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Development and Validation of the Resident Healthcare-Seeking Culture Scale (RHCS) Among Chinese Demographics in the Community Setting

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Objective: This study aimed to develop a measurement scale with good reliability and validity to assess the reasonableness of resident healthcare-seeking culture.

Methods: This investigation utilized a cross-sectional research design, employing a multi-stage random sampling technique to select adult inhabitants aged eighteen and above who possess fundamental literacy abilities. An online survey was conducted from March to April 2021 across 27 provinces in China, encompassing 911 questionnaires for scale development. This study primarily applied discriminant coefficients and exploratory factor analysis to refine the scale items. Scale reliability was assessed using Cronbach's alpha, and split-half reliability. Scale validity was determined through content validity and structural validity. Data analysis was performed using SPSS 21.0, and structural equation modeling was executed with AMOS 23.0 software. Statistical significance was defined at $P<0.05$.

Results: The Resident Healthcare-seeking Culture Scale (RHCS) ultimately comprised 5 dimensions and 20 items. The cumulative explained variance of the five common factors within this scale amounts to 55.24%, satisfactorily adhering to the established criterion of social science research that the extracted factors should explain between 50% and 60% of the total variance. The Cronbach's alpha coefficient for the total scale was 0.83. Split-half reliability was 0.87. The Pearson correlation coefficients associating the scores from the five dimensions with the overall scale score were 0.78, 0.65, 0.65, 0.64, and 0.42, respectively, all statistically significant with P-values less than 0.001. The results of confirmatory factor analysis suggested that RMR=0.045, GFI=0.952, AGFI=0.936, PGFI=0.712, NFI=0.917, IFI=0.944, TLI=0.931, CFI = 0.943, and RMSEA = 0.046.

Conclusion: The measurement scale for healthcare-seeking culture among Chinese residents exhibits superior reliability and validity, serving as an effective instrument for hospital administrators to evaluate the reasonableness of demand-side healthcare culture.

Plain language summary: Known information: Healthcare culture encompasses both the facets of supply and demand. Existing research predominantly attends to the supply aspect, delving into the organizational culture within healthcare settings and crafting numerous evaluative instruments, including the Hospital and Safety Culture scales. Conversely, the realm of demand, specifically the healthcare-seeking culture among residents, remains underexplored, with a notable absence of tools to assess the reasonableness of this culture.

Contribution of this study: This research quantitatively explores the resident healthcare-seeking culture for the first time, introducing a new theoretical framework to the domain of healthcare culture studies. By developing a scale with robust reliability and validity, this research offers a scientific instrument to evaluate the reasonableness of resident healthcare-seeking culture. Furthermore, this study addresses a previously unexplored void in the investigation of healthcare-seeking culture among residents.

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Implications of this study: By employing this scale, healthcare providers can gain a deeper insight into the characteristics of resident healthcare-seeking culture among residents across various demographic settings. This understanding enables them to tailor their services more closely to align with the cultural practices surrounding patients' access to healthcare, thereby enhancing patient satisfaction and collaboration in treatment. Moreover, this scale furnishes valuable data to health policymakers, facilitating the incorporation of patients' healthcare-seeking cultural traits into the formulation of health policies and the design of more effective and culturally resonant policy initiatives.

Keywords: Chinese residents, culture, health care seeking, scale development and validation

Introduction

The culture originated from social and behavioral psychology in the 1950s and 1960s. The culture of healthcare/ medicine is a significant facet of culture. Existing research has concentrated on the development of supply-side healthcare culture measurement tools, including patient safety culture,[1,2] healthcare organizational culture,[3] and innovation culture,[4] while there is a dearth of research on demand-side healthcare culture, namely, resident/ patient healthcare-seeking culture ("就医文化" in Chinese). The systematic and comprehensive theoretical and empirical research on this topic remains scant. Merely one piece of literature delves into the cultural attributes of seeking medical advice,[5] without addressing the broader characteristics of the healthcare-seeking culture. Notably, this study, dating back 2000 years, concentrates exclusively on ethnic minorities within a specific region. Furthermore, contemporary research lacks tools for measuring the healthcare-seeking culture among residents/ patients. Generally, a significant gap remains in international research concerning the tools used to examine the healthcare-seeking culture.

