



An Investigation and Analysis on Constitution Identification for Elderly Population over 65 Years Old

Yun Jia*, Yifeng Zhang

Affiliated Hospital, China University of Geosciences, Wuhan 430074, China

*Corresponding author: jiayun@cug.edu.cn

Abstract. To provide theoretical basis for the prevention and health care of the elderly with traditional Chinese medicine (TCM), 752 elderly people over 65 years old in a university community in Wuhan were investigated with the question form of TCM constitution combined with the judgments of the TCM doctors, then the results of constitution identification are analyzed. The elderly are more common with mixed constitutions accounting for 60.64%. Yin deficiency, Yang deficiency and blood stasis are the top three types of based constitution. As age increases, the ratio of normal constitution decreases, the ratio of biased constitution increases, and gradually tends to be deficient. It can be concluded that prevention and intervention programs targeted health guidance should be provided for different constitutions in the elderly, and an integrated health care strategy of Chinese and Western medicine should be adopted to improve their health status.

Keywords: TCM, Elderly Population, Constitution Identification, Investigation

1 Introduction

With the rapid development of the national economy, people's material life has been greatly enriched and their attention to health has also been increased. From ancient times to the present, generations of medical practitioners have emphasized the importance of "prevention before disease and prevention of changes after disease". How to do well in "TCM prevention" is mainly based on TCM constitution identification. According to the "National Basic Health Service Specification", community hospitals should conduct TCM constitution identification for the elderly above 65 years old every year, and provide better guarantees for elderly health management. Conducting TCM constitution identification for the elderly, guiding TCM health care and preventing disease before it occurs have important social significance for alleviating the scarcity of health resources [1].

Constitution refers to the individual's inherent characteristics of function and morphological stability that is formed by the adaptation of natural and social environments under the influence of both congenital (parental) inheritance and various post-natal factors. TCM constitution identification is based on the individual's constitution.

© The Author(s) 2023

S. Yacob et al. (eds.), *Proceedings of the 2023 7th International Seminar on Education, Management and Social Sciences (ISEMSS 2023)*, Advances in Social Science, Education and Humanities Research 779, https://doi.org/10.2991/978-2-38476-126-5_212

According to different constitution types, different treatments are given, comprehensively understanding the overall health and disease and the individualization of constitution, and formulating corresponding prevention and treatment methods. Due to regional differences in living conditions, habits, etc., the health status of elderly people in each region differs greatly, and their constitution types also vary. In this paper, a TCM constitution survey is being conducted on elderly individuals above 65 years old in China University of Geosciences (Wuhan) to understand the constitution characteristics of the elderly and provide theoretical basis for prevention and health care.

2 Materials and Methods

2.1 Object

752 elderly individuals who participated in the physical examination for the elderly at China University of Geosciences (Wuhan) hospital in September 2022 were selected as study participants.

Inclusion criteria: (1) individuals who live in the community and participating in the elderly physical examination; (2) individuals who have knowledge of and agree to participate in the survey, understand the questionnaire, and cooperate with the doctor to complete TCM constitution identification and receive TCM conditioning programs. Exclusion criteria: (1) individuals with mental illness who cannot communicate normally; (2) individuals with serious illnesses who cannot understand the content of the questionnaire; (3) individuals who does not give informed consent; (4) individuals who does not complete the questionnaire or cannot cooperate with the TCM physician's examination.

2.2 Content

The study includes basic information and TCM constitution survey. Basic information includes name, gender, birthday, marital status, occupation, medical history, etc. TCM constitution survey is conducted using the form of "TCM Constitution Evaluation and Judgment" ^[2] developed by the Chinese Society of TCM, which consists of 33 items related to daily habits, psychology and physical examinations. Each item is scored based on the options "never", "occasionally", "sometimes", "often" and "always". The constitution type is determined based on the respective items and its scores. The 9 constitution types ^[3] are moderate, Qi-deficiency, Yang-deficiency, Yin-deficiency, phlegm-dampness, dampness-heat, blood stasis, Qi-depression and special constitutions.

2.3 Methods

A TCM constitution identification survey team distributed the TCM Health Constitution Management Questionnaire to each elderly participant. After completing the questionnaire, the data was entered into the TCM constitution calculation software.

The standard for determining biased constitution was the sum of scores for each item: if the score is ≥ 11 points, it is determined as "yes"; if the score is 9-11 points, it is determined as "tendency", and if the score is ≤ 8 points, it is determined as "no". The standard for determining moderate constitution is as follows: the sum of scores for each item is ≥ 17 points, and the scores for the other eight constitutions are all ≤ 8 , it is determined as "yes"; the sum of scores for each item is ≥ 17 points, and the scores for the other eight constitutions are all ≤ 10 , it is determined as "basically yes"; if the above conditions are not satisfied, it is determined as "no". The constitution type was generated according to the scores for each item, and two intermediate or above TCM physicians analyzed the results, especially when multiple constitutions coexist, TCM physicians need to comprehensively judge the elderly person's constitution type based on the patient's actual situation and the four diagnostic methods.

After the data collection was completed, SPSS20.0 statistical software was used for statistical analysis, and chi-square test was used for analysis. $P < 0.05$ indicated a statistically significant difference.

3 Results

3.1 Distribution of Constitution Types

Among the 752 elderly individuals above 65 years old, the most common constitution was the biased constitution with two or more constitution types, accounting for 60.6% (456 individuals). The number of moderate constitutions was relatively low, with 136 individuals, accounting for 18.1%. Female moderate constitution accounted for a lower proportion than males, while female biased constitution accounted for a higher proportion than males, $p < 0.05$. Table 1 lists the results.

