



Industrial Transformation Strategic Research of Integrating Traditional Chinese Medicine into Elderly Care Services in Hubei Province Based on Data Processing and SWOT Analysis

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Abstract. Under the background of China's big health industry, the development of traditional Chinese medicine industry has ushered in a huge opportunity. The advantages of traditional Chinese medicine in the treatment of chronic diseases and geriatric diseases should be brought into play. In the era of big data, more accurate industrial transformation and upgrading strategies can be introduced based on specific data processing. In this paper, through market survey and data processing by SPSS, data shows that the feasibility of integrating traditional Chinese medicine into the pension industry. The research involved 171 participants, who responded to a topic-specific version of the Attitude towards traditional Chinese medicine in the treatment of chronic diseases and geriatric diseases Questionnaire. Several analytic techniques, including the chi-square test and Cramer's V test, showed that people got positive attitudes about traditional Chinese medicine but they also requested more services in the treatment of chronic diseases and geriatric diseases. Using SWOT analysis, the development path of integrating traditional Chinese medicine into the pension industry is discussed from the strengths, weaknesses, opportunities and threats, and put forward targeted policy suggestions. Integrating traditional Chinese medicine into the pension industry needs the joint efforts of the government, schools and enterprises. Only in this way can the two industries develop together.

Keywords: traditional Chinese medicine; Data analysis; Elderly Care Services; Social security industry; Industrial transformation; SWOT model; SPSS analysis

1 Introduction

With the growing trend of severe aging, people require more for life. As the public document shows, Tutorial for the Outline of the Healthy China 2030 Plan points out that the unique advantages of traditional Chinese medicine's should be fully utilized and the scale of Health Industry should be expanded to establish a Health Industry with a complete and optimized structure, making it a pillar industry of the national economy. Many provinces and cities in China have complied with the requirements of the new era to accelerate the development of the traditional Chinese medicine health service industry. Wuhan, a city of China, is endowed with the richest regional genuine medicinal materials with significant curative effect due to its strengths of geography and climate. Also, it has a comparatively perfect medical system and service industry, both contribute to forming a supportive environment for the development of local traditional Chinese medicine health industry. However, as a flourishing industry, the health care industry gets shallow awareness from the public as well as limited domestic researches on the health care service industry of traditional Chinese medicine. Based on, this study wants to provide the corresponding scientific bases to promote the boom of the health care industry by investigating the Wuhan public's awareness of the health care industry and analyzing the factors that influence their intentions.

2 Literature review

Although the development of health care is booming, scholars pay more attention to forest health care industry, the researches on traditional Chinese medicine health care service are less. Qingfeng Huang (2020) argued that Wuhan has the capabilities and advantages to develop the wisdom pension industry, and suggested that the could be applied to promote it to grow rapidly.[1] Xue Chen (2020) found out that there were fragmentation and imbalance existed in the further development of pension service in Wuhan. In order to solve these problems, she held the opinion that the pension service market should be fully open, diversified social welfare needed to be provided, and the talent team of aged community services should be strengthened.[2] Li Yang (2021) pointed out that the environment for development and the internet-based information platform needed to be optimized immediately. She suggested that the supply-side structural reform of pension service should be pushed ahead, and built up the information platform.[3]

Although scholars have their different focus on the health care industry, some conclusions contain universality which had lessons for the health care industry in most areas. These conclusions are capable to increase the development of the health industry and supply-side structural reform and will be the theoretical basis underlying further researches.

3 Research method

This study applied the questionnaire assessment method and literature review method and obtained effective statistics by sending out questionnaires to the local citizens in most areas of Hubei province. A general conclusion was drawn in terms of the present journal literature of the traditional Chinese medicine health care industry from 2020 to 2021.

3.1 Questionnaire

The data of this study based on were from the questionnaire sent in the eastern, middle (Wuhan), and western parts of Hubei province. To ensure the validity and authenticity of the data, this study adopted the method of random sampling, and the respondent were mainly residents of Wuhan, Hubei Province. 171 questionnaires were distributed in total, and 150 were collected. The effective rate was 87.72%.

3.2 Expert Interview

Research conversation is a way to collect objective and unbiased factual materials according to the respondents' reply in oral form to accurately explain the overall representative of the sample. The research team has interviewed several managers from government and companies.

