutions. The overall satisfaction score is 3.97, with a standard deviation of 0.814, suggesting higher recognition of the overall service quality by patients at leading hospitals of urban medical consortia. See Table 4 for details. This proves that H1 holds true: patients' satisfaction at leading hospitals of urban medical consortia is higher than that at primary healthcare institutions.

Table 4. Descriptive analysis of patient satisfaction

		mean	Standard error	standard deviations
Primary medical and health institutions	Basic hospital conditions	3.827	0.029	0.885
	Medical services	3.885	0.028	0.853
	The process of visiting the doctor	3.896	0.029	0.865
	hospitalization costs	3.856	0.033	0.979
	Overall satisfaction	3.869	0.028	0.830
Lead hospital of urban medical consortium	Basic hospital conditions	3.987	0.028	0.827
	Medical services	3.999	0.027	0.818
	The process of visiting the doctor	3.942	0.028	0.849
	hospitalization costs	3.911	0.030	0.899
	Overall satisfaction	3.971	0.027	0.814

4.2. Correlation analysis and multiple collinearity test

4.2.1. Correlation analysis

To measure the correlation between healthcare service provision and patient satisfaction, the Pearson correlation coefficient was used to evaluate their relationship. The analysis revealed that there is a significant correlation at the 0.01 level between healthcare service provision and patient satisfaction in primary healthcare institutions, as well as in the lead hospitals of medical consortia. The correlation in primary healthcare institutions is slightly higher than that in the lead hospitals of medical consortia, see Table 5.

Table 5. Correlation analysis between medical service supply and patient satisfaction

	Medical service supply	
institution	Pearson correlation	conspicuousness
Primary medical and health institutions	0.102**	0.002
Lead hospital of medical consortium	0.093**	0.005

4.2.2. Multiple collinearity test

This paper employs a hierarchical regression model to investigate the impact of independent variables on the dependent variable. To test for multicollinearity among variables, variance inflation factors (VIF) were analyzed for all control variables and independent variables. The results show that the VIF values for all variables are less than 5, indicating no multicollinearity issues. See Table 6.

Table 6. Multiple collinearity test of control variables and independent variables

	model 1	model 2
variable	VIF	VIF
(constant)		
sex	1.077	1.085
Age (years)	1.71	1.722
census register	1.346	1.36
Whether they are permanent residents	1.252	1.266
marital status	1.546	1.551
Educational attainment	1.344	1.353
Per capita monthly household income	1.33	1.345
health condition	1.141	1.164
Chronic disease status	2.05	2.057
Medication use	2.048	2.055
Distance from community health services	1.019	1.023
The tangible		1.845
continuity		1.11
Humanistic care		1.585
economical efficiency		1.723

4.3. Regression analysis

Table 7. Results of multivariate stratified linear regression analysis

	Primary medical and health institutions		Lead hospital of urban medical consortium	
variable	model 1	model 2	model 1	model 2
(constant)	5.093	4.720	4.844	4.513
sex	0.114*	0.137**	0.119*	0.136**
Age (years)	-0.047	-0.039	-0.063*	-0.056
census register	-0.079	-0.048	-0.031	-0.006
Whether they are permanent residents	-0.168	-0.097	-0.210*	-0.140
marital status	-0.032	-0.045	-0.036	-0.045
Educational attainment	-0.045	-0.036	-0.039	-0.030
Per capita monthly household income	-0.044	-0.038	0.020	0.022
health condition	-0.256***	-0.212***	-0.222***	-0.184***
Chronic disease status	-0.050	0.009	-0.080	-0.027
Medication use	0.076	0.049	0.137	0.117
Distance from community health services	-0.088	-0.092	-0.084	-0.088
The tangible		0.000		0.047
continuity		0.180***		0.171***
Humanistic care		0.164***		0.125***
economical efficiency		-0.111***		-0.126***
R square	0.089	0.178	0.075	0.151
ΔR square	0.089	0.089	0.075	0.075
F	7.859***	13.680***	6.595***	10.481***

To further explore the impact relationship between medical service provision and patient satisfaction, this paper uses four primary indicators of medical service provision as independent variables and patient satisfaction at primary healthcare institutions and leading hospitals in urban medical consortia as dependent variables. Considering that demographic variables and respondents' personal circumstances (gender, age, household registration, whether they are permanent residents, marital status, education level, monthly family income, health condition, chronic disease status, medication use, and distance from community health service centers) can interfere with the model, these are included as control variables for stratified regression. Model 1 examines the influence of control variables on the dependent variable, while Model 2 incorporates the four primary indicators of medical service provision based on Model 1. The analysis results are presented in Table 7.