Demand-side healthcare culture encompasses the healthcare-seeking psychology and behaviors cultivated during the pursuit of healthcare services. It primarily comprises material culture (including the environment of healthcare institutions, facilities and equipment, and individuals' social resources), spiritual culture (eg values, norms, beliefs, and attitudes), behavioral culture (behavioral intentions and self-reported behaviors) and institutional culture (such as health policies and healthcare systems). A limited number of empirical studies explore certain aspects of this field, focusing on specific dimensions such as patient attitudes[6] and healthcare-seeking behaviours,[7,8] yet only a single facet of healthcare-seeking culture is examined. Healthcare-seeking culture is complex and operates on multiple levels, necessitating its assessment across various dimensions.

In January 2020, The Lancet published an editorial emphasizing the necessity for a Shift of Medicine Culture in individuals' access to health care.[9] This article highlights that medicine is an imperfect science and that not every patient's issue can be solved. A transformation in the medicine culture is essential to enhance the public's perception of life and medicine, enabling more people to accept the inevitability of illness and death with tranquility.[10] This shift can also lead to more scientific approaches to seeking healthcare services. The alteration in the medical culture among the populace can result in a genuine improvement in the recognition and perception of their own health status, adherence to the hierarchical healthcare system norms (first consulting their general practitioner and subsequently seeking hospital care through their GP),[11] and orderly access to healthcare can also empower patients in maintaining their own health. This concept also aligns with the fundamental principles of scientifically seeking healthcare: the rational use of medical and health resources, the selection of appropriate and moderate medical and health services, and the effective prevention and treatment of diseases and the maintenance of health.

In view of the empirical research gaps and practical significance of resident healthcare-seeking culture, this study is premised on the components of culture, using Chinese residents as an example to develop a healthcare-seeing culture measurement tool. The aim is to provide a reliable and valid research instrument for assessing the reasonableness of resident healthcare-seeking culture, and to offer a reference and theoretical support for the development and application of measurement tools for residents in other countries.

Methods

Ethic Statement

The present investigation was thoroughly ethically reviewed and approved by the Medical Ethics Review Committee of Tongji Medical College, Huazhong University of Science and Technology, China, prior to its commencement (Ethics No. S027). The study team has explained in detail the purpose, procedures, potential risks and benefits of the study to all participants, and written informed consent has been obtained from each participant. We confirm that this study has followed the guiding principles outlined in the Declaration of Helsinki in all respects, ensuring the rights and well-being of the participants.

Study Population and Sampling

This study included adult residents aged 18 years and above with basic literacy skills in China. According to the components of culture (material culture, institutional and behavioral culture, spiritual culture), this study initially defined the dimensions of resident healthcare-seeking culture and formed a preliminary questionnaire, which was subsequently administered in a pilot study involving twenty residents in Wuhan City. These twenty study participants were not encompassed within the sample during the phase of scale development. The results of pilot study were utilized to make slight adjustments to the questionnaire prior to finalizing the version to be used in the online survey.

In this investigation, the selection of the study population was accomplished by employing a simple random sampling technique, a subset of probability sampling, in conjunction with multi-stage sampling methods. The sampling procedure was divided into three distinct stages. Initially, 27 provinces/autonomous regions/municipalities in China were randomly chosen from a total of 34 regions via the principle of simple random sampling. In the second stage, within these 27 regions, two prefectures per region were selected at random to serve as survey sites. In the final stage, in the selected prefecture-level cities, an online survey questionnaire was dispatched to community residents aged 18 and above. For the online survey, each device, whether computer or mobile phone, was uniquely restricted using cookies and device numbers, ensuring that each device could only respond once, with a logical verification implemented. Moreover, informed consent was obtained from the respondents prior to the investigation.

The sample size in this study was determined mainly by using 10 times the number of scale items,[12] thereby being needed at least 260 subjects. Given that this study was conducted in 27 provinces/cities/autonomous regions/municipalities in China, it became imperative to expand the initial sample size of 260 participants to ensure that each region was properly represented. In light of the geographic coverage and population variances across these regions, it was decided in this study to sample no fewer than 18 inhabitants from each prefecture-level city, thereby enhancing the sample's representativeness and the generalizability of the results. Moreover, accounting for a combined non-response and questionnaire completion failure rate of 3%, this study ultimately opted to disseminate 1000 electronic questionnaires (calculated as 27 provinces * 2 cities per province * 18 residents per city * 103% = 1001 participants). Finally, a total of 1000 questionnaires were distributed and 946 respondents completed the questionnaire, with a response rate of 94.6% (946/1000). Of these questionnaires, 35 questionnaires were excluded due to missing key data and respondents being under 18 years of age, resulting in a total of 911 questionnaires being included.

Definitions of Demographic Variables

As the survey program of the Seventh Census had not yet been publicly distributed before this study, the definitions of the demographic variables primarily derived from China's Sixth Population Census.[13] To avert any potential misunderstanding by respondents regarding these variables, their definitions were clearly specified in the online questionnaire. The principal demographic variables for this study were defined as follows.

