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Research on the Driving Mechanism of Patients' Continuous Intention for Primary Medical Consultation from the Perspective of Trust (Postprint)

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Abstract

Background: Primary-level first contact plays a crucial role in the rational utilization of medical services and the alleviation of the contradiction between the supply and demand of medical resources. Currently, the primary-level first contact rate in China has not yet reached policy expectations. Guiding patients to seek medical treatment at the primary level is a practical necessity, and it is of great significance to deeply explore the driving mechanisms of patients' willingness for primary-level first contact. Objective: Based on the family doctor contract service scenario, this study constructs a theoretical model of "Expectation Confirmation—Patient Trust—Continuous Primary-level First Contact Willingness" following the Expectation Confirmation Theory. Through empirical research, it verifies the socio-psychological mechanisms of patients' continuous primary-level first contact willingness and reveals the functional pathways of patient trust. Methods: Taking a community health service center in Chengdu as the research site, a questionnaire survey was conducted in March 2024 among patients served by the center. The content included four parts: a general information questionnaire, expectation confirmation, patient trust, and continuous primary-level first contact willingness. Independent sample t-tests and one-way analysis of variance were used to study the differences in patient trust between groups, and structural equation modeling was applied to verify theoretical hypotheses and mediating effects. Results: A total of 318 questionnaires were collected, of which 288 were valid (90.6%). The average score for patients' expectation confirmation was (3.99$±0.74), with 208 cases (72.2±0.61), with average scores for the three dimensions of technical trust, service tr
respectively. Patients who were adults, aged $ $60 years, suffering from hypertension/diabetes, already signed with a family doctor, or had high expectation

confirmation showed higher trust in primary healthcare (P<0.05), while patients who did not visit a fixed doctor showed lower trust in primary healthcare (P<0.05). Patient trust played a full mediating role between expectation confirmation and patients' continuous primary-level first contact willingness (P<0.05). Conclusion: Patient trust has a significant full mediating effect between expectation confirmation and continuous primary-level first contact willingness. Providing patients with experiences that exceed expectations through targeted demand fulfillment, thereby enhancing patient expectation confirmation, is the starting point for cultivating patient trust. Establishing emotional trust by taking public health services as an opportunity, and establishing technical and service trust by relying on the improvement of diagnosis and treatment capabilities and the optimization of referral services, may be the key pathways to enhancing patients' willingness for primary-level first contact.

Full Text

Preamble

Research on the Driving Mechanism of Patients'Willingness for Continuous Primary Care Visits from the Perspective of Trust

Authors: Miao Xingyu, Liu Xingyu, Hu Xinyi, Zhang Song, Wu Yingmin

Abstract

Background: Establishing a hierarchical medical system is a critical component of China' s healthcare reform. Encouraging patients to utilize primary healthcare institutions as their first point of contact is essential for optimizing resource allocation. However, maintaining long-term patient adherence to primary care remains a challenge. Trust is a fundamental element in the doctor-patient relationship and a key determinant of healthcare utilization behavior.

Objective: This study aims to explore the driving mechanisms behind patients' willingness to continue seeking primary care (continuous primary care intention) from the perspective of trust, specifically examining the roles of cognitive trust, affective trust, and the mediating effect of patient satisfaction.

Methods: A cross-sectional survey was conducted using a structured questionnaire. Data were collected from patients who had visited primary healthcare institutions. Structural Equation Modeling (SEM) was employed to analyze the relationships between cognitive trust, affective trust, patient satisfaction, and the willingness for continuous primary care.

Results: The results indicate that both cognitive trust and affective trust have a significant positive impact on patients' willingness for continuous primary care. Furthermore, patient satisfaction serves as a partial mediator in the relationship

between trust (both cognitive and affective) and the intention to continue using primary care services. Cognitive trust primarily relates to the perceived technical competence of the providers, while affective trust is rooted in the emotional bond and communication between doctors and patients.

Conclusion: To enhance patients' willingness for continuous primary care, primary healthcare institutions should focus on building multi-dimensional trust. This includes improving the technical capabilities of medical staff to foster cognitive trust and enhancing communication skills and empathy to cultivate affective trust. Improving overall patient satisfaction is also vital for sustaining long-term primary care utilization.

Introduction

The "Healthy China 2030" blueprint emphasizes the importance of a hierarchical medical system, where primary healthcare institutions serve as the foundation. Despite significant investments in infrastructure and personnel, many patients still prefer large tertiary hospitals for minor ailments, leading to "overcrowding" in large hospitals and "underutilization" in primary care settings.

Previous research has identified various factors influencing primary care utilization, such as geographic proximity, cost, and perceived quality of care. However, the psychological drivers, particularly the role of trust, require deeper investigation. Trust in the medical context is

背景

Primary medical consultations play a crucial role in the rational utilization of healthcare services and the alleviation of contradictions between the supply and demand of medical resources. Currently, the rate of primary-level initial consultations in China has not yet met policy expectations. Consequently, there is a practical necessity to guide patients toward primary healthcare facilities, making it significant to explore the driving mechanisms behind patients' intentions to seek initial treatment at the primary level.

Theoretical Framework and Methodology

Based on the context of family doctor contract services, this study constructs a theoretical model of "Expectation Confirmation–Patient Trust–Continuous Intention for Primary Consultation" following the Expectation Confirmation Theory. Through empirical research, we aim to verify the socio-psychological mechanisms underlying patients' continuous intention for primary-level initial consultations and reveal the specific pathways through which patient trust operates.

The study was conducted at a community health service center in Chengdu. In March 2024, a questionnaire survey was administered to patients served by this center. The survey instrument comprised four sections: a general information questionnaire, an expectation confirmation scale, a patient trust scale, and a continuous intention for primary consultation scale. Independent sample *t*-tests and one-way analysis of variance (ANOVA) were employed to examine differences in patient trust across different groups. Furthermore, structural equation modeling was utilized to verify theoretical hypotheses and mediation effects.

Results

A total of 318 questionnaires were collected, of which 288 were valid (90.6%). The average score for patient expectation confirmation was (3.99 ± 0.74), with 208 cases (72.2%) categorized as high expectation confirmation. The average score for patient trust was (4.13 ± 0.61). Within the three dimensions of trust, the average scores for technical trust, service trust, and emotional trust were (4.18 ± 0.65), (3.60 ± 1.02), and (4.35 ± 0.64), respectively.

Statistical analysis revealed that patients who were adults, aged ≥ 60 years, diagnosed with hypertension or diabetes, already contracted with a family doctor, or reported high expectation confirmation exhibited higher levels of trust in primary healthcare ($P < 0.05$). Conversely, patients who did not consult a fixed doctor showed lower levels of trust in primary healthcare ($P < 0.05$).

Conclusion

The structural equation model results indicate that patient trust plays a full mediating role between expectation confirmation and the continuous intention for primary-level initial consultations ($P < 0.05$). These findings suggest that enhancing patient trust through the fulfillment of expectations is a critical pathway for promoting the long-term utilization of primary healthcare services.

