Investigation and Countermeasure Research on Perceived Value and Willingness to Medical Treatment of Traditional Chinese Medicine Service by the Public

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Abstract. The objective of this paper is to study the conditions of perceived value, trust and willingness to medical treatment of Traditional Chinese Medicine (TCM) service, and to explore the influence of perceived value and trust on medical treatment intention. The data were collected by questionnaire survey, using reference sampling and convenience sampling, and the data were analyzed by SPSS. 97.33 percent of respondents received TCM service, traditional Chinese medicine treatment was given priority to, the ratio as high as 85%, acupuncture, massage and cupping project; the public trust of TCM evaluation score for 4.16 (maximum 5 points) at a high level; perceived function value, economic value and time value of TCM were 3.84, 3.42 and 3.09 in medium level; perceived function value (b = 0.398, P = 0.000), perceived time value (b = 0.319, P = 0.000) and perceived economic value (b = 0.173, P = 0.000) have a positive effect on their willingness to medical treatment. Chinese public have a higher degree accept to TCM, but the service utilization is unbalance; public have high trust in TCM, but the perceived value has no obvious advantage; perceived value and trust have positive impact on intention to accept TCM.

1. Introduction

With thousands of years of history, TCM has become one of the representatives of Chinese national excellent culture. TCM service not only has the unique advantage in wide indication [1], low cost of medical [2], being easy to popularize and apply [3], but also has obvious advantage in treatment of various common and chronical disease [4]. The concept of holism of TCM has guiding value for prevention disease and plays an important role in the protection of people’s life and health as well [5].

President Xi Jinping attached importance to the following facts: it needs to excavate the essence in treasury of TCM thoroughly, to make the unique advantage of TCM into full play, to promote the modernization of TCM and to push forward TCM to the world during the 60 anniversary of the establishment of Chinese Academy of sciences of TCM. Inheriting, developing and utilizing the valuable wealth of TCM have significance in the great process of constructing healthy China and fulfilling the China dream.

This study concerned the public who once received TCM service as an investigation object, investigating perceived value and trust of TCM and the willingness to medical treatment of TCM, discussing the influence of perceived value and trust on the willingness to medical treatment. At last, the study raised corresponding suggestions so as to advance the development of TCM and to promote the utilization ratio of service according to the result.
2. Research Design

2.1 Investigation object

This study carried out a survey for the public in June 2016 and 1051 questionnaires were collected. 1023 respondents (97.33%) received TCM service. Among them, 442 respondents are male, 581 respondents are female, accounting for 43.2% and 56.8% respectively. The age of these respondents was mainly distributed from 19 to 55 years old. 0.2 percent of the respondents were under 18 years old. 14.9 percent of the respondents were between 19 and 25 years old; 45.4 percent of the respondents were between 26 and 35 years old; 28 percent of the respondents were between 36 and 45 years old; 10 percent of the respondents were between 46 and 55 years old; 1.2 percent of the respondents were between 56 and 65 years old and 0.5 percent of the respondents were over 66 years old.

2.2 Investigation method

Questionnaire survey was used to collect data, which consists of three parts: the first is the condition of the public acceptance of TCM diagnosis and treatment services; the second is to measure the trust and perceived value of TCM service as well as the willingness to medical treatment of TCM by the means of Likert 5 scale. Among them, based on the comprehensive evaluation theory [6], the scale measuring perceived value was modified with TCM service characteristics [7]; based on the study of Otani [8], the scale measuring the willingness to medical treatment of TCM was modified with TCM characteristics. The third is the public demographic variables.

2.3 Statistical method

This survey collected data by the platform called Wen Juan Xing which can automatically exert the data in the form of SPSS. SPSS 13.0 was applied to carry out statistical analysis methods mainly including descriptive statistical analysis, reliability analysis, exploratory factor analysis, analysis of variance and hierarchical multiple regression analysis.

3. Data Analysis

3.1 The condition of the public acceptance and trust of TCM service

893 respondents (85.0%) received the treatment of Chinese medicine, 469 respondents (44.6%) received the treatment of acupuncture, 416 respondents (51%) received the treatment of massage, 512 respondents (48.7%) received the treatment of cupping, 356 respondents (33.9%) received the treatment of diet, 65 respondents (6.2%) received the treatment of qigong. The result of descriptive statistical analysis showed that the mean of the trust of TCM was 4.16 (maximum 5 points) at a high level. The result of the analysis of variance suggested that there was no significant difference among the trust of TCM in different genders, ages, incomes and educational backgrounds.

3.2 Perceived value of TCM service

Firstly, the scale measuring perceived value of TCM service was conducted the analysis of reliability and validity. That the coefficient of Cronbach’s Alpha was as high as 0.829 and of each dimension was 0.790, 0.838 and 0.800 respectively, revealed the scale had a high reliability. Exploratory factor analysis showed KMO value was 0.811. By the principal components analysis, using maximum variance method to rotate, three factors was extracted, which was in accordance with the expected result. The factor load of each item was above 0.5; these factors could accumulatively explain 74.01% of the total variances. As a result, the scale had good construct validity.