Sex referred to the biological sex of the respondents, encompassing both male and female. Marital status was defined as the actual marital status of participants at the time of the survey, rather than their legal marriage status, with the following options: unmarried, spouse, divorced, and widowed. Educational attainment denoted the highest level of education achieved, irrespective of whether the individual was currently enrolled, graduated, incomplete, or had dropped out. The options included: not attended school, primary school, junior high school, senior high school, specialized college, undergraduate, and postgraduate. The nature

of household registration referred to the type of the permanent household registration, categorized according to the agricultural or non-agricultural designation in their household registration books. Participation in medical insurance was divided into two categories: yes or no. Selection of any of the following medical insurance types indicates participation: basic medical insurance for urban and rural residents, basic medical insurance for employees (including maternity insurance), commercial insurance and other medical insurance.

Statistical Analysis

The SPSS 21.0 software (SPSS Inc, Chicago, IL) was employed for data analysis, while AMOS 23.0 software[14] was utilized for structural equation modelling in this study. Statistical significance was set at $P<0.05$, unless specified otherwise. Descriptive analysis used frequency (n) and percentage (%) to detail the basic demographic profile of the study population.

This questionnaire employed a 5-point Likert scale for responses,[15] scored positively: strongly disagree (1 point), disagree (2 points), undecided (3 points), agree (4 points), and strongly agree (5 points), except for items 4, 5, 12 and 16, which were scored inversely (5 points for strongly disagree and 1 point for strongly agree). The discriminant coefficient for each item was calculated by ranking respondents according to their total score, selecting the highest 25% and the lowest 25%, calculating the average scores for these groups on each item, and subtracting these averages to determine the discriminant coefficient. A higher absolute value indicates greater discriminative power. Items with a discriminant coefficient below 0.5 were deemed inappropriate and excluded.[16] Subsequent exploratory factor analysis was conducted, with the number of factors determined by the characteristic root greater than one.[17,18]

Scale reliability was evaluated utilizing Cronbach's alpha coefficient and split-half reliability. The split-half reliability mainly divides the scale items into odd and even parts numerically and computes the correlation coefficient between the scores of these two parts. In this study, both the content validity and structural validity of the scale were examined. Content validity was established by Pearson correlation analysis to reveal the relationship between scores on each dimension and the overall scale score. Structural validity was confirmed by employing confirmatory factor analysis to assess the fit of the scale to the model.[19]

Patient and Public Involvement (PPI)

The purpose of this study was to develop an instrument suitable for measuring the degree of reasonableness of the population's healthcare-seeking culture and to assess its reliability and validity. We involved the public and patients from the following areas during the study:

During the study design stage, we invited residents from different regions, ages, sex, education levels, and medical experiences to participate in the revision of the questionnaire to ensure that the content and format of the questionnaire were in line with the actual situation and needs of the residents.

In the implementation stage of the study, we distributed the questionnaire to residents in 27 provinces/autonomous regions/municipalities directly under the central government across the country through an online platform (Questionnaire Star, namely "问卷星" in Chinese) and collected 911 valid questionnaires. We explained the purpose and significance of the study to the participants in the questionnaire and obtained their consent.

During the dissemination phase of the study, we will publish the results of the study in the form of an article on a relevant journal. We will also cooperate with some health organizations to apply the findings to healthcare services and management, to improve the reasonableness of the population's healthcare-seeking culture and the satisfaction of doctors and patients.

We are grateful and appreciative of the participation of the public and patients, whose contributions were essential to the success of this study. We also reflect on and evaluate the PPI process of this study for further improvement and refinement in future studies.

Results

Basic Information of Subjects

From the aforementioned information, it is apparent that the survey data of this study encompassed a total of 911 residents. The respondents' average age was 36±12 years. Among them, 415 (45.6%) were men and 496 (54.4%) were women. The Han Chinese population comprised 875 individuals (96.0%), while 36 (4%) were from ethnic minorities (Table 1).

Screening of Scale Items

Discriminant Coefficient

Of the 24 items in the questionnaire, the highest discriminant coefficient was 1.12 (item 5), and the lowest was 0.01 (item 16). The mean discriminant coefficient for all items was 0.88, with a standard deviation of 0.26. Items with a discriminant coefficient below 0.5 were eliminated, including item 14 (0.42), and item 16 (0.01) (Table 2). After excluding these two items, the mean discriminant coefficient for the remaining 22 items was 0.94, with a standard deviation of 0.15. The contents of the items are detailed in Supplementary Table 1.