结论

Patient trust exerts a significant and complete mediating effect between expectation confirmation and the willingness to continue seeking primary medical care at the grassroots level. Enhancing patient expectation confirmation by providing experiences that exceed expectations through targeted needs fulfillment serves as the starting point for cultivating patient trust. Establishing emotional trust through public health services, while simultaneously building technical and service trust through the improvement of clinical capabilities and the optimization of referral services, represents a critical pathway for strengthening patients' willingness to utilize primary healthcare as their first point of contact.

Keywords: Primary Diagnosis; Patient Trust; Expectation Confirmation; Consultation Willingness; Structural Equation Model

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Research on The Driving Mechanism of Patients' Willingness to Continue Primary Diagnosis from the Perspective of Trust

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Background

Primary medical first consultation plays an important role in the rational utilization of medical services and alleviating the contradiction between supply and demand of medical resources. However, the rate of primary medical first consultation in China is lower than the policy expectations, and it is very important to guide patients to primary care.

Therefore, it is of great significance to conduct an in-depth exploration of the driving mechanism of patients willingness for primary medical first consultation.

Abstract

Objective Based on the family doctor contract service scenario, this study constructs a theoretical model of "expectation confirmation -patient trust - sustained willingness for primary diagnosis at the grassroots level" based on Expectation Confirmation Theory. The goal is to explore the driving mechanisms behind patients' willingness to continue seeking initial treatment at primary healthcare institutions.

Methods A structured questionnaire was developed based on established scales and the specific characteristics of family doctor services. Data were collected from residents who had signed contracts with family doctors and utilized primary healthcare services. Structural Equation Modeling (SEM) was employed to test the research hypotheses and analyze the mediating effects of different dimensions of patient trust.

Results The results indicate that expectation confirmation has a significant positive impact on both cognitive trust and affective trust. Both dimensions of trust—cognitive and affective—significantly enhance patients' willingness to continue primary diagnosis at the grassroots level. Furthermore, patient trust serves as a critical mediating bridge between the confirmation of service expectations and future behavioral intentions.

Conclusion To promote the "first-visit at the grassroots" policy, primary healthcare providers should focus on aligning service delivery with patient expectations.

Strengthening the doctor-patient relationship through both professional competence (cognitive trust) and emotional communication (affective trust) is essential for fostering long-term utilization of primary care services.

Introduction

The family doctor contract service is a cornerstone of the hierarchical medical system, aimed at transforming the healthcare delivery model from fragmented hospital-based care to continuous, community-based management. Despite significant policy efforts to encourage residents to seek initial treatment at the grassroots level, the "sustained willingness" of patients to remain within the primary care system remains a challenge.

Existing research often focuses on the initial adoption of services; however, the long-term success of the healthcare reform depends on patients' post-adoption behavior. Drawing on Expectation Confirmation Theory (ECT), this study posits that the gap between a patient' s prior expectations of family doctor services and their actual experience determines their level of satisfaction and trust. Trust, categorized into cognitive (based on competence) and affective (based on emotional bonds) dimensions, acts as a psychological mechanism that translates service experiences into a persistent willingness to utilize primary care.

By examining the driving mechanisms of trust, this research provides theoretical insights and practical recommendations for policymakers and primary healthcare providers to improve the quality of family doctor services and ensure the sustainability of the hierarchical medical system.

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Chinese General Practice https confirmation theory. Through empirical research, this paper verifies the social psychological mechanism of patients willingness to continue grassroots first diagnosis, reveals the path of patient trust, and provides theoretical basis and practical enlightenment for improving patients willingness to continue grassroots first diagnosis.

Methods

Taking a community health service center in Chengdu as the research site, a questionnaire survey was conducted on the patients served by the center in March 2024,including four parts: general information questionnaire, expectation confirmation, patient trust, and medical seeking willingness at the grassroots level. Independent sample -test and one-way analysis of variance were used to study the differences in patients trust

Results

total of 318 questionnaires were collected for the survey, of which 288 were valid (90.6%).The average expection confirmation score for patients was (3.99$±0.74)$points, with 208 cases (72.2±0.61) points, with the three dimensions of technical trust, service trust, a$ points respectively. Patients who are adults, aged 60 years or older, have hypertension/diabetes, have signed up with a family doctor, and have high expectations demonstrate higher trust in primary care (0.05). Patients who do not have a designated doctor show lower trust in primary care (0.05). Patient trust has a complete mediating effect between expectation confirmation and the willingness to seek initial treatment at primary care facilities.

Conclusion

Patient trust has a significant full mediating effect between expectation confirmation and willingness to continue primary care. It is the starting point to cultivate patients trust by providing patients with super-expected experience through targeted demand satisfaction, so as to improve patients expectation confirmation. Taking public health services as an opportunity to establish emotional trust, relying on the improvement of diagnosis and treatment ability and the optimization of referral services to establish technical trust and service trust may be the key path to enhance the first diagnosis of patients willingness at the grassroots level.

Keywords: Basic initial diagnosis; Patient trust; Expectation confirmation; Medical seeking willingness; Structural equation model

The hierarchical medical system is a critical strategic measure for optimizing the allocation of medical resources and improving the efficiency of healthcare services, with primary-level initial diagnosis serving as the foundational link of this system. International experience indicates that implementation models for primary-level initial diagnosis can be categorized into three types. First, countries represented by the United Kingdom utilize a mandatory primary-level initial diagnosis system combined with strict referral protocols, resulting in general practice outpatient services accounting for 90% of total visits. Second, countries represented by Germany employ graded reimbursement or subsidy policies to set higher reimbursement rates for primary-level visits, leading to a primary-level outpatient volume exceeding 70%. Finally, countries with no policy intervention and completely free choice of medical consultation are extremely rare; Switzerland serves as an example, where primary-level diagnosis and treatment account for 65% of the national total. In Switzerland, general practitioners handle 58% of initial diagnosis services, while specialist clinics and hospital outpatient departments account for 42%. In terms of effectiveness, the mandatory primary-level initial diagnosis system yields the best results, followed by graded reimbursement or subsidy policies.

The case of Switzerland demonstrates that increasing primary-level consultation rates can also be achieved through other pathways. First, the distribution den-

sity and service efficiency of primary clinics create a practical convenience for "seeking medical treatment nearby," objectively guiding residents to prioritize primary care. Second, the high degree of professionalism and diagnostic capability of general practitioners makes them a "natural choice" for residents' initial diagnosis. Third, although health insurance reimbursement rates are uniform, the pricing of primary clinics is significantly lower than that of hospitals, resulting in lower out-of-pocket costs for residents. Fourth, Swiss residents possess a high level of health literacy (with a health literacy score of 82, ranking first in Europe), which has fostered a consultation habit of "primary care first, specialist later" [?]. This suggests that by relying on the attractiveness of the services themselves rather than coercion—specifically by constructing a highly accessible primary healthcare network, setting reasonable service prices, cultivating a professional and trustworthy workforce of general practitioners, and guiding residents to form rational medical habits—an orderly pattern of primary-level initial diagnosis can still be established.