As shown in Table 7, when investigating the relationship between medical service supply and patient satisfaction with primary healthcare institutions, control variables have an impact on the dependent variable. When only demographic variables are controlled, "gender" (β=0.114, $p<0.05$) and "health status" (β=-0.256, $p<0.001$) significantly affect patient satisfaction. Female patients have higher satisfaction, while patients with better health status have lower satisfaction. This supports the initial validity of Hypothesis H3, and further exploration will be conducted using independent samples t-tests and one-way ANOVA in subsequent sections. After adding the medical service supply indicator to Model 2, the model's explanatory power significantly improved (ΔR^2=0.089). Among these, "continuity" (β=0.180, $p<0.001$) and "humanistic care" (β=0.164, $p<0.001$) have a significant positive impact on satisfaction, whereas "economy" (β=-0.111, $p<0.001$) has a significant negative impact. The regression coefficient P-value for "tangible" is>0.05, indicating no statistical significance, thus proving that the tangibility of medical service supply does not correlate with patient satisfaction at primary healthcare institutions.

When examining the relationship between healthcare service provision and patient satisfaction with urban medical consortium lead hospitals, control variables such as "gender" (β=0.119, $p<0.05$), "age" (β=-0.063, $p<0.05$), "whether they are permanent residents" (β=-0.210, $p<0.05$), and "health status" (β=-0.222, $p<0.001$) significantly predict satisfaction. After incorporating these independent variables, the model's explanatory power also significantly increased (R^2=0.075→0.151). The positive effects of "continuity" (β=0.171, $p<0.001$) and "humanistic care" (β=0.125, $p<0.001$) were significant, while the negative effect of "economy" (β=-0.126, $p<0.001$) was more pronounced. The regression value of "tangible facilities" showed no statistically significant correlation with patient satisfaction. This may be due to the inherent gap in hardware facilities between urban lead hospitals and primary institutions under the medical consortium model. However, the study sample indicates that patients' satisfaction with lead hospitals is generally higher than that of primary institutions, suggesting that patients have formed high expectations for the tangible facilities of lead hospitals, and the actual differences may contribute less to changes in satisfaction. Therefore, hypotheses H2b and H2c are supported, while H2a and H2d are not.

4.4. Independent sample t-test and one-way ANOVA

To investigate whether there are significant differences in satisfaction among different medical-seeking groups, this paper conducted independent samples T-tests and one-way ANOVAs on demographic variables and individual patient factors. The analysis revealed that individuals with different household registration, chronic disease status, medication use, health conditions, and distance to community health service institutions showed significant differences in patient satisfaction.

For binary variables, the analysis results of independent samples T-tests show that household registration type, chronic disease status, and medication use can lead to differences in patient satisfaction at primary healthcare institutions, while gender and whether one is a permanent resident have no significant statistical impact. Household registration type only affects patient satisfaction at primary healthcare institutions and does not influence patient satisfaction at the leading hospitals of urban medical consortia. In primary healthcare institutions, the satisfaction level of urban residents

(3.790, standard deviation 0.788) is significantly lower than that of rural residents (3.962, standard deviation 0.868) (t=3.083, p=0.002). At the leading hospitals of urban medical consortia, household registration type shows no statistically significant difference. Primary healthcare institutions focus more on managing common and chronic diseases, which better matches the needs of rural patients, and rural patients perceive improvements in medical service referrals more clearly, potentially enhancing their satisfaction; secondly, the average satisfaction level for chronic disease patients at primary healthcare institutions is 3.698 (standard deviation 0.827), while that for non-chronic disease patients (3.890) (t=-2.156, p=0.031). Compared to non-chronic disease patients, chronic disease patients have significantly lower satisfaction levels, and this trend is also observed at the leading hospitals of urban medical consortia. Finally, the difference in satisfaction among long-term medication users is similar to that among chronic disease patients: at primary healthcare institutions and the leading hospitals of urban medical consortia, the satisfaction level for long-term medication users is significantly lower (3.623 <3.895, t=-2.872, p=0. 004), the satisfaction of patients with long-term medication in primary medical and health institutions was lower than that of the leading hospitals in urban medical consortia (3.623<3.712). Chronic disease patients and patients with long-term medication may have higher expectations for medical effects, and the gap between actual treatment effects and expectations is more likely to cause dissatisfaction, leading to a decline in satisfaction. See Table 8 for details.