Table 1 Demographic Attributes of the Respondents

Variables	n	%
Sex		
Male	415	45.6
Female	496	54.4
Nationality		
Han ethnic group	875	96.0
Ethnic Minorities	36	4.0
Marital status		
Unmarried	370	40.6
Spouse	508	55.8
Divorced	26	2.9
Widowed	7	0.8
Educational attainment		
No schooling	2	0.2
Primary school	17	1.9
Secondary school	136	14.9
High school	130	14.3
Specialized college	110	12.1
Undergraduate	280	30.7
Postgraduate	236	25.9
Household registration		
Agricultural	421	46.2
Non-agricultural	490	53.8
Participation in medical insurance		
Yes	489	53.7
No	422	46.3
Self-reported health status		
Good	708	77.7
Neutral	183	20.1
Bad	20	2.7
Diagnosed chronic disease		
None	744	81.7
Have at least one	167	18.3

Table 2 Discriminant Coefficient for Each Item Within This Scale

No. of Items	Average Score for the Highest 25% of Total Items	Average Score of the Lowest 25% of Total Items	Discriminant Coefficient
1	4.83	3.96	0.87
2	4.80	3.72	1.07
3	4.64	3.64	1.00
4	4.79	3.82	0.96
5[a]	4.60	3.48	1.12
6	4.51	3.49	1.02
7	4.59	3.63	0.96
8	3.79	2.78	1.01
9	3.76	2.81	0.95
10	3.86	2.86	1.00
11	4.68	3.81	0.87
12	3.94	2.86	1.08
13	4.26	3.19	1.07
14[a]	3.69	3.27	0.42
15	4.51	3.66	0.85
16[a]	3.08	3.07	0.01
17	3.76	3.25	0.51
18	4.27	3.41	0.86
19	4.43	3.56	0.87
20	4.03	2.92	1.11
21	4.04	2.98	1.06
22	4.05	3.07	0.98
23	3.80	3.00	0.80
24	3.54	2.88	0.66

Notes: Discriminant coefficient for each item is calculated as the difference between the average score of the highest 25% and the lowest 25% of total items. [a]Items with a coefficient below 0.5 are excluded; thus, items 5, 14 and 16 were excluded due to a discriminant coefficient of less than 0.5.

Exploratory Factor Analysis

Following the exclusion of the two aforementioned items, an exploratory factor analysis (EFA) was conducted on the remaining 22 items. The Kaiser-Meyer-Olkin (KMO) value for the remaining items was 0.862, and Bartlett's sphericity test yielded a *p*-value of less than 0.001, signifying that these items were suitable for EFA.[20] Five common factors were extracted premised on the criterion that the characteristic root exceeded one. The factor loading matrix, subsequent to the varimax rotation, is presented in Supplementary Table 2. The results indicate that item 1 exhibits significant loadings on both factors 1 and 3, as does item 11. Therefore, items 1 and 11 were removed.

Following the preceding analysis, the remaining 20 items were selected for EFA. The KMO value for these items was 0.836, and Bartlett's sphericity test yielded a *p*-value of less than 0.001, indicating their suitability for EFA. The final selection of five common factors was based on the criterion that the characteristic root exceeds one, and the results of the varimax rotation are shown in Table 3. At this stage, the total cumulative explained variance of the five common factors was 55.24%, indicating that these common factors sufficiently encapsulate the majority of the information within the items. When considered alongside professional practice, these five common factors exhibit a clear professional meaning.

Considering the more substantial factor loadings of each item and integrating professional practice, we can designate factor 1 as social norms; factor 2 as healthcare-seeking behavior; factor 3 as personal values; factor 4 as attitudes towards doctors; and factor 5 as perceptions of traditional medicine and modern medicine. Following this analysis, we ultimately established that the Resident Healthcare-seeking Culture Scale comprises 5 dimensions and 20 items.

Table 3 The Matrix of Factor Loadings Post-Varimax Rotation for 20 Items in an Exploratory Factor Analysis