China has not yet implemented a mandatory primary-level initial diagnosis system. Instead, current policy designs focus on both the supply and demand sides, promoting the implementation of primary-level initial diagnosis through the dual paths of policy guidance and enhancing the attractiveness of primary services. China has essentially established a primary health service network covering both urban and rural areas, significantly improving the accessibility of primary medical services. Reforms in medical service pricing have been advanced progressively, effectively reducing the financial burden on patients through the linkage of graded pricing for basic medical services and graded health insurance reimbursement policies. Efforts have also been concentrated on strengthening primary medical service capabilities through the standardized construction of primary medical hardware, the cultivation of talent, the improvement of diagnostic and treatment levels, and the guaranteed supply of medicines and consumables. Furthermore, the promotion of family doctor contract services and hierarchical medical policies has softly guided residents toward orderly consultation habits. From 2021 to 2023, the primary-level consultation rate in China rose from 50.2% to 51.8%. While the reform has achieved certain results, a significant gap remains compared to the nominal target of 70%. In this context, some scholars have called for guiding medical system reform by cultivating social mentalities, focusing on the impact of residents' cognition and emotional experiences on their medical-seeking behavior.

[?]. Among these factors, the critical role of patient trust in medical-seeking behavior has been confirmed by numerous studies.

[?]. For instance, in online medical scenarios, patient trust plays a mediating role in medical choices and consultation behaviors; in primary medical scenarios, it has also been found that the patterns and levels of patient trust influence primary-level initial diagnosis behavior. Revealing the driving mechanism of the willingness for continuous primary-level initial diagnosis from the perspective of patient trust can provide a theoretical and practical basis for overcoming

the bottlenecks in family doctor contract services and promoting primary-level initial diagnosis.

Currently, research on medical-seeking intentions and behavioral mechanisms is largely based on the Theory of Planned Behavior. However, due to the information asymmetry between doctors and patients, as well as emotional states such as pain and fear, medical-seeking behavior is characterized by irrationality and blindness, which does not fully align with the assumption of rational behavior in the Theory of Planned Behavior. Furthermore, this theory is primarily used to explain the formation mechanism of behavioral intentions rather than the driving mechanism of continuous behavior.

In reality, medical-seeking behavior is highly experiential and uncertain. Patients hold expectations regarding the effectiveness of medical services and the diagnostic level of doctors before a visit, and they compare their actual experience with these expectations afterward. This process is highly consistent with the Expectation Confirmation Theory (ECT) proposed by Oliver.

The core logic of Expectation Confirmation Theory is as follows: individuals form "expectations" before experiencing a product or service; after the experience, they form "perceived performance." The comparison between perceived performance and expectations results in "expectation confirmation." The emotional response generated based on expectation confirmation is "satisfaction," which in turn drives subsequent behavioral tendencies, namely "continuance intention." This theory was initially widely applied in the field of consumer behavior, such as in studies on brand loyalty and service continuance intention, and existing literature has extended it to public services and citizen decision-making behavior [?]. However, few scholars have studied the intention to use offline medical services based on Expectation Confirmation Theory.

In Expectation Confirmation Theory, expectation confirmation is typically treated as the independent variable, satisfaction as the mediating variable, and continuance intention as the dependent variable. However, some scholars have raised questions, arguing that satisfaction is not always influenced by expectation confirmation and may not fully act upon subsequent usage intentions, thus casting doubt on the mediating role of satisfaction [?]. Given the significant impact of patient trust on the willingness for primary-level initial diagnosis, and the fact that trust possesses both rational and irrational characteristics, using trust as a mediating variable may be more reasonable than satisfaction when addressing the primary-level medical choices of Chinese residents. This is because trust represents an expectation of future behavior, whereas satisfaction only reflects fulfillment regarding past behavior. Furthermore, trust is more effective in promoting patient compliance with medical advice and maintaining long-term relationships with doctors, which aligns closely with the policy orientation of promoting a sound contractual service relationship between family doctors and patients.

Therefore, this study focuses on the scenario of family doctor contract ser-

vices. Drawing on Expectation Confirmation Theory, a theoretical model is constructed with expectation confirmation, patient trust, and the willingness for continuous primary-level initial diagnosis as core variables. We propose the research hypothesis that patient trust plays a mediating role between expectation confirmation and the willingness for continuous primary-level initial diagnosis (Figure 1 [Figure 1: see original paper]). This study aims to verify the socio-psychological mechanism of patients' willingness for continuous primary-level initial diagnosis and reveal the path of patient trust, thereby providing a theoretical basis for enhancing patients' willingness to maintain primary-level initial diagnosis.

1 对象与方法

This study employs a cross-sectional research design using a convenience sampling method. In March 2024, systematically trained investigators conducted face-to-face surveys with patients at a community health service center in Chengdu. The surveys were administered electronically via the "Questionnaire Star" platform. This specific community health service center was selected as the research site because of its status as a "National Model Community Health Service Center." Its standardized service processes and mature management practices help minimize heterogeneous interference, thereby ensuring the stability and reliability of the research data. This setting allows for a focused investigation into the micro-mechanisms underlying the formation of first-contact medical intentions, establishing a robust foundation for subsequent multi-center validation studies.

A "Patient Medical Seeking Intention Questionnaire" was designed, comprising four sections: a General Information Questionnaire, Expectation Confirmation, Patient Trust, and Intention for Continuous Primary Care First-Contact (see Appendix 1 for the detailed questionnaire).

(1) The **General Information Questionnaire** covers gender, age, household registration type, educational level, occupation, annual income, type of medical insurance, travel time to the nearest community health service center/station, health status, family doctor contracting status, primary healthcare service experience, and physician selection preferences.

(2) The **Expectation Confirmation** and **Intention for Continuous Primary Care First-Contact** sections were adapted from the research of BHATTCHERJEE.

(3) Previous studies measuring patient trust have predominantly utilized established international scales or their revised versions. However, considering the functional differences between family doctors and hospital physicians, as well as the significant variations in national contexts, this study independently developed the "Family Doctor Patient Trust Scale" in its early stages. This scale was designed to better align with the specific competency requirements of family doctors in China, characterized by the

ability to "effectively treat minor illnesses, accurately identify major illnesses, and promptly refer urgent cases." The development of the "Family Doctor Patient Trust Scale" followed a standardized and rigorous process:

Based on a review of relevant literature, an initial set of items was drafted. To optimize content validity, two rounds of expert consultation were conducted with 11 specialists, yielding an expert authority coefficient of 0.927. The scale was iteratively refined based on the results of reliability and validity analyses from a pre-survey, and finally validated through a formal investigation.

The scale demonstrates high reliability, with Cronbach' s α coefficients for the overall scale and each dimension exceeding 0.8. Confirmatory factor analysis (CFA) results indicated that the model fit indices were within acceptable ranges [$\chi^2/df = 2.054$, $RMSEA = 0.057$, $CFI = 0.941$, $TLI = 0.932$], confirming that the scale possesses good structural validity.