3.3 Data Processing

According to the data obtained, this study uses SPSS to import and process, and makes a brief regression analysis. This can help us to see the problems behind the data more clearly and find the key points in the process of industrial transformation.

4 Results of the questionnaire

4.1 A Good Market Foundation

By importing the data into SPSS, more detailed information is revealed. According to the analysis of the data from the questionnaire, 88.89% of respondents are willing to use traditional Chinese medicine as the main method for prevention and health care (as is shown in **Fig. 1.**), 52.05% of respondents is in the life circle which exists health care industries and are willing to access to the integration service of traditional Chinese medicine (as is shown in **Fig. 2.**).

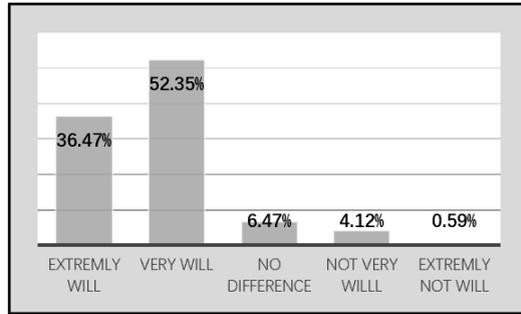


Fig. 1. Results to “To what extent are you willing to take traditional Chinese medicine as the main way in prevention and health care?”

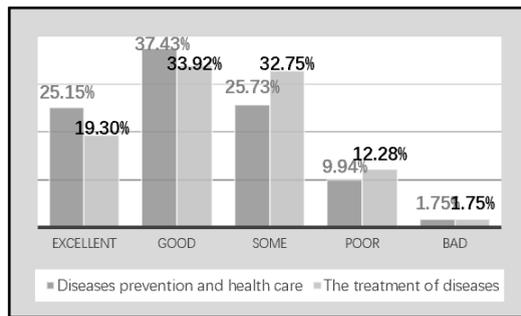


Fig. 2. Results to “How is the effect of traditional Chinese medicine in?”

Accompanied by the aggravation of the aging in China, it is expected that aging will see its peak in 2050, in which the population of elderly people will exceed 400 million, accounting for more than 20 percent of China’s population. Thus in recent years, the elderly people’s demands for the services of the health care industry will be increasing. In addition, the central government has issued Opinions of the State Council on accelerating the perfection of the socialist market economy system in the new era. With the help of policies, the health care industry will be grown positively and the firm market foundation is going to be formed.

4.2 Lack of Advertising

According to the analysis, the health care industry of traditional Chinese medicine in Wuhan province is lack of the advocacy in front of the public. The questionnaire shows that most of the respondents get information about the health care industry through their families and friends and the Internet, other approaches like TV, newspaper, and journals account for relatively little proportion (15.2 percent). It indicates that in the era of rapid dissemination of information, the health care industry in Wuhan less uses platforms for advocacy. And due to the lack of approaches to advocate, residents are exposed to the scarce opportunities to experience the health care industry.

4.3 New Opportunities for Development

Based on the analysis, we found that there were three-fifths of respondents chose home care in the question to gratify the needs for health pension, which way of the aged care do you prefer? Home care is a new way of Chinese aged service, it can help solve numerous elderly people's pension problems in the new era and is the complements to the traditional pension with government's instruction and public' involvement. At the same time, the health industry in Wuhan can be developed rapidly bases on genuine herbs and infant pension industry in Wuhan.

5 Findings and discussion

Through the above research results, it is easy to get the advantages and disadvantages of TCM integrated into the elderly care service in the eyes of the public. After analyzing and summarizing these strengths and weaknesses, it is clearly shown that the development of traditional Chinese medicine industry will also face various opportunities and challenges in the context of the combination of medical care and elderly care. All the conclusions can be summarized into the following table1 through SWOT analysis.