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
4	0.80808	0.00670	0.14810	0.08136	0.03736
3	0.77882	0.03375	0.13679	0.17155	−0.02605
6	0.74965	0.10678	0.02123	0.11103	0.09980
5	0.67589	0.16997	0.11161	0.23065	0.12352
2	0.61774	0.04083	0.32772	0.02186	0.02155
7	0.61235	0.01035	0.24676	0.19058	0.06300
9	−0.05316	0.81873	0.17172	0.01022	0.02636
8	−0.05537	0.80887	0.18065	0.02487	0.05245
12	0.28625	0.67308	−0.17982	0.09794	−0.01670
10	0.01947	0.56921	0.14795	0.16742	−0.10662
13	0.39830	0.55137	−0.01837	0.01187	0.10607
18	0.24135	0.10684	0.69988	0.03732	0.08547
19	0.30761	0.02290	0.69022	0.10269	0.06813
15	0.13814	0.08008	0.63981	0.15194	−0.09684
17	0.01885	0.09291	0.45675	−0.00579	0.19599
20	0.09335	0.08261	0.11392	0.76827	0.09404
21	0.18398	0.08288	0.09645	0.75148	0.04966
22	0.24884	0.08062	0.02396	0.70327	0.09342
24	0.12841	−0.02334	0.06752	0.10111	0.86616
23	0.06995	0.01660	0.14074	0.12670	0.85792

Evaluation of Scale Reliability

The Cronbach' alpha coefficient of the scale was 0.83, with corresponding coefficients for the five dimensions (social norms, healthcare-seeking behavior, personal values, attitudes towards doctors, and perceptions of traditional and modern medicine) being 0.85, 0.75, 0.60, 0.68 and 0.75, respectively. In addition, the split-half reliability of the scale was 0.87, demonstrating robust reliability.

Evaluation of Scale Validity

To assess content validity, Pearson correlation analysis demonstrated significant correlations between the scores on the five dimensions (healthcare-seeking behaviors, personal values, social norms, perceptions of traditional and modern medicine and attitudes towards doctors) and the total score of the scale. The correlation coefficients were 0.65, 0.65, 0.78, 0.42 and 0.64, respectively, with a statistical significance of $P<0.0001$.

Regarding construct validity, the confirmatory factor analysis (CFA) revealed the following indices: Root Mean Square Residual (RMR)=0.045, Goodness of Fit Index (GFI)=0.952, Adjusted Goodness of Fit Index (AGFI)=0.936, Parsimony goodness of fit index (PGFI)=0.712, Normed Fit Index (NFI)=0.917, Incremental Fit Index (IFI)=0.944, Tucker–Lewis Index (TLI)=0.931, Comparative Fit Index (CFI)=0.943, and Root-Mean-Square Error of Approximation (RMSEA) =0.046, all meeting the requisite criteria (Table 4). As illustrated in Figure 1, most observed variables exhibited standardized factor loadings of 0.40 or higher, all statistically significant ($P<0.001$). Refer to Supplementary Tables 3 and 4 for the final scale in English and Chinese, and Supplementary Material 5 for scale scoring and usage instructions.

Table 4 The Results of the Confirmatory Factor Analysis Structural Equation Modeling and Their Reference Standards

Indicators	Ratio	RMR	GFI	AGFI	PGFI	NFI	IFI	TLI	CFI	RMSEA
Results	0.826	0.045	0.952	0.936	0.712	0.917	0.944	0.931	0.943	0.046
Criteria	<3	<0.05	>0.90	>0.90	>0.50	>0.90	>0.90	>0.90	>0.90	<0.05