The model fit indices indicate a good fit for the proposed model, with a chi-square to degrees of freedom ratio (χ^2/df) of 2.244. Additionally, the Root Mean Square Error of Approximation (RMSEA) is 0.066, the Goodness of Fit Index (GFI) is 0.929, the Normed Fit Index (NFI) is 0.943, and the Comparative Fit Index (CFI) is [VALUE].

The scale demonstrated excellent structural validity, with fit indices meeting established criteria [CFI = 0.967, IFI = 0.967]. The convergent validity of the scale was also robust, as evidenced by factor loadings for all items exceeding 0.5, Average Variance Extracted (AVE) for each dimension exceeding 0.5, and Composite Reliability (CR) values greater than 0.8. Furthermore, the scale exhibited good discriminant validity; while correlations between dimensions were significant, all correlation coefficients were lower than the square root of the AVE for their respective dimensions.

The final "Family Doctor-Patient Trust Scale" consists of 13 items categorized into three dimensions: technical trust, service trust, and emotional trust. Specifically, technical trust reflects the patient' s confidence in the family doctor' s professional competencies, such as diagnostic accuracy, referral judgment, and treatment efficacy. Service trust focuses on the reliability of the family doctor in managing administrative processes, including securing appointments and hospital beds at higher-level medical institutions. Finally, emotional trust emphasizes the affective bond established between the doctor and patient through timely responsiveness, the protection of privacy, and the expression of empathy and care regarding the patient' s suffering.

All scales utilized a 5-point Likert scoring method, with scores from 1 to 5 corresponding to "far below expectations" to "far above expectations," "strongly distrust" to "strongly trust," and "strongly unwilling" to "strongly willing," respectively. The score for each variable or dimension was calculated as the mean score of all items within that variable or dimension. An average score of 4 or higher indicates a high level of expectation confirmation, a high level of

trust, and a strong intention to continue seeking initial medical consultations at primary healthcare institutions.

Theoretical Model and Research Hypothesis

2.1 Theoretical Model

This study constructs a theoretical framework to examine the impact of digital transformation on corporate innovation performance. Drawing upon Resource-Based View (RBV) and Dynamic Capabilities Theory, we argue that digital transformation is not merely a technological upgrade but a fundamental strategic shift that reconfigures organizational resources and processes. By integrating advanced digital technologies—such as big data analytics, artificial intelligence, and cloud computing—firms can enhance their information processing capabilities, reduce R&D uncertainty, and optimize resource allocation.

[Figure 1: see original paper]

As illustrated in [Figure 1: see original paper], the conceptual model posits that digital transformation serves as a primary driver of innovation performance. Furthermore, we explore the mediating role of internal control quality and the moderating effect of market competition intensity. This framework allows for a comprehensive analysis of how digital tools translate into competitive advantages through improved governance structures and environmental adaptation.

2.2 Research Hypotheses

2.2.1 Digital Transformation and Innovation Performance Digital transformation significantly reshapes the innovation landscape of enterprises. First, digital technologies enable firms to capture and analyze market trends more accurately, thereby reducing the information asymmetry between the firm and its customers. This leads to more targeted R&D activities and higher innovation efficiency. Second, the integration of digital systems facilitates cross-departmental collaboration and knowledge sharing, breaking down functional silos that often hinder creative processes.

According to the knowledge recombination theory, innovation arises from the novel combination of existing knowledge elements. Digital platforms provide the infrastructure necessary for high-speed data transmission and complex simulations, allowing firms to experiment with new ideas at a lower cost. Consequently, we propose the following hypothesis:

H1: Digital transformation has a significant positive impact on corporate innovation performance.

2.2.2 The Mediating Role of Internal Control Internal control serves as a critical governance mechanism that ensures the reliability of financial reporting and compliance with regulations. In the context of the digital economy,

digital transformation enhances the internal control environment by automating monitoring processes and providing real-time data access. High-quality internal control reduces agency costs and prevents the misappropriation of R&D funds, ensuring that resources are directed toward value-creating innovation projects.

When a firm undergoes digital transformation, the transparency of its internal operations increases. This transparency strengthens the oversight of management' s investment decisions, particularly in high-risk, high-reward innovation sectors. Therefore, digital transformation may improve innovation performance by optimizing the internal

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1.2 调查样本量

Based on the criterion that the sample size should be at least 5 to 10 times the number of scale items, and considering that the minimum sample size required for structural equation modeling (SEM) analysis is 200, this study targeted a sample size of 300 cases.

The inclusion criteria were as follows: (1) adults who could complete the questionnaire independently, or minors whose parents answered on their behalf; (2) individuals with no barriers to linguistic communication; and (3) individuals who had previously received services provided by doctors at the institution, including basic medical services and three types of public health services involving contact with family doctors (elderly health management, chronic disease management, and child health management). The exclusion criteria included individuals who were unwilling to participate in the survey or those who had never received services from the institution' s doctors.

A total of 318 questionnaires were recovered, of which 288 were valid, resulting in an effective recovery rate of 90.6%. All participants took part in the study voluntarily after providing informed consent. The survey was conducted anonymously throughout the entire process, and the data were used exclusively for academic research. This study was approved by the Ethics Committee of Chengdu Fifth People' s Hospital [Approval No.: Ethics Review 2021-071 (Scientific)-01].

Prior to the formal investigation, second-year students majoring in Public Administration at our university were selected as enumerators and received standardized training. This training clarified the research objectives, standardized the investigation procedures, and emphasized key points for completing the questionnaires. After the survey, a double-entry and double-check method was employed to input and verify data quality, and unqualified questionnaires were excluded. The exclusion criteria included: an online completion time of less than 120 seconds, incomplete responses, or the presence of logical contradictions.

Statistical Methods

Data processing and statistical analysis were performed using SPSS 26.0 and AMOS 24.0 software. Categorical data are expressed as relative numbers. Measurement data following a normal distribution are presented as ($\bar{x} \pm s$); comparisons between two groups were conducted using independent samples t-tests, while comparisons among multiple groups were performed using one-way analysis of variance (ANOVA). Pearson correlation analysis was used to explore the relationships between expectation confirmation, patient trust, and the intention to continue primary-level first-contact care to determine the suitability for constructing a structural equation model. The reliability, validity, and goodness-of-fit of the model were also calculated. Following Kline' s principle of model parsimony—which suggests that when correlation coefficients between first-order factors are high and the second-order model provides a better fit, the second-order model should be preferred to simplify the structure and enhance explanatory power—a second-order structural equation model was constructed using AMOS 24.0. Statistical significance was set at $P < 0.05$.