Secondly, each item and dimension concerning perceived value of TCM service was carried out descriptive statistic analysis. The result indicated that the sequence of evaluation score was as follow: perceived function value (3.84) > perceived economic value (3.42) > perceived time value (3.09). As to evaluation of function value, the high agreement was received in the items “TCM has a good efficacy in the treatment of chronic disease” and “TCM is able to cure disease radically”.

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Table 1. Perceived value of TCM service.

<table>
<thead>
<tr>
<th>Perceived value</th>
<th>Categories</th>
<th>Cronbach’s alpha</th>
<th>Factor loading</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived function value</td>
<td>1. TCM has little side effect.</td>
<td></td>
<td>0.714</td>
<td>3.75</td>
</tr>
<tr>
<td></td>
<td>2. TCM is able to cure disease radically.</td>
<td></td>
<td>0.841</td>
<td>3.91</td>
</tr>
<tr>
<td></td>
<td>3. TCM has a good efficacy in the treatment of chronic disease.</td>
<td>0.790</td>
<td>0.822</td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td>4. Compared with western medicine, TCM has better efficacy in the treatment of difficult and miscellaneous disease.</td>
<td></td>
<td>0.658</td>
<td>3.68</td>
</tr>
<tr>
<td>Perceived economic value</td>
<td>5. The price of medical treatment of TCM is fair.</td>
<td>0.838</td>
<td>0.842</td>
<td>3.42</td>
</tr>
<tr>
<td></td>
<td>6. The price of medical treatment of TCM is cheaper than that of western medicine.</td>
<td></td>
<td>0.848</td>
<td>3.41</td>
</tr>
<tr>
<td></td>
<td>7. It is more convenient to hospitalize by TCM than by western medicine.</td>
<td>0.800</td>
<td>0.849</td>
<td>3.10</td>
</tr>
<tr>
<td></td>
<td>8. It is more time-saving to hospitalize by TCM than by western medicine.</td>
<td></td>
<td>0.877</td>
<td>3.07</td>
</tr>
</tbody>
</table>

Thirdly, the analysis of single-factor variance was done with the independent variables of gender, age, income and educational background as well as with the dependent variable of each dimension of perceived value. The result indicated that there was no significant difference between male and female in the perceived value of TCM service (perceived function value: Mean_{male} = 3.10, Mean_{female} = 3.85, p = 0.312; perceived economic value: Mean_{male} = 3.43, Mean_{female} = 3.39, p = 0.432; perceived time value: Mean_{male}=3.10, Mean_{female} = 3.06, p = 0.503). There were significant differences in perceived time value between different age groups (Mean_{19-25} = 2.83, Mean_{26-35} = 3.11, Mean_{36-45} = 3.08, Mean_{46-55} = 3.24, Mean_{55-65} = 3.71, Mean_{above 66} = 3.70, p < 0.01). The perceived function value of respondents whose family monthly income was below ¥1500 was significant lower than that between ¥5000 and 10000 (Mean_{below 1500} = 3.57, Mean_{5000-8000} = 3.88, Mean_{8000-10000} = 3.93, p < 0.05). The respondents whose family monthly income were below ¥1500 were significant lower than that between ¥5000 and 10000 in terms of the perception of economic value (Mean_{below 1500} = 3.09, Mean_{5000-8000} = 3.53, Mean_{8000-10000} = 3.50, p < 0.05). The respondents whose family monthly income was below ¥1500 was significant lower than that between ¥3000 and 10000 in terms of the perception of time value (Mean_{below 1500} = 2.69, Mean_{5000-8000} = 3.13, Mean_{8000-10000} = 3.93 p < 0.05). The sample was divided into two groups, one was the respondent who received higher education, and the other was the respondents who didn’t. By analysis of single-factor variance, the result showed no remarkable difference existed in the perception of function value of TCM service among different educational backgrounds.

3.3 The public willingness to medical treatment of TCM service

Descriptive statistic analysis showed that the mean of the willingness, at a normal level, was 3.40. Among them, the agreement value of “if I am ill, I will prefer to hospitalize by TCM” was 3.26; the agreement value of “if my relatives or friends are ill, I will recommend them to hospitalize by TCM” was 3.47; the agreement value of “If someone asks me to recommend, I will give priority to TCM”, at a middle level, was 3.46.

Thirdly, the analysis of single-factor variance was done with the independent variables of gender, age, income and educational background as well as with the dependent variable of the willingness to medical treatment of TCM. The result indicated there was no significant difference in the willingness to medical treatment of TCM among different genders, ages and educational backgrounds; The patients whose family monthly income was below ¥1500 was significant lower
than the ones above ¥8000-10000 in terms of the willingness to medical treatment of TCM (Mean
below 1500 = 3.14, Mean8000-10000 = 3.5).

