

The Relationship between Health Care Literacy of TCM and Health Status of Community Residents

-A Study from Chengdu Qingyang District

Hongying Wang
School of Management
Chengdu University of TCM

Yingyan Liu
School of Management
Chengdu University of TCM
Chengdu, China

Sheng Li*
Center for Health Policy and Drug Operational Management
Chengdu University of TCM
Chengdu, China
*Correspondence author

Abstract—The purpose of the survey is to evaluate health care literacy level of TCM and the health condition of residents in Qingyang District of Chengdu and to analyze the factors affecting TCM health care literacy and health status, then to explore the correlation between them, and finally to provide a theoretical basis for improving the TCM health care literacy and their health status. Literature analysis, questionnaire method and quantitative analysis are used in this study. The study finds that the TCM health care literacy level of residents in Qingyang District of Chengdu is low, and their health status is general. Then, there is a linear relationship between them. Some intervention measures should be taken, such as deepening medical and health system reform, improving medical insurance system, establishing citizen's health care and TCM health literacy monitoring and evaluation system, carrying out targeted health education, strengthening the promotion of TCM health care content in multiple forms and multiple channels and improving community nursing service system.

Keywords—Community residents; TCM health care literacy; Health status; Correlation

I. INTRODUCTION

With the progress of economy, science and technology and the transformation of medical model, healthy lifestyle is highly pursued in society, it has become a normal behavior to pay attention to one's own health. In the "Health China 2030" Planning Outline issued by the State Council, improving the health literacy of the whole people, strengthening the implementation of health education and establishing the thinking of prevention first are important ways to popularize healthy life [1]. Numerous studies have shown a close link between health literacy and health status, in the researches composed by Xiaoyun Hu, Xianwen Li and other scholars have shown that health literacy can directly or indirectly affect health status [2-3]. Traditional Chinese medicine is an important part of excellent traditional culture, and it's also China's characteristic medical resources. In May 2014, TCM

health care literacy was identified by the National Health and Family Planning Commission as one of the key tasks of health education [4]. TCM health care literacy is a kind of ability to correct and control one's own behavior and to maintain and improve one's health level through the acquisition, understanding and adoption of TCM knowledge and technology under the guidance of TCM theories. Based on the previous research's conclusion, according to the current status of TCM health care literacy and health status of residents in Qingyang District, Chengdu, this study aims to provide theoretical basis for improving TCM health care literacy of local residents and finally improve their health condition.

II. RESEARCH CONTENT AND METHOD

A. Data Sources

The survey randomly selected four districts in Qingyang District to issue questionnaires, and the investigators selected eligible regional residents to issue questionnaires for investigation. 75 questionnaires were distributed in each region, 300 copies were distributed, and 271 of that is valid questionnaires, so, the effective rate of the questionnaire is 95.08%.

B. Survey design

The level of TCM health care literacy in this study was determined by the TCM Health Care Literacy Questionnaire, the content of which based on the existing questionnaire issued by the State, and it finally formed according to actual investigation needs. This questionnaire consists of four dimensions, basic knowledge and philosophy of TCM health care literacy, the literacy of healthy lifestyle and behaviour, health care content literacy and health care methods literacy, The health status in this study was determined by the current universal health survey summary SF-36 [6].

C. Analysis method

This study used literature analysis, questionnaire survey and quantitative analysis to carry out the work. The SPSS22.0 software was used to analyze the survey data, and the residents' TCM health literacy level and health status were evaluated by the percentage system score. Then, a regression equation, taken the general demographic characteristics and TCM health literacy as independent variables and the health status as the dependent variable, was established by regression analysis.

III. RESULTS OF INVESTIGATION

A. General demographic characteristics of the respondents

This study investigated 271 residents aged 15-69 in Qingyang District. Among the total population, 137 were males(50.6%), 134 were females(49.4%). The largest number of people in the age group was 15-24 years old(23.6%), and the second largest number was 55-64 years old(18.8%). At the cultural level, the number of undergraduate person is the largest, with 109 people. Among the monthly income, the largest number of people's income is under 3,500 yuan(35.8%). In terms of occupation, the number of employees is the largest, with 102 people(37.6%); whether the work is related to health, 100 people chose Yes, 171 people chose No.