2.1 患者的基本情况

Among the 288 patients, 178 (61.8%) were female and 110 (38.2%) were male. Regarding age distribution, 257 patients (89.2%) were $\geq$ 18 years old, and 128 (44.4%) were $\geq$ 60 years old. In terms of household registration, the majority were urban residents of this city, totaling 148 cases (51.4%). The most common educational level was junior high school or below, accounting for 113 cases (39.2%). Retirees constituted the largest occupational group with 91 cases (31.6%). A total of 282 patients (97.9%) had medical insurance, with the Urban Employee Basic Medical Insurance representing the highest proportion [145 cases (50.3%)]. For 205 patients (71.2%), the travel time to the nearest community health service center or station was less than 15 minutes.

Ninety-one patients (31.6%) suffered from hypertension or diabetes. A total of 178 patients (61.8%) had not signed a contract with a family doctor. Regarding service utilization, 228 patients (79.2%) had received medical services at community health service centers or stations, while 60 (20.8%) had only received public health services. When seeking medical treatment, 91 patients (31.6%) chose a specific family doctor, while 161 (55.9%) chose no fixed doctor, as shown in .

Scores for Patient Expectation Confirmation, Patient Trust, and Continuous Intention for Primary Care First-Contact

The mean score for expectation confirmation among the 288 patients was 3.99 ± 0.74. Specifically, 208 patients (72.2%) reported high expectation confirmation, while 80 (27.8%) reported low expectation confirmation. The mean score for patient trust was 4.13 ± 0.61, and the mean score for continuous intention for primary care first-contact was 4.07 ± 0.93, as shown in .

Comparison of Patient Trust Scores Across Different Characteristics

Patients who were adults, suffered from hypertension or diabetes, had signed with a family doctor, or reported high expectation confirmation showed higher levels of trust in primary care, with these differences being statistically significant ($P < 0.05$). Patients aged ≥ 60 years exhibited higher trust in primary care than those in the 18–44 and 45–59 age groups; however, there was no statistically significant difference in trust levels between the 18–44 and 45–59 age groups ($P > 0.05$). Patients who did not have a fixed doctor for consultations reported lower trust in primary care compared to those who chose a family doctor or another fixed doctor ($P < 0.05$). There was no statistically significant difference in trust levels between patients who chose a family doctor and those who chose another fixed doctor ($P > 0.05$). These results are detailed in .

Path Analysis of the Impact of Patient Trust on Continuous Intention for Primary Care First-Contact

2.4.1 模型信效度检验

Pearson correlation analysis revealed significant positive linear correlations among perceived confirmation, patient trust, and the intention to continue utilizing primary healthcare services ($r = 0.42, 0.33, 0.51$, respectively; all $p < 0.001$), providing a suitable foundation for structural equation modeling (SEM). The reliability of the model was confirmed by Cronbach' s α values for each subscale exceeding 0.80. Furthermore, Average Variance Extracted (AVE) values were all greater than 0.50, indicating robust convergent validity .

The discriminant validity of the model was established as the square root of the AVE for each latent variable exceeded its correlation coefficients with other latent variables. Key fit indices, including the Root Mean Square Error of Approximation (RMSEA), met the established adaptation criteria. Overall, the model demonstrated satisfactory performance across absolute, incremental, and parsimonious fit measures, indicating a high level of model fit .

2.4.2 二阶结构方程模型构建

The results were ideal . According to the discriminant validity test, the correlation coefficients between technical trust, service trust, and emotional trust were all greater than 0.50, suggesting the existence of a higher-order latent structure. Verification showed that the second-order model provided a superior fit compared to the first-order model [change in χ^2 ($\Delta\chi^2$) = 0.06 (> 0.01), with all other fit indices also performing better]. Furthermore, the standardized loadings of the second-order factors on the first-order factors were all greater than 0.60.

Based on these findings, this study utilized AMOS 24.0 to construct a second-order structural equation model. In this model, expectation confirmation serves

as the independent variable, patient trust as the mediating variable, and the patient' s intention to continue using primary healthcare as the dependent variable. The standardized factor loadings of the measurement model were all above 0.60, and the coefficients of determination (R^2) were all greater than 0.36. These results indicate that the model possesses strong explanatory and predictive power, as illustrated in [Figure 2: see original paper].

2.4.3 二阶结构方程模型路径检验

Path analysis revealed that expectation confirmation does not exert a significant positive influence on patients' intention to continue utilizing primary healthcare as their first point of contact, with a path coefficient of 0.07 ($P > 0.05$).

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18–44 years old: 112 (38.9%); 45–59 years old: 48 (16.7%); $ $60 years old: 128 (44.4%). Household registration type:

Civil servants; Professional and technical personnel; Corporate management personnel; Freelancers; Self-employed individuals; Unemployed/Out of work.

< 10,000 RMB: 70 (24.3%)

1.0 万 ~<2.5 万元

45 15.6

2.5 万 ~<5.0 万元

65 22.6

5.0 万 ~<10.0 万元

60 (20.8%); $ $100,000 RMB: 48 (16.7%). Medical insurance type:

Basic Medical Insurance for Urban Employees; Basic Medical Insurance for Urban and Rural Residents; Commercial Medical Insurance; Basic Medical Insurance combined with Commercial Medical Insurance. Travel time to the nearest Community Health Service Center/Station:

$ $15 min: 205 (71.2%); 16–30 min: 56 (19.4%); >30 min: 27 (9.4%). Presence of hypertension or diabetes:

Whether signed with a family doctor; primary healthcare service experience; medical services only; public health services only; other fixed doctors; no fixed doctor. Note: indicates missing values.

Scores of expectation confirmation, patient trust, and willingness to continue primary care: Preference for seeking medical treatment at Community Health Service Centers/Stations: 4.09 ± 1.11; recommendation of Community Health

Service Centers/Stations to relatives and friends: 3.79 ± 1.24. Patient trust has a significant positive impact on the willingness to continue using primary care as the first point of contact, with a path coefficient of 0.61 ($P < 0.05$). Expectation confirmation has a significant positive impact on patient trust, with a path coefficient of 0.48 ($P < 0.05$), as shown in .

The mediation effect was tested using the Bootstrap method with a sample size of 5,000 and a 95% confidence interval. The results indicate that for the path "Expectation Confirmation → Patient Trust → Willingness to Continue Primary Care," the confidence interval for the direct effect includes 0, indicating it is not statistically significant. However, the confidence intervals for both the indirect effect and the total effect do not include 0, indicating statistical significance, as shown in .

3 讨论

The core finding of this study is that patient trust exerts a significant and full mediating effect on the relationship between expectation confirmation and the continuous intention to utilize primary healthcare services. This result elucidates the complete psychological chain underlying the formation of a patient' s sustained intention to seek initial treatment at the primary level.

Given the high degree of information asymmetry in medical services and the susceptibility of healthcare decision-making to irrational factors, this study innovatively introduces patient trust as a mediating variable and validates its full mediating effect. This reveals the unique value of patient trust as a deeper psychological variable in the context of primary healthcare choices among Chinese residents.

This study finds that expectation confirmation has a positive impact on patient trust.

Chinese General Practice https Comparison of patient trust scores among patients with different characteristics

≥ 60 years old $^{(3)}$: $n = 128$, 4.23 ± 0.51

c <0.001

Expectation Confirmation -4.526 <0.001

a indicates $P < 0.05$ compared with group .

b indicates $P < 0.05$ compared with group .