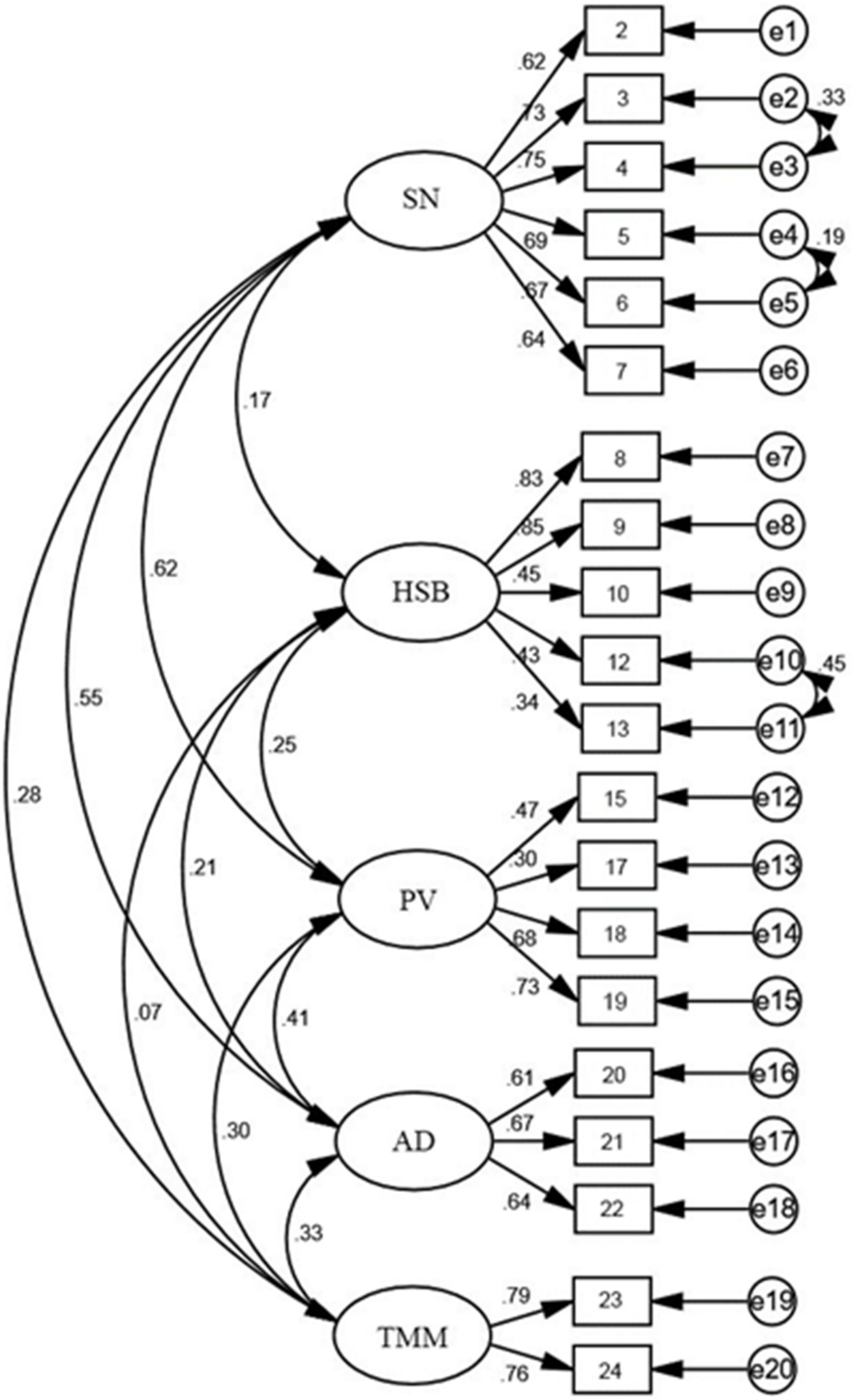

Figure 1 Pathway diagram for confirmatory factor analysis of the scale.
Abbreviations: SN, social norms; HSB, healthcare-seeking behavior; PV, personal values; AD, attitudes towards doctors; TMM, perceptions for traditional and modern medicine.

Discussion

This groundbreaking empirical study embarks on an exploration of the development and evaluation of the demand-side healthcare culture scale. It elucidates and analyses the structural characteristics of resident healthcare-seeking culture, providing a scientific and comprehensive understanding of Chinese resident healthcare-seeking culture. Furthermore, it establishes a foundation for examining the specific demographic characteristics of this culture. It also takes Chinese residents as an example to provides theoretical guidance for future empirical investigations in other nations.

The RHCS is Demographically Generalizable; However, Consideration Must Be Accorded to the Demographic-Specific Healthcare-Seeking Culture Scales

The principal objective of incorporating demographic variables within this study is to achieve a more balanced distribution among the sampled populace. With this intention, the demographic findings shall be expounded upon herein. This research pioneered a demographically generalized healthcare-seeking culture scale. Notwithstanding, the majority of Han Chinese individuals, those perceiving their health as favorable, and those without chronic diseases, intimates that ensuing studies might well develop tailored healthcare-seeking culture scales for ethnic minorities, individuals with moderate to poor health status, and those afflicted by at least one chronic condition. It is imperative to acknowledge that, as this study inaugurates a resident-specific healthcare-seeking culture scale, there exists no prior research within this domain for comparative analysis of demographic outcomes.

The Resident Healthcare-Seeking Culture Scale Possesses Significant Practical Application Value and Potential for International Applicability

For one thing, it demonstrates a high degree of validity and accuracy. Factor analysis, a technique employed to discern the essential structure of multiple observed variables and to reduce their dimensionality,[21] confirms this. Bartlett's sphericity test exceeds 0.8, indicating the scale's suitability for factor analysis. Subsequently, the CFA was performed using various indices including Ratio, RMR, GFI, AGFI, PGFI, NFI, IFI, TLI, CFI, and RMSEA. In general, Ratio values below 3 are deemed ideal and those below 5 are acceptable RMR and RMSEA values below 0.05 are considered ideal, while those less than 0.08 are acceptable GFI, AGFI, NFI, CFI, IFI, TLI values above 0.9 are ideal and those above 0.8 are acceptable.[22] Overall, the model demonstrates a good fit in this study.