B. Survey results of TCM health care literacy and health status

In order to make the data consistent, the scores of this survey are standardized, and the standardization processing is as follows, standardized score = (actual score - minimum score of the affiliated area) / (highest score in this aspect - lowest score in this aspect) * 100.

The average TCM health care literacy of residents in Qingyang District was 65.7811, slightly higher than 60. Among the four dimensions, the TCM health care method scored the highest, reaching 67.5738, and the remaining dimensions were all below 60. This shows that the level of health care literacy of residents in Qingyang District is low.

According to the calculation method of SF-36, after standardization, the average score of personal health status of residents in Qingyang District is 66.2017, exceeding 60, but not much, which indicates that their health status is general.

C. General demographic characteristics of investigators and their TCM health care literacy

The non-parametric independent sample test of TCM health care literacy and health status and general demographic characteristics were respectively tested. The results indicated that, besides gender(P>0.05), different ages, occupations, education levels, monthly income, and whether work related to health all had an impact on the differences in TCM health care literacy (P<0.05); Except for gender, education level and age(P<0.05), the monthly income and whether work were related to health had no effect on the health status score (P>0.05).

D. Correlation between TCM health care literacy and health status

According to the Cognitive Behavior Theory and Knowledge Attitude Behavior Theory, TCM health care literacy is a kind of cognition, belief and attitude, its ultimate goal is to improve and promote healthy behavior, owing to health status is the expression after the practice of health behavior, therefore, this study used TCM health care literacy and the above-mentioned gender, age and education level that have an impact on health status as the independent variable, and the health status as the dependent variable, doing linear regression. It turned out that, except for the degree of education and age(P>0.01), TCM health care literacy and gender were significant(P<0.01), and the following regression equation (1) was obtained.

$$Y = 60 - 5.043X1 + 0.215X2 \tag{1}$$

In this equation, Y represents health status, X1 represents gender and X2 symbolizes TCM health care literacy. In the regression equation, F = 10.905, Sig = 0.000, R2 = 0.141. And from the regression coefficient, the TCM health care literacy has a significant impact on health status, reaching 0.215. The regression equation indicates that the higher the health literacy level of TCM, the better the health condition(table 1).

TABLE 1. ANALYSIS RESULTS OF LINEAR REGRESSION

Model		Unstandardized	Standard	t	significance
		Coefficients	coefficient		
<i>standar</i>					
		B	d error	Beta	
1	(constant)	60.000	4.756		12.614 .000
	Gender	-5.043	1.420	-.202	-3.551 .000
	Degree of Education	.127	.860	.009	.148 .883
	Age	-.214	.447	-.030	-.480 .632
	TCM health literacy	.215	.040	.318	5.420 .000

a. Dependent Variable, Z Health Condition

IV. DISCUSS

A. Demographic characteristics and scoring of respondents

In this survey, the respondents are highly educated, because filling out the questionnaire may require a certain level of literacy and understanding ability, and it is easier for people with lower education to refuse to investigate.

The results of this survey imply that the TCM health care literacy of residents in Qingyang District is low, and there is a phenomenon that the idea and method's scores are higher than the behavior's. The cause of it may be that people's expectations for health cannot be matched with their current level of health education. The health status of residents in

Qingyang District is general. It may be because the respondents are mostly enterprise personnel and the elderly, the enterprise personnel have no measures to promote health, and the health status of the elderly is generally poor.

B. Effects of Different Demographic Characteristics on Health Status and TCM Health Care literacy

1) Men' TCM health care literacy level is lower than women', and their health status score is higher.

In this survey, men' TCM health care literacy level is lower than women', the result is consistent with the research of Xiaoyue Yin [7] and others. Because of the differences between men and women in personality, reading habits, roles in family and society and living habits, men have less initiative to acquire knowledge of health care in traditional Chinese medicine.