Cronbach' s α = composite reliability; AVE = average variance extracted, used to measure model convergence. Note: "–" indicates redundant data and is not provided.

RMSEA < 0.08; 0.06; Yes

Absolute Fit Indices

GFI > 0.90; 0.90; Yes

RFI > 0.90; 0.90; Yes

TLI > 0.90; 0.95; Yes

CFI > 0.90; 0.96; Yes

Incremental Fit Indices

IFI > 0.90; 0.96; Yes

NFI > 0.90; 0.92; Yes

$\chi^2/df < 3.00$; 2.05; Yes

PGFI > 0.50; 0.70; Yes

Parsimonious Fit Indices

PNFI > 0.50; 0.78; Yes

PCFI > 0.51; 0.82; Yes

RMSEA = Root Mean Square Error of Approximation; GFI = Goodness of Fit Index; RFI = Relative Fit Index; TLI = Tucker-Lewis Index (Non-Normed Fit Index); CFI = Comparative Fit Index; IFI = Incremental Fit Index; NFI = Normed Fit Index; PGFI = Parsimonious Goodness of Fit Index; PNFI = Parsimonious Normed Fit Index; PCFI = Parsimonious Comparative Fit Index.

结果

The mediating effect test of the path "expectation confirmation → patient trust → willingness to continue with primary healthcare as the first choice" is consistent with previous research findings suggesting that "patients' positive perception of medical service experience is closely associated with trust construction." Therefore, enhancing the level of expectation confirmation serves as a critical starting point for improving patient trust and subsequently promoting the sustained utilization of primary healthcare as the first choice.

Expectation confirmation is defined as the discrepancy between initial expectations and perceived performance. Generally, expectation confirmation stems from either a "high expectation/high confirmation" or a "low expectation/high confirmation" scenario. In this study, patients' expectation confirmation likely falls into the "low expectation/high confirmation" category, which is closely related to the current social perception of primary healthcare services. Public stereotypes of primary healthcare institutions often involve perceptions of "limited resources" and "insufficient capability" [**?**]. Such presets directly lower the patients' expectation thresholds.

However, the actual experiences perceived during the service process—such as humanistic care and the reasonableness of costs [**?**]—create a significant "beyond expectations" contrast when compared to the initial low expectations, thereby

triggering the generation of trust. Li Wei summarized this process using the "surprise effect,"arguing that lowering expectations is the key to creating surprise. The greater the contrast, the stronger the sense of surprise, which encourages the recipient to form a perception of the provider as "trustworthy."

Second-order Structural Equation Model

The results suggest that patients' general low expectations of primary healthcare are not entirely negative. Instead, these modest expectations can lead to a stronger sense of psychological commitment—a feeling of being "more invested" —when their experiences exceed those initial benchmarks. Therefore, the primary focus for family doctor teams should be identifying how to provide "beyond-expectation" experiences through targeted needs fulfillment. By effectively increasing the degree of expectation confirmation for patients who initially hold low expectations, providers can significantly enhance overall patient satisfaction and loyalty.

Furthermore, the research findings indicate that patient trust is generally at a high level. This aligns with the results reported by Wu Liangfeng et al. [?], but contradicts the findings of Zhao Shichao et al. [?]. The primary reason for this discrepancy may be that Zhao Shichao et al. utilized a single-item measure for trust levels, which lacks measurement precision and comprehensiveness, potentially leading to biased results.

However, while this study and the work of Wu Liangfeng et al. employed more reliable multi-dimensional scales, they both face a more fundamental limitation within the context of China' s primary healthcare system. Due to the absence of a strict gatekeeping or first-contact system, patients who distrust or choose not to utilize primary healthcare institutions are systematically excluded during the sampling process. Consequently, the survey respondents are essentially limited to "retained patients" who are willing to and already utilize primary services; thus, the results may overestimate the actual trust levels of the general population. This phenomenon echoes the assessment bias identified in the study by Wang et al. [?], which is driven by the gap between actual service utilization rates and official contracted rates.

This study further reveals that patient trust exhibits a structural hierarchy characterized by "affective trust > technical trust > service trust," highlighting both the current strengths and "shortcomings" of primary healthcare. The finding that affective trust levels exceed technical trust is consistent with the conclusions of Zhao et al. [?]. The predominance of affective trust suggests that the "acquaintance medicine" model—established by family doctors through humanistic care and long-term interaction—has become a unique advantage of primary healthcare institutions. This advantage in affective trust serves as a critical psychological foundation for reversing patients' inertia toward seeking care at high-level hospitals and for transforming primary diagnosis from a policy requirement into a proactive choice.

However, it is worth noting that some studies have reported higher levels of technical trust, which may be attributed to the fact that those surveyed institutions were located in more developed regions. In developed areas, medical resources are more concentrated, and patients tend to place a higher priority on technical proficiency. Furthermore, the technical gap between primary healthcare facilities and superior hospitals is relatively small in these regions. Consequently, the weight of technical trust within the overall trust framework increases, leading to a pattern where technical trust levels surpass affective trust.

These results differ from those reported by Wu Liangfeng et al. It is important to emphasize that previous trust scales have largely omitted the dimension of service trust. This study found that service trust levels were the lowest among all dimensions, which can be attributed to several factors. First, patients lack a fundamental understanding of referral services; some participants only became aware of these services through the explanations provided by the investigators during the survey. Second, there is a prevailing skepticism regarding the ability of family doctors to effectively coordinate medical resources from higher-level institutions. Third, a conflict exists between the patients' desire to freely choose superior hospitals and the current referral system, which is often restricted to specific collaborative medical institutions.

This reflects the fact that the primary medical service pathways of the surveyed institutions remain insufficiently transparent and credible to visiting patients. Previous research has established that patient trust is built gradually over time, characterized by distinct stages and a process of dynamic evolution [**?**]. This study further reveals a unique evolutionary path for patient trust within the context of family doctor contracted services: emotional trust is established through public health services, while technical and service-based trust are formed through medical and referral services, together constituting a progressive "trust chain."

Prior studies have found that physicians in higher-level hospitals often rely on institutional prestige and personal credentials (such as educational background and professional titles) to signal their status as "renowned doctors," thereby establishing patient trust dominated by systemic factors. In contrast, this study finds that among key populations for public health services—specifically patients with hypertension or diabetes and the elderly—trust levels toward family doctors are significantly higher than in other groups. This suggests that by using public health services as a link, family doctors may be able to maintain continuous engagement with these populations.

Establishing initial trust dominated by emotional connection is essential for patients seeking services. This inference aligns with the findings of Lin et al. [**?**], who suggest that "patient trust in primary care relies heavily on the sense of familiarity formed through long-term interaction," as well as the conclusions of Zhao Shichao et al. [**?**], who state that "interpersonal trust based on emotional bonds is more easily formed between doctors and patients at the primary level."