Furthermore, prior research indicates[23,24] that in the realm of natural sciences, the cumulative variance attributable to all factors generally ranges between 70% and 80%. Conversely, Hair et al[25] have noted that this criterion may not be applicable to social science investigations, where an explained variance comprising 50% to 60% of the total is often deemed acceptable. In our study, the explained variance for the five common factors stood at 55.24%, thereby meeting the conventional criteria for cumulative explained variance within social science research. Accordingly, this scale developed comprises five dimensions and 20 items, demonstrating substantial practical utility.

For another, this scale exhibits commendable stability and reliability. Prior to conducting the survey, the reliability and validity of the questionnaire must be evaluated to ensure the accuracy and reliability of the results. Reliability pertains to the consistency and steadiness of the measurement outcomes. A higher reliability coefficient indicates a more reliable scale. Types of reliability include internal consistency, split-half reliability, and so forth.[19] The internal consistency of each scale dimension is denoted by the Cronbach's alpha coefficient. A higher correlation among the scale items corresponds to a higher Cronbach's alpha coefficient. The Cronbach's alpha coefficients of this scale ranged from 0.60 to 0.85, and its split-half reliability exceeded 0.80, demonstrating the scale's robust reliability.

In essence, our scale delineates five dimensions and 20 items pertaining to the healthcare-seeking culture in China, demonstrating robust reliability and validity. This scale serves as an excellent measure of the healthcare-seeking culture among residents and may aid in establishing a foundational comprehension of demand-side healthcare culture. This is particularly significant for hospital administrators, researchers and health policymakers aiming to influence healthcare-seeking psychology and behaviors to foster a shift of healthcare-seeking culture. In addition, we provide scoring recommendations and utilization instructions to enhance the scale's generalizability to studies involving residents of

other countries. Consequently, future studies may authenticate the cross-cultural relevance of this scale for various ethnic groups.

The Resident Healthcare-Seeking Culture Scale Covers Multiple Dimensions, Addressing the Deficiencies of Existing Single-Dimension Empirical Studies

This scale contains five dimensions, namely social norms, healthcare-seeking behavior, personal values, attitudes towards doctors, and perceptions of traditional and modern medicine. Social norms in seeking healthcare, which are a subset of general social norms[26] and an element of the spiritual culture in healthcare-seeking, refer to an individual's perception of specific behaviors influenced by significant others (eg family, relatives, friends, and so forth).[27] This scale indicates that the perception of responsibility for one's health and the necessity to seek medical services before receiving care may also be shaped by these social influences, thus forming part of the healthcare culture. Healthcare-seeking behavior (HSB) is defined as "any action or inaction by an individual who believes they have a health issue or are ill, undertaken to seek appropriate remedies".[28,29] Although existing research lacks a healthcare-seeking behavior scale, this scale identifies HSB as a crucial component of healthcare-seeking culture, encompassing residents' choice of medical institutions and the impact of the healthcare system on their decisions. Personal values underpin decision-making in seeking medical services, and this scale assesses how people evaluate the outcomes of their illnesses and their choice of healthcare providers through four items, including personal values related to medical errors by doctors, reflecting a blame-free medical culture.[30] Stephen et al[31] evaluate patients' values via assessing how they appraise different health statuses. Attitude is an individual's response according to his or her preferences. Previous studies on patients' attitudes towards physicians have focused on doctor-patient communication and doctors' skills[32–34] while this scale assesses patients' attitudes towards doctors through three items. As a major aspect of Chinese healthcare/ medicine culture, traditional and modern medicine play indispensable roles. With the evolution of modern medicine and the growing recognition of traditional medicine, public perceptions have also transformed. This study assesses residents' knowledge and satisfaction with both traditional and modern medicine.

Novelty of the Research Findings

This investigation represents the first empirical exploration into the development of the resident healthcare-seeking culture scale. Its innovative contributions are illuminated through the following facets:

Contribution to Advancing Knowledge

Through the systematical development and validation of the RHCS, this research will enable scholars and practitioners to profoundly comprehend and scrutinize the structural features underlying the reasonableness of resident healthcare-seeking culture. This will not only furnish a scientific and comprehensive reference framework for examining the healthcare-seeking culture of Chinese residents but also establish a pivotal comparative benchmark for global healthcare-seeking culture research.