Table 1. Results of the SWOT Analysis

STRENGTH	WEAKNESS
<p>S1. People holds high awareness and recognition of TCM.</p> <p>S2. The therapeutic effect of TCM is more moderate and bearable.</p> <p>S3. TCM believes that prevention should be the main treatment.</p> <p>S4. TCM has a good effect in the treatment of senile and chronic diseases.</p>	<p>W1. The long treatment cycle of traditional Chinese medicine.</p> <p>W2. The imperfect service system of TCM for the aged people.</p> <p>W3. Lack of the professionals in TCM service for the old.</p> <p>W4. Lack of TCM health care products and wearable devices.</p>
OPPORTUNITY	THREAT
<p>O1. Great support of government and high public attention.</p> <p>O2. Severe aging trend produce more demands.</p> <p>O3. The concept of preventing diseases in TCM thoughts is gradually popularized.</p>	<p>T1. Insufficient support for the pension industry.</p> <p>T2. The training cycle of TCM professionals is long, and it is difficult for graduates to quickly adapt to people's changing needs.</p> <p>T3. Corporate profit models need to be innovated.</p>

Based on the mapping of strengths, weaknesses, opportunities, and threats above, an analysis is carried out to look for strategies using existing strengths to take advantage of available opportunities (S-O Strategies) and use their strengths to overcome existing threats (S-T Strategies). It also analyzed strategies to reduce the weaknesses they have in seizing opportunities that exist (W-O Strategies) and overcoming existing threats (W-T Strategies). The mapping of S-O, S-T, W-O, and W-T strategies can be seen in Table 2 to Table 5.

5.1 S-O Strategies

When it comes to the S-O strategies, the strengths should be developed to insure the opportunities can be realized. So strategies are needed to integrate the strengths and opportunities. As is shown in the table 1, there are 4 strengths and 3 opportunities. Combining different strengths and opportunities makes out different strategies.

As a result, when $S1 + S3 + O1 + O3$ are taken into account, strategies are:

- Increasing more positive publicity
- Creating health products that are convenient for more people
- Increasing the diversity of the health products

When the $S2 + S4 + O2$ are taken into account, strategies are:

- Combining TCM services with pension needs. On the one hand, it provides more pension services with Chinese medicine characteristics, and on the other hand, it develops more traditional Chinese medicine pension products

5.2 S-T Strategies

When it comes to the S-T strategies, it means that in the threats, strengths are the power to make a living and overcome all the difficulties.

As a result, when the $S1 + S3 + T1$ are combined, the strategies are:

- Issuing more support policies for the pension industry
- Providing more preferential policies for pension enterprises to help enterprises grow

And when the $S2 + S4 + T2$ are combined, the strategies are:

- Ideological education should be gradually integrated into daily learning activities to improve students' awareness
- Doctors should take the responsibility of treating diseases and rescuing people, and should not be choosers.

When the $S3 + S4 + T2$ are combined, the strategies are:

- Universities of traditional Chinese medicine should adjust the talent training plan according to the change of market demand
- Colleges should provide more inter-disciplinary talents in line with the needs of society and enterprises

When the $S2 + S3 + T3$ are combined, the strategies are:

- Developing and innovating more traditional Chinese medicine treating pre-disease products to provide universal health care products.

When the $S2 + S4 + T3$ are combined, strategies are:

- Providing safer and more comfortable traditional Chinese medicine services for elderly people
- Developing and innovating portable products and wearable devices suitable and easy to use for elderly people

5.3 W-O Strategies

When it comes to the W-O strategies, it considers the weaknesses and opportunities at the same time. Actually, when the weaknesses are overcome, opportunities are coming. So the weaknesses need to be changed to create more opportunities.

As a result, when it comes to the **W1+O1** situation, the strategies can be inferred as:

- Building the whole industry chain of traditional Chinese medicine industry
- Improving the skills of doctors to make them more competitive
- Optimizing the quality of TCM
- Introducing high-tech products to the area to improve make the TCM more competitive

- Improving the curative effect of the TCM

When it comes to the **W2+W4+O1+O2** situation, the strategies can be inferred as:

- Creating a whole industry chain of traditional Chinese medicine industry
- Innovating and improving the TCM pension service network in a very active way
- Providing good hardware and software facilities for the pension industry

When it comes to the **W3+O1+O2** situation, the strategies can be inferred as:

- Giving full play to the role of universities of traditional Chinese medicine
- Actively deploying education mode of combining production, study, and research, and cultivate talents needed for social development

5.4 W-T Strategies

When it comes to the W-T strategies, it considers the weaknesses and threats at the same time. Actually, if the weaknesses are not overcome, the threats are coming. So the weaknesses need to be changed and the threats need to be faced.