For the multivariate variables, this paper used one-way ANOVA to test the differences in patient satisfaction among different groups. The analysis results showed that health status and distance from community health service institutions would cause differences in patient satisfaction, while age, education and income did not cause statistically significant differences in patient satisfaction.

Patient satisfaction is significantly lower for those with poorer health status. In primary healthcare institutions, patients with "very good" health status have the highest satisfaction (4.124, standard deviation 0.85), while those with "not very good" health status have a satisfaction score of 3.229, showing a significant difference from the "very good" group (F=18.655, p<0.001); a similar trend is observed in the leading hospitals of medical consortia. Patients with "very good" health status have statistically higher satisfaction than those with "fairly good" and "average" health status. The data from both groups show that patient satisfaction decreases as health status declines. This aligns with the findings of scholars such as GaoJie et al[17]. Satisfaction ranks from highest to lowest as "very good," "fairly good," "average," and "not very good." Variables included in the stratified regression analysis (such as income and education level) may interact with health status, reversing the effect of health status on the dependent variable, thus leading to results that contradict those from univariate analysis of variance.

Patients who live more than 30 minutes away from community health service institutions show significantly lower satisfaction in both types of facilities. In primary healthcare institutions, the mean satisfaction score for the long-distance group is 3.535, significantly lower than that of the short-distance group (<15 minutes: 3.894,15-30 minutes: 3.860; F=3.307, p=0.037). In medical consortia hospitals, the patient satisfaction score for the long-distance group (mean 3.5647) is also significantly lower compared to the short-distance group (<15 minutes: 3.994,15-30 minutes: 3.977; F=4.892, p=0.008). Scholars often choose 30 minutes as the threshold for accessibility time. [18] A medical distance exceeding 30 minutes directly increases time and economic costs, indicating that geographical accessibility is a common constraint affecting patient satisfaction, see Table 9 and Table 10. This proves that Hypothesis H3 holds true. There are significant differences in patient satisfaction among different medical-seeking groups.

Table 8. Analysis results of independent sample T-test

	Patient satisfaction in primary medical and health institutions				Patient satisfaction of the leading hospital in the urban medical consortium			
	Mean (standard deviation)				Mean (standard deviation)			
	yes	deny	t	p	yes	deny	t	p
Whether it's a male	3.820 (0.856)	3.909 (0.807)	-1.599	0.110	3.917 (0.856)	4.016 (0.777)	-1.799	0.077
Whether it is a city household registration	3.790 (0.788)	3.962 (0.868)	3.083	0.002	4.021 (0.852)	3.929 (0.779)	1.679	0.094
Whether they are permanent residents	3.880 (0.837)	3.800 (0.780)	0.986	0.324	3.991 (0.814)	3.842 (0.810)	1.875	0.061
Whether they have chronic diseases	3.698 (0.827)	3.890 (0.828)	-2.156	0.031	3.804 (0.821)	3.992 (0.812)	-2.148	0.032
Whether to take medicine for a long time	3.623 (0.757)	3.895 (0.833)	-2.872	0.004	3.712 (0.783)	3.998 (0.813)	-3.076	0.002