Men' health status scores are higher than women', mainly because men' mental health and emotional function scores are higher than women', which is consistent with Xia Li's research conclusions [8]. Because of the different needs of social roles, women, especially married women, need to take care of the family at the same time as they work, so, the pressure is high. At the same time, women are more sensitive to negative emotions.

2) The older the respondent is, the less optimistic the health status is

The results showed that there was a correlation between age and health literacy of TCM ($P < 0.05$). People aged 45-54 have the highest level of health literacy. People in this age group have a high degree of trust in traditional Chinese medicine, and have more retirees in them, who have time to care about their personal health. The youths aged 25-34 have the lowest level of health literacy in TCM. At this age group, the social pressure is high, the work is busy, and they think they are in good health condition, and they are unwilling and have no time to acquire knowledge of health care in TCM. In addition, there is a negative correlation between age and health status ($P < 0.05$). The older you get, the more your body functions deteriorate, the weaker your social and psychological functions, and the less optimistic your health is.

3) The higher the level of education, the higher the level of TCM health care literacy

The survey results showed that the correlation between education level and TCM health care literacy was significant ($P < 0.05$). And the higher the level of education, the higher the level of TCM health care literacy. According to Cognitive Behavior Theory, cognitive changes will eventually lead to behavioral changes. The degree of individual's education affects the degree of cognition of things. The higher the level of culture, the better the cognitive ability, and the more active the learning of TCM health care.

At the same time, the correlation between education level and health status was significant ($P < 0.05$). According to the theory of knowledge and belief, knowledge is the basis of the target behavior. The higher the level of education, the more proactively acquire, understand and utilize health knowledge. On the basis of knowledge, it can form good health literacy and

use it as a driving force to carry out health-promoting behaviors, and the health status is better.

4) The higher the monthly income, the higher the level of TCM health care literacy

At the same time, the correlation between education level and health status was significant ($P < 0.05$). According to the theory of knowledge and belief, knowledge is the basis of the target behavior. The higher the level of education, the more proactively acquire, understand and utilize health knowledge. On the basis of knowledge, it can form good health literacy and use it as a driving force to carry out health-promoting behaviors, and the health status is better.

However, in this survey, the correlation between monthly income and health status was not significant ($P > 0.05$). It may be that the proportion of young, temporarily non-income students in the survey was too high, which affected the results of the survey.

5) Work is related to health, the health is better

According to the analysis results, whether the work is related to health and TCM health care literacy has a significant correlation ($P < 0.05$). People whose work is health-related may have more knowledge about health, and the level of TCM health care literacy should be higher than that of work and health. However, the survey results show that the latter's TCM health literacy score is higher than the former, That may be because there are minor health-related workforce, and they may know the health knowledge of Western medicine and have less knowledge about TCM health care.

Whether the work was related to health and health status was significant ($P > 0.05$). However, the health status of people who are not related to health is better than whose work related to health. It may be due to the high intensity of work and pressure of health workers, especially Western medicine, and they are easy exposure to radioactive rays. In addition, the relationship between doctors and patients has been tense in recent years, affecting the doctor's mentality, resulting in poor health of the doctor group.

C. Gender, TCM health care literacy and health status are related

There is a positive correlation between TCM health care literacy and health status. The higher the TCM health care literacy possessed by residents, the better their health status will be. Moreover, the correlation between the dimensions of TCM health care literacy and health status is good and positively correlated. Secondly, gender and health status are negatively correlated, and men' health status is better than women'.

V. SUGGESTIONS

A. Deepen the reform of the medical and health system and improve the medical security system

We should comprehensively promote the construction of medical associations in various forms, strengthen the construction of hierarchical medical system, and solve the problem of uneven distribution of medical resources. To carry out the exploration of the total amount of medical insurance in the medical association, and strive to meet the growing consumer demand of the residents while using the medical insurance fund efficiently. Promote the trial of day surgery, gradually increase the number of pilot diseases, treat patients' conditions in a low-cost, fast and convenient way, and reduce the waste of medical resources. Strengthen and implement the signing of family doctors, and pay attention to the assessment of service quality. We also should improve the universal medical security system, promote complement basic medical insurance and major illness insurance, and promote the prosperity of commercial health insurance.