When it comes to the **W2+T2** situation, the strategies can be inferred as:

- Issuing more support policies for the pension industry
- Providing more preferential policies for pension enterprises to help enterprises grow

When it comes to the **W1+W3+T2** situation, the strategies can be inferred as:

- Give full play to the role of universities of traditional Chinese medicine
- Deploying the education mode of combining production, study, and research
- Cultivating talents needed for social development

When it comes to the **W2+W4+T3** situation, the strategies can be inferred as:

- Building a fully functioning pension service system
- Encouraging school-enterprise cooperation
- Deploying innovative research and development, increasing the diversity of traditional Chinese medicine services
- Improving the profitability of the industry

5.5 Results

The results of the S-O, S-T, W-O and W-T analyzes are summarized into real work programs that are ready to be implemented for empowering the developing strategies

of the integrating TCM into elderly care services. The process of summarizing is by re-registering all the S-O, S-T, W-O and W-T strategies in a table then sorted according to their level of importance. The results are as in Table 2.

Table 2. Summarizing Results of All Strategies

NO.	Types of Strategies	Forms of Work	Strategies
1	SO, ST, WT	Promoting TCM culture, enhancing public awareness of TCM; The prosperity of pension industry needs the intervention of TCM service; The construction of TCM pension service system needs more political supports.	The government should introduce related stimulus measures to improve TCM pension service system.
2	ST, WO, WT	Tighten up ideological education to improve contribution consciousness; Training professionals of TCM for the aged; Training professionals for TCM health care companies.	TCM colleges and universities should constantly adjust the personnel training mode to the changing demands of society. By cooperating with enterprises, institutes, TCM colleges should cultivate undergraduates that adapting to society.
3	ST, WO	Guarantee the quality of medicinal materials; Demand for more professionals; The precision of enterprise service and the diversification of products.	A whole industry chain development model can ensure the effective development of TCM industry.
4	SO, WT	The TCM products for disease prevention should be convenient for old people; Drugs for chronic diseases and geriatric diseases; Developing and innovating portable products and wearable devices suitable and easy to use for elderly people; More products bring more profits to enterprises.	When develop new products enterprises should pay more attention to the retention of the drug effectiveness of chronic diseases and geriatric diseases as well as the convenience of device use, especially for old people.

6 Conclusion

Through the data collection and above analysis, it is found that the integration of traditional Chinese medicine into the pension industry needs the coordinated development of three main bodies, namely the government, universities and enterprises.

Firstly, the government should introduce related stimulus measures to improve TCM pension service system.

Secondly, TCM colleges and universities should constantly adjust the personnel training mode to the changing demands of society.

Thirdly, by cooperating with enterprises and institutes, TCM colleges should cultivate undergraduates that adapting to society.

Fourthly, a whole industry chain development model can ensure the effective development of TCM industry.

Last but not the least, when develop new products enterprises should pay more attention to the retention of the drug effectiveness of chronic diseases and geriatric diseases as well as the convenience of device use, especially for old people.

References

1. Huang, Q.F. (2020) Promote Wuhan smart health care industry with “Five development strategies”. *Yangtze Tribune*, 05: 26-29.
2. Chen, X. (2020) Problems and Countermeasures of government purchasing elderly care services -- a case study of Wuhan City, Hubei Province. *Reform and Openning*, 24: 53-56.
3. Zhuo, R. (2021) On the elderly care service mode of "combination of medical care and maintenance". *Economic Research Guide*, 11: 73-75.
4. Dargahi, H., Darrodi, A., & Zalvand, R. (2019) Family medicine program in Iran: SWOT analysis and TOWS matrix model. *Iranian Journal of Public Health*, 48(6).
5. Sun J.L., Liu S.J., Suo H.Y., Chen G. (2022) Theoretical Thinking on Science and Technology Supporting the Development of Elderly Care Services from the Perspective of Social Governance. *Population and Development*, 28(01):50-58.

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