Table 9. Results of single-factor variance analysis of primary medical and health institutions

project	option	average value	standard deviation	f	p	multiple comparisons
age	<20	4.178	0.956	2.184	0.042	\
	20-30	3.899	0.786			
	30-40	3.889	0.828			
	40-50	3.813	0.853			
	50-60	3.729	0.771			
	60-70	3.708	0.444			
	>70	3.188	0.265			
record of formal schooling	Primary school and below	\	\	2.025	0.092	\
	junior middle school	3.898	0.901			
	High school (secondary vocational school, secondary vocational school, vocational high school)	3.991	0.892			
	junior college	3.972	0.895			
	undergraduate course	3.791	0.819			
	Master's degree or above	3.838	0.682			
income	<one thousand, five hundred yuan	4.042	0.772	1.499	0.213	\
	1500-3000 yuan	3.974	0.840			
	3000-5000 yuan	3.858	0.799			
	> five thousand yuan	3.836	0.848			
health condition	beyond compare	4.124	0.854	18.655	0	1>2,3,4
	Better	3.785	0.778			
	same as	3.626	0.774			
	Not good	3.229	0.778			
	very bad	\	\			
Distance from community health services	<15 minutes	3.894	0.825	3.307	0.037	1,2>3
	15-30 minutes	3.860	0.816			
	> 30 minutes	3.535	0.950			

Table 10. Results of single-factor variance analysis of leading hospitals in urban medical consortia

project	option	average value	standard error	f	p	multiple comparisons
age	<20	4.189	0.951	1.904	0.077	\
	20-30	3.995	0.781			
	30-40	4.013	0.802			
	40-50	3.929	0.837			
	50-60	3.757	0.761			
	60-70	3.806	0.596			
	>70	4.000	0.000			
record of formal schooling	Primary school and below	4.795	0.503	2.504	0.114	\
	junior middle school	3.886	0.903			
	High school (secondary vocational school, secondary vocational school, vocational high school)	4.068	0.858			
	junior college	4.059	0.835			
	undergraduate course	3.914	0.817			
	Master's degree or above	3.968	0.696			
income	<one thousand, five hundred yuan	4.032	0.764	0.318	0.812	\
	1500-3000 yuan	3.932	0.842			
	3000-5000 yuan	3.946	0.776			
	> five thousand yuan	3.988	0.835			
health condition	beyond compare	4.189	0.833	14.416	0	1>2>3
	Better	3.917	0.760			
	same as	3.709	0.805			
	Not good	3.573	0.782			
	very bad	\	\			
Distance from community health services	<15 minutes	3.994	0.818	4.892	0.008	1,2>3
	15-30 minutes	3.977	0.774			
	> 30 minutes	3.565	0.944			

5. Research Conclusions and Prospects

This study reveals the relationship between medical service provision and patient satisfaction under the context of medical consortia. The continuity of medical service provision, through optimizing service processes and resource coordination, directly enhances patients 'accessibility and trust in medical services; humanistic care, by strengthening communication between doctors and patients, can gain the cooperation of patients and their families' support and respect, leading to better treatment outcomes and improved subjective experiences of medical service provision. The negative impact of economic indicators may stem from differences in patients' sensitivity to costs. Under the medical consortium model, primary care patients have lower expected costs for common disease treatments and are more sensitive to minor fluctuations in actual expenses, easily becoming dissatisfied due to restrictions on drug lists or insufficient reimbursement rates; whereas patients at leading hospitals in urban medical consortia often face complex examinations and high-value treatments. Although the quality of service is better, the relatively lower reimbursement rates and examination costs further exacerbate their negative perceptions of economic burdens.

The impact of household registration, health status, medication use, and geographical accessibility on patient satisfaction shows significant differences. In primary healthcare institutions, urban

residents have significantly lower satisfaction levels compared to rural residents; patients with chronic diseases and those who self-assess their health as poor exhibit even lower satisfaction levels in both primary care facilities and medical consortium hospitals; long-term medication users, especially those in primary care settings, show markedly lower satisfaction; geographical accessibility is a common barrier affecting satisfaction, with patient groups requiring travel distances exceeding 30 minutes experiencing a noticeable decline in satisfaction, further confirming the fundamental role of convenience in the medical service experience.

However, this paper still has certain shortcomings in model construction and variable selection, which may weaken the generalizability of the conclusions. Future research can expand the scope of influencing factors, incorporating variables such as medical insurance payment reform into the model construction to establish a multi-dimensional policy evaluation system. By combining the experiences of other pilot cities with medical consortia, the sample coverage area and population types can be expanded, providing more comprehensive empirical support for the differentiated implementation of tiered diagnosis and treatment policies.

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