3.4 The influence of perceived value of TCM service on the willingness to medical treatment
of TCM

Hierarchical multiple regression analysis was done with the independent variables of function
value, time value and time value, with the dependent variable of the willingness to medical
treatment of TCM and with the control variables of demographic variables including gender, age,
income, educational background and of the public trust of TCM. The result showed that excluding
the influence of control variables, the public trust, perceived function value, perceived economic
value and perceived time value of TCM services had significant impact on the intention to accept it;
the regression coefficients were 0.111, 0.325, 0.108, 0.334, which all existed significance at 99%
confidence level. In addition, there was no co-linearity relation (1<VIF<3) between each
independent variable. The perception of time value and function value had great impact on the
intention to medical treatment of TCM, while the economic value had less influence.

4. Conclusions

4.1 The public have a high acceptance to TCM, but the utilization of each service is
unbalance

In this survey, 97.33% of respondents received TCM service. Apart from the high utilization of
Chinese medicine, the utilization of acupuncture, massage, cupping project, diet etc. is general low.
The result was basically consistent with Qi Yihong’s survey which was aimed at in Jiangsu province
in 2010. For one thing, the result has something to do with the wide indication of TCM treatment.
For another, it is related to the public awareness rate and service available rate of other diagnosis
and treatment items. The services, acupuncture, massage, cupping project, etc, have a high
requirement for medical technical level of doctors, however, at present, technical personnel is
insufficient [7].

4.2 The public trust of TCM is high, but the perceived value is low

The public trust TCM, however, perceived evaluation of TCM service is relatively low. Compared with the advantage of perception of western medicine, TCM service takes no obvious
advantage in perceived function value, economic value and time value, for long therapy time and
slow action of decoction of TCM. In addition, the quality of Chinese medicinal materials also has
an influence on the public perception of function value in TCM [9]. Additionally, with the ever
increasing utilization of TCM services, once large-scale TCM hospitals fail to keep up with the
process optimization, patient waiting time will be extended, which is likely to lower the perception
of time value.

4.3 Perceived value and trust of TCM service have positive impact on intention to accept
TCM

Excluding the influence of demographic variables and other control variables, the public
perceived function value, perceived economic value and perceived time value on TCM services
have significant positive impact on the intention to accept to it. After adding the control variable of
trust, both trust and each factor of perceived function value still have significant effect on the
willingness to medical treatment.

5. Suggestions

5.1 Strengthen the popularization of knowledge of TCM and enhance the cultural
awareness of TCM

With the broad and profound of TCM culture and abundant therapy items, although the public has
certain awareness of TCM, it is quite infinite. For instance, with the exception of TCM therapy, the public awareness of other items is generally low. Therefore, the management apartment and hospital of TCM should strengthen the popularization of relevant knowledge by means of official media and propaganda column.

5.2 Promote perceived time value of patient by optimizing the medical service process

In the past five years, with the rapid development of TCM and ever increasing utilization of its services, the outpatient volume of national TCM hospital has witnessed rapid growth (the highest annual growth rate reached 12.69%). It is utterly necessary for large-scale TCM hospital to apply Internet thinking, process reengineering and simulation technology to optimize medical service process, which is eventually conducive to the improvement of perceived value of TCM.

5.3 Pay attention to the training of TCM talents; establish characteristic TCM item

The utilization of acupuncture, massage, cupping project, treatment of diet etc. is general low, which is related to not only the insufficient awareness of the public, but also the popularization of this kind item. The services, acupuncture, massage, cupping project, massage, have a high requirement for doctors, however, at present, the technical personnel is insufficient. Besides, the extension of this kind item needs high quality talents for support as well as the emphasis and establishment of medical service institution. Accordingly, on the one hand the state ought to intensify the training of TCM relevant talents. On the other hand the funds and policies should give strong backing to medical service institution and encourage the unique establishment of departments and items.

5.4 Intensify the quality supervision of Chinese medicinal materials so as to build the trust of patient in TCM

In recent years, some illegal problems of Chinese medicinal materials have gradually emerged. Firstly, the standardization of planting and breeding process has not been put into practice in right place. Secondly, the illegal behaviors, staining, weight gain, doping and counterfeit, occur to production chain and circulation link. Thirdly, in the Chinese medicinal materials specialized market, there exists the matters that defective products substitute the qualified ones; fake products replace real ones; make and sell fake products. All of these problems have an impact on the safety of Chinese medicinal materials and the effect of drugs, which would further lower patients’ perception of function value of TCM. Consequently, the state should reinforce the formulation of the standard in planting, processing and circulation link of Chinese medicinal materials so as to improve the quality supervision of Chinese medicinal materials.

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References