Originality of the Findings

This tool is the pioneering instrument specifically designed to quantify the reasonableness of resident healthcare-seeking culture. Its development methodology and evaluative procedures represent the innovation. By scientifically measuring cultural aspects of healthcare-seeking psychology and behavior, this study addresses the void in existing research and posits a novel theoretical foundation for the cultural adaptability of healthcare services.

Potential Impact on the Field

The development of this scale offers theoretical insights and methodological support for similar studies across diverse nations and regions, boasting extensive applicational prospects. Additionally, utilizing this scale can enhance detailed investigations into the characteristics of specific demographic groups' healthcare-seeking culture, potentially impacting the formulation and optimization of health policy and enhancing the cultural sensitivity of healthcare services.

In summation, this study introduces a novel perspective and scientific basis for elucidating and ameliorating the resident healthcare-seeking culture via an innovative scale, promising a significant impact on the realm of healthcare culture research.

Research and Practical Implications for Scale Development

The scale formulated in this study significantly advances research within this domain. Firstly, it introduces a methodical quantification of previously unmeasured dimensions and indicators inherent in the resident healthcare-seeking culture, thereby addressing a notable deficiency in the extant literature. Through systematical identification and measurement of the reasonableness of resident healthcare-seeking culture, this scale emerges as a pioneering tool for future inquiries. Moreover, this study can facilitate cross-cultural healthcare research. This scale equips researchers with a rigorous method for scientifically assessing and contrasting the healthcare-seeking psychological and behavioral aspects of residents and patients across different cultures. This is crucial for cross-cultural healthcare studies in the era of globalization.

The development of this scale not only enhances academic research but also carries significant practical implications. Firstly, it augments the cultural sensitivity of healthcare services. Through employing this scale, healthcare providers can more deeply comprehend the healthcare-seeking psychology and behaviors of individuals across diverse cultures, thereby tailoring their services to align closely with the cultural preferences and habits of residents' access to healthcare. This adjustment enhances patient satisfaction and cooperation. Moreover, this study informs the formulation of health policies and the execution of interventions. This scale offers vital data support, enabling health policymakers to craft health promotion strategies that are both more effective and culturally consonant, considering the critical role of resident healthcare-seeking culture in health policies and community interventions.

Strengths and Limitations of This Study

Our research is the pioneering empirical investigation into the development of a demand-side healthcare culture measurement tool, addressing a significant research void. This scale demonstrates commendable reliability and validity, making it a valuable instrument for examining resident healthcare-seeking culture. Additionally, this study encompasses major regions in China, thus ensuring a somewhat representative. However, the shortcomings of the study should not be overlooked. This study predominantly concentrated on the inhabitants of mainland China, indicating that the study's demographic range could be broadened to encompass individuals from Hong Kong, Macao, and Taiwan. Furthermore, given that this study was conducted within China, other nations might, in future, further verify the scale's applicability to their respective populations.

Conclusion

In conclusion, this study introduces a pragmatic, valid, and reliable methodology for assessing the resident healthcare-seeking culture pertaining to the demand-side healthcare culture. Our findings support the application of this measurement tool in future research to evaluate the reasonableness of resident healthcare-seeking culture. Despite the complexity and subtlety inherent in the healthcare-seeking culture, empirical measurement is feasible and can offer an appropriate and practicable methodology to enhance the reasonableness of resident healthcare-seeking culture.

Abbreviations

RMR, Root mean square residual; GFI, Goodness of fit index; AGFI, Adjusted goodness-of-fit index; PGFI, Parsimony goodness of fit index; NFI, Normed fit index; IFI, Incremental fit index; TLI, Tucker-Lewis index; CFI, Comparative fit index; RMSEA, Root-mean-square error of approximation; EFA, Exploratory factor analysis; CFA, Confirmatory factor analysis.

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Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception (HBX, ZXL), study design (HBX, ZXL), execution (HBX, JF, LQ, SJY, LQL, QFT, YH), acquisition of data (HBX, JF, LQ, SJY, LQL, QFT, YH, ZXL), analysis (HBX) and interpretation (HBX, ZXL), or in all these areas (HBX, ZXL); took part in drafting (HBX, ZXL), revising (HBX, JF, LQ, SJY, LQL, QFT, YH) or critically reviewing the article (HBX, ZXL); gave final approval of the version to be published (HBX, JF, LQ, SJY, LQL, QFT, YH, ZXL); have agreed on the journal to which the article has been submitted (HBX, JF, LQ, SJY, LQL, QFT, YH, ZXL); and agree to be accountable for all aspects of the work (HBX, JF, LQ, SJY, LQL, QFT, YH, ZXL).

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Disclosure

There are no conflicts of interest.

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