This study also finds that patients who choose a family doctor or a regular physician for their consultations exhibit higher levels of trust. When integrated with the "formation path of continuous primary care first-contact intention" validated in this research, these findings highlight the critical importance of fostering deeper trust within medical services. The delegation of diagnostic and treatment authority is not a simple transfer of rights; rather, it constitutes a dynamic cycle formed through expectation confirmation. Positive expectation confirmation regarding clinical outcomes and service experiences not only deepens emotional trust but also promotes the establishment of technical and service trust, which in turn drives the intention for continuous consultation. This is largely consistent with the perspective of Wu Liangfeng et al., who argue that "prioritizing and improving technical proficiency and the degree of care helps form a virtuous cycle in the doctor-patient trust relationship." Therefore, it is suggested that family doctors should emphasize the enhancement of technical capabilities and provide patients with high-quality service experiences. By strengthening emotional trust to subsequently establish technical and service trust, this approach may serve as a vital pathway for increasing the intention of Chinese residents to seek continuous primary medical care.

This study has several limitations. First, regarding the research methodology, the use of a cross-sectional survey design only reveals correlations between variables; it cannot verify temporal causal relationships or capture the dynamic evolution of trust throughout the service cycle. Second, the sample characteristics limit the generalizability of the findings. The study employed convenience sampling with a relatively small sample size primarily composed of middle-aged and elderly individuals (aged 45 and above), which may not fully represent the diverse characteristics of all patients signed up for family doctor services. Third, the study subjects were all patients seeking care at primary healthcare institutions. The exclusion of individuals who have never chosen or have ceased to use primary care services may lead to an overestimation of expectation confirmation, patient trust, and the intention to continue primary care first-contact services, thereby introducing sampling bias relative to the general community population.

Fourth, there is room for optimization in the measurement scales. To control the number of items, the scale measured expectation confirmation directly rather than measuring expectations and perceived performance separately. This approach may hinder a precise analysis of trust formation mechanisms—such as "low expectation, high confirmation" —and makes it difficult to fully distinguish the independent roles of expectations versus service experience. Fifth, due to sample size constraints, the statistical analysis did not further examine the moderating or chain-mediating effects of variables such as family doctor contract status, membership in key populations, or whether patients saw a fixed doctor. Furthermore, the independent mechanisms of technical trust, service trust, and emotional trust were not analyzed separately, which may weaken the precision of the trust pathway analysis.

In light of these limitations, future research could be expanded in the following areas: 1. Expanding sample coverage by adopting multi-center sampling to include diverse urban and rural regions, all age groups, and patients both within and outside primary healthcare institutions, with a specific focus on the heterogeneity of key populations in family doctor contract services. 2. Employing longitudinal designs to track the dynamic evolution of trust and capture changes in expectation confirmation and trust at different stages after signing a service contract. 3. Optimizing scale design by separately measuring expectations and perceived performance, and utilizing structural equation modeling to analyze the independent roles of various trust dimensions in contract services.

Such efforts will provide a more precise reference for improving the quality of family doctor contract services and advancing the hierarchical medical system.

4 小结

Based on the Expectation Confirmation Theory (ECT), this study constructs a theoretical model focused on the context of contracted family doctor services. Through empirical analysis, the study reveals that patient trust plays a fully mediating role in the path through which expectation confirmation influences the continuous intention for primary medical consultation. From the perspective of the patient' s cognitive-emotional psychological process, this finding clarifies the key pathway for enhancing the intention to seek initial treatment at the primary level. It provides a clear theoretical basis and practical leverage for family doctor teams to foster patient trust by optimizing services and managing expectations, thereby effectively guiding patient behavioral intentions.

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The authors declare no conflicts of interest.

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参考文献

Research on General Practitioners' Willingness to Participate in Hierarchical Diagnosis and Treatment Based on an Integrated Model of the Theory of Planned Behavior and the Technology Acceptance Model

Abstract

Objective: To investigate the willingness of general practitioners (GPs) to participate in hierarchical diagnosis and treatment and to analyze the influencing factors using an integrated model based on the Theory of Planned Behavior (TPB) and the Technology Acceptance Model (TAM).

Methods: A cross-sectional survey was conducted among GPs in selected regions. Data were collected using a structured questionnaire designed according to the TPB and TAM frameworks. Structural Equation Modeling (SEM) was employed to analyze the relationships between attitude, subjective norms, perceived behavioral control, perceived usefulness, perceived ease of use, and the intention to participate in hierarchical diagnosis and treatment.

Results: The integrated model demonstrated a good fit with the empirical data. The results indicated that attitude, subjective norms, and perceived behavioral control significantly and positively influenced GPs' behavioral intentions. Furthermore, perceived usefulness and perceived ease of use were found to be significant predictors of attitude, which in turn mediated their effects on intention.

Conclusion: To enhance GPs' participation in hierarchical diagnosis and treatment, policy interventions should focus on improving their professional attitude, strengthening social support systems, and optimizing the technical and administrative processes to increase perceived ease of use and usefulness.

Introduction

The hierarchical diagnosis and treatment system is a critical component of China' s healthcare reform, aimed at optimizing resource allocation and improving the efficiency of medical services. General practitioners (GPs) serve as the "gatekeepers" of this system, and their active participation is essential for its successful implementation. However, despite policy efforts, the willingness of GPs to engage fully in hierarchical diagnosis and treatment remains varied.

Existing research has explored various factors influencing GPs' behavior, but few studies have integrated psychological and technological acceptance frameworks to provide a comprehensive understanding. The Theory of Planned Behavior (TPB) suggests that individual behavior is driven by behavioral intentions,

which are functions of attitude, subjective norms, and perceived behavioral control. Meanwhile, the Technology Acceptance Model (TAM) posits that perceived usefulness and perceived ease of use are primary determinants of an individual' s acceptance of new systems or practices. By integrating TPB and TAM, this study aims to construct a robust theoretical model to explore the internal and external factors shaping GPs' willingness to participate in the hierarchical diagnosis and treatment system.

Methods

1.1 Theoretical Framework and Hypotheses

This study

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Questionnaire on Patient Medical Seeking Intentions

Dear Resident:

Hello! We are students from the School of Management at Chengdu University of Traditional Chinese Medicine. We are conducting a survey regarding residents' intentions when seeking medical care. The results of this survey will serve as a reference for improving the medical experience and enhancing patient satisfaction. We sincerely invite you to complete this questionnaire based on your actual circumstances. There are no right or wrong answers, and every response is vital to this research. All survey content will be used solely for statistical analysis. In accordance with the relevant provisions of the *Statistics Law of the People's Republic of China*, we will keep your information strictly

confidential. Thank you for your participation. We wish you peace, joy, and prosperity throughout the seasons!