B. Establish a citizenship TCM health care literacy monitoring and evaluation system

First of all, the Health Planning Commission and State Administration of TCM should take the lead in establishing a monitoring and evaluation system for citizen TCM health care literacy, and each city (state) and county actively cooperate to regularly monitor and evaluate the TCM health literacy level of residents in the jurisdiction, and this work should be included in the government work assessment; Secondly, we should actively improve the questionnaire of "Chinese citizens health care literacy of Chinese medicine" to form a standard suitable for monitoring the level of TCM health care literacy in all regions of the country, which is conducive to the work of relevant departments; finally, actively promote the release of relevant content of TCM health care literacy in health education, improving the literacy level of citizen TCM health care.

C. Conduct targeted health education

On the one hand, for those who have low cultural level and old age, they adopt some easy-to-understand education methods and carry out intensive education repeatedly. For those who are younger and have higher cultural level, they can preach the excellent traditional Chinese medicine books such as the Yellow Emperor's Canon; For men, pass on health knowledge and healthy lifestyles to men in simple and clear materials, and strengthen their health education; On the other hand, combining health education work with the cultural education of the target population, and using cultural education to promote the healthy development of health education, such as putting some Chinese medicine common sense, theory and TCM health care movement (Tai Chi, etc.) into the teaching of primary and middle school.

D. Strengthen the promotion of TCM health care content in a multiform and multichannel way

First of all, actively use television, newspapers and other media. Professionals use the free clinics, lecture and other forms to publicize the knowledge of TCM health care, promoting citizens to take the initiative to acquire TCM health care knowledge. Secondly, actively use new media such as WeChat, to publish the teaching steps and videos of TCM health care movements (such as Taiji boxing, etc.) and simple Health Care Method of TCM(Comb method, etc.); Finally, use scientific means to promote. Strengthen the crackdown on false and exaggerated propaganda, strictly control the quality of health care programs and products, and form a good TCM health care literacy promotion and learning environment.

E. Improve the community care service system

Establish a standardized community nursing service station, improve the accessibility of nursing services and community nursing service system, pay attention to the physical health of residents, especially the elderly, and regularly carry out free medical consultations and other activities in the community; At the same time, carry out psychological counseling services to help residents establish a positive and correct view of health, promoting residents' interest in cultivating TCM health care movements; In addition, actively promote the concept of "Preventive Treatment of Disease" of Chinese medicine, and strive to create an atmosphere of community preventive care; Finally, strengthen the construction of community nursing talents, encourage talents to join community services, and pay attention to the training and assessment of community nursing staff service quality.

F. Advocate a healthy lifestyle and pay attention to sub-health interventions

Promote healthy lifestyles in a community-based unit. Actively publicize the knowledge about the healthy lifestyle and the dangers of sub-health among the whole people, Advocate healthy eating behavior, limit alcohol, smoking and other bad behaviors, promote a reasonable diet, psychological balance, and stay away from sub-health; At the same time, continuously integrate community health resources, taking the community nursing service center as a platform, the health care methods of TCM are incorporated into the healthy lifestyle, and the residents should be actively organized to carry out activities such as Taiji boxing, so as to give full play the role of TCM in preventing diseases.

VI. CONCLUSION

There is a correlation between TCM health care literacy and health status. The TCM health care literacy of the residents in the study area is low and their health status is general. Men' TCM health care literacy level is lower than women', and their health status score is higher. The older the respondent is, the less optimistic the health status is. The higher the level of education and income, the higher the level of TCM health care literacy, and work is related to health, the health is better. In order to improve their health, in addition to improving the medical and health system, measures should be taken to improve their TCM health care literacy level.

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