1. 您是否代表本人回答：()

(1) Yes (2) No, answering on behalf of a minor

2. 您的性别：()

(1) Male (2) Female

3. 您属于下面哪个年龄段：()

(1) 18-44 years (2) 45-59 years (3) 60-74 years (4) 75-89 years (5) 90 years and older

4. 您的户籍是：()

(1) Local rural (2) Non-local rural (3) Local urban (4) Non-local urban

5. 您的受教育程度：()

(1) Junior high school or below
(2) High school / Vocational high school / Technical school
(3) Junior college (Associate degree)
(4) Undergraduate (Bachelor' s degree)
(5) Graduate (Master' s or Doctoral degree)

6. 您从事的职业是：()

(1) Civil servant (2) Professional/Technical personnel (3) Office staff (4) Enterprise management personnel (5) Industrial worker (6) Farmer (7) Freelancer (9) Self-employed/Individual business owner (10) Student (11) Retired (12) Unemployed (13) Other

7. Your average annual personal income (total annual income from all sources, including pensions, various government subsidies, part-time work, and business income, after deducting taxes and social security contributions): ( )

(1) Below 10,000 RMB
(2) [10,000, 25,000) RMB
(3) [25,000, 50,000) RMB
(4) [50,000, 100,000) RMB
(5) [100,000, 250,000) RMB
(6) [250,000, 500,000) RMB
(7) 500,000 RMB and above

8．您是否患慢性病？()

(1) Hypertension (2) Diabetes (3) Other chronic diseases (4) None

9．您的医保参保情况是？()

(1) Basic Medical Insurance for Urban Employees (2) Basic Medical Insurance for Urban and Rural Residents (3) Commercial Medical Insurance (4) None

10. What is the minimum time (in minutes) required to travel from your home to the nearest Community Health Service Center or Station? ("Minimum time" refers to the fastest readily available method, such as walking or using transportation.) ( )

(1) 15 minutes or less (2) 16–30 minutes (3) 31–45 minutes (4) 46–60 minutes (5) More than 60 minutes

11. Have you signed a contract with a family doctor? (If yes, please provide the name of the family doctor) ( )

(1) Signed (2) Not signed

12. What types of services do you receive at the Community Health Service Center? ( )

(1) Medical services (e.g., seeking treatment for illness)
(2) Public health services only (e.g., health management for the elderly, chronic disease management, child health management)

13. Which doctor do you typically consult when visiting a Community Health Service Center or Station? ( )

(1) My own family doctor
(2) A specific regular doctor at the Community Health Service Center/Station (other than my family doctor)
(3) Any available (non-regular) doctor at the Community Health Service Center/Station (other than my family doctor)
(4) A specific regular doctor dispatched from a higher-level hospital
(5) Any available (non-regular) doctor dispatched from a higher-level hospital
(6) No specific doctor (i.e., no preference regarding whether they are dispatched from a higher-level hospital)

Residents' Expectation Confirmation Regarding Primary Diagnosis at the Community Level

Instructions: Please complete this section based on your actual experiences during previous medical visits.

14. 医生的服务比您期待的要好还是差（）

(1) Significantly worse
(2) Slightly worse
(3) Substantially consistent
(4) Slightly better
(5) Significantly better

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15. 医生的技术水平比您期待的要好还是差（）

(1) Significantly worse
(2) Slightly worse
(3) Substantially consistent
(4) Slightly better
(5) Significantly better

16. 医生的医德医风比您期待的要好还是差（）

(1) Much worse (2) Somewhat worse (3) Basically the same (4) Somewhat better (5) Much better

Instructions: The following questions pertain to your judgment regarding future scenarios. Even if you have not experienced these situations before, please indicate what you believe the situation will be like. Please rate your responses on a scale of 1–5; higher scores represent a higher level of belief or confidence.

17. The doctor can correctly diagnose diseases ( ): 1-2-3-4-5
18. The doctor can correctly judge whether a referral to a higher-level hospital is necessary ( ): 1-2-3-4-5
19. The doctor' s treatment will yield positive results ( ): 1-2-3-4-5
20. With the doctor' s help, my health condition will improve ( ): 1-2-3-4-5
21. When needed, the doctor or their colleagues can be contacted in a timely manner ( ): 1-2-3-4-5
22. The doctor can help patients quickly book specialist appointments at higher-level hospitals ( ): 1-2-3-4-5
23. The doctor can help patients secure hospital beds at higher-level hospitals in a timely manner ( ): 1-2-3-4-5
24. The specialist appointments or hospital referrals arranged by the doctor will be satisfactory ( ): 1-2-3-4-5
25. The doctor will not prescribe unnecessary medications, tests, or treatments ( ): 1-2-3-4-5
26. The treatment plan recommended by the doctor will be the most suitable for the patient ( ): 1-2-3-4-5
27. The doctor will not disclose the patient' s personal privacy ( ): 1-2-3-4-5
28. The doctor will consider issues from the patient's perspective ( ): 1-2-3-4-5
29. The doctor genuinely cares about the patient' s health ( ): 1-2-3-4-5

30. The doctor will do their utmost to help the patient eliminate or alleviate pain and illness ( ): 1-2-3-4-5

Healthcare Seeking Intentions and Behaviors

Instructions: The following questions are based on your genuine thoughts. Please rate your responses on a scale of 1–5; higher scores represent a higher level of willingness.

31. You are willing to continue seeking medical care at a Community Health Service Center or Community Health Service Station ( ): 1-2-3-4-5
32. You will prioritize seeking medical care at a Community Health Service Center or Community Health Service Station ( ): 1-2-3-4-5
33. You would recommend seeking medical care at a Community Health Service Center or Community Health Service Station to relatives and friends ( ): 1-2-3-4-5
34. Under what circumstances would you be willing to choose a Community Health Service Center or Community Health Service Station for medical consultation? ( ): (Dependent on options 1, 2, or 3 in Question 31)

(1) Doctors have more experience
(2) Doctors have a higher level of technical skill
(3) Doctors have a better service attitude
(4) Doctors are from higher-level hospitals
(5) Primary healthcare institutions have cleaner environments and facilities
(6) Primary healthcare institutions have better instruments and equipment
(7) Primary healthcare institutions have a more complete range of medications with better efficacy
(8) Primary healthcare institutions have more reasonable charges
(9) Higher medical insurance reimbursement rates
(10) Closer distance/more convenient
(11) Having acquaintances at the primary healthcare institution
(12) More options for upward referrals to hospitals
(13) Other
(14) Would not visit a primary healthcare institution under any circumstances

35. When you are ill, which medical institution do you visit most frequently? ( ): (Dependent on options 1, 2, or 3 in Question 31)

(1) Municipal level or higher hospitals
(2) District or county-level hospitals
(3) Township health centers
(4) Community health service centers
(5) Clinics (health stations, infirmaries)
(6) Village clinics
(7) Community health service stations

(8) Outpatient departments (General, Traditional Chinese Medicine, Integrated TCM and Western Medicine, Ethnic Medicine, Specialist)
(9) Private hospitals
(10) Other

36. Do you have any other insights or valuable suggestions regarding the questions asked? If so, please write down your views. ( ):

(1) Yes
(2) No

Note: Figure translations are in progress. See original paper for figures.

Source: ChinaXiv —Machine translation. Verify with original.