Table 1. Distribution of Constitution Types among Elderly Individuals of Different Genders

Constitution Type	Male (Percentage)	Female (Percentage)	Total (Percentage)
moderate	96 (25.3%)	40 (10.8%)	136 (18.1%)
Qi-deficiency	8 (8.3%)	10 (2.7%)	18 (2.4%)
Yang-deficiency	10 (2.6%)	24 (6.5%)	34 (4.5%)
Yin-deficiency	20 (5.3%)	14 (3.8%)	34 (4.5%)
blood stasis	6 (1.6%)	8 (2.2%)	14 (1.9%)
dampness-heat	2 (0.5%)	6 (1.6%)	8 (1.1%)
Qi-depression	2 (0.5%)	0 (0%)	2 (0.3%)
phlegm-dampness	36 (9.5%)	8 (2.2%)	44 (5.9%)
special	4 (1.1%)	2 (0.5%)	6 (0.8%)
biased	196 (51.6%)	260 (69.9%)	456 (60.6%)

3.2 Composition Ratio of Biased Constitution Types

Among the elderly individuals, biased constitution with two or more constitution types was common while single constitution was relatively rare. The top three specific

biased constitution types were Yin-deficiency, Yang-deficiency and blood stasis, with $p < 0.05$. It can be seen from Table 2.

Table 2. Composition Ratio of Biased Constitution Types

Constitution Type	single	biased	Total (Percentage)
Qi-deficiency	18	210	228 (12.6%)
Yang-deficiency	34	252	286 (15.9%)
Yin-deficiency	34	266	300 (16.6%)
blood stasis	14	250	264 (14.6%)
phlegm-dampness	44	170	214 (11.9%)
dampness-heat	8	156	164 (9.1%)
special	6	94	100 (5.5%)
Qi-depression	2	110	112 (6.2%)

3.3 Distribution of Constitution Types among Different Age Groups

For elderly individuals aged 65-69 years, the top three biased constitution types were dampness-heat, blood stasis and Yin-deficiency. For those aged 70-79 years, the top three constitution types were Yin-deficiency, Yang-deficiency and blood stasis. For those aged 80 years and above, the top three constitution types were Yin-deficiency, Yang-deficiency and Qi-deficiency, with $p < 0.05$. It can be seen from Table 3.

Table 3. Distribution of Constitution Types among Different Age Groups

Constitution Type	Aged 65-69 (Percentage)	Aged 70-79 (Percentage)	Aged 80+ (Percentage)
moderate	54(8.9%)	40(6.8%)	42(9.4%)
Qi-deficiency	70(11.5%)	64(10.8%)	76(17.0%)
Yang-deficiency	72(11.8%)	102(17.3%)	78(17.5%)
Yin-deficiency	74(12.2%)	112(19.0%)	80(17.9%)
blood stasis	78(12.8%)	100(16.9%)	72(16.1%)
phlegm-dampness	58(9.5%)	76(12.9%)	36(8.1%)
dampness-heat	98(16.1%)	18(3.1%)	40(9.0%)
special	38(6.3%)	38(6.4%)	18(4.0%)
Qi-depression	66(10.5%)	40(6.8%)	4(0.9%)

4 Discussion

(1) The proportion of moderate constitution among residents over 65 years old in the investigation community was less than 20%, and the most common constitution type was biased constitution. It suggests that most elderly individuals are in a sub-healthy state. Female moderate constitution was less than male moderate constitution, while female biased constitution was more than male biased constitution, as the formation factors of constitution are diverse and have relatively stable inherent characteristics.

In other words, constitution is inherent but can be influenced by various factors. And individual differences in physiological structure and pathological characteristics are extremely complex, which inevitably leads to the coexistence or change of constitutional characteristics, and it has been shown that biased constitution with two or more types is commonly found in the general population. Due to the gradual decline of elderly individuals' physical functions and the influence of multiple pathological factors, it is more likely to have biased constitution with two or more constitution types, while possessing two or more biased constitution characteristics.

(2) The top three biased constitution among elderly individuals in the investigation community were Yin-deficiency, Yang-deficiency and blood stasis. The moderate constitution was less common among elderly individuals, and biased constitution was more common. When analyzing single biased constitution and biased constitution with two or more constitution types together, the top three biased constitution types were Yin-deficiency, Yang-deficiency and blood stasis. Yin-deficiency constitution refers to the deficiency of Yin fluids and has symptoms of dry mouth and throat, and heat in the hands, feet, and chest. Yang-deficiency constitution mainly displays symptoms of insufficient Yang Qi, aversion to cold, and cold hands and feet. Blood stasis constitution mainly displays poor blood circulation and a dark complexion. This is related to the climate characteristics of Wuhan and the occupation of elderly individuals in the investigation community. Elderly individuals should take blood-activating and stasis-resolving therapy as a general treatment and pay attention to conditioning and improving their blood stasis constitution to prevent the occurrence of diseases.

(3) The types of biased constitution among elderly individuals vary according to age. The top three constitution types for the elderly in the lower age group were dampness-heat, blood stasis and Yin-deficiency. The top three for the middle-aged elderly were Yin-deficiency, Yang-deficiency and blood stasis. The top three for the elderly aged 80 and above were Yin-deficiency, Yang-deficiency and Qi-deficiency. Elderly individuals' metabolism slows down, and the functions of the organs gradually decline, leading to a tendency towards deficiency syndrome. For them, the focus should be on nourishing the deficiency, regulating the balance of Yin and Yang. Due to the geographical location and their lifestyle and profession, their constitution is complex and diverse, with more than half of them having multiple constitution types. Personalized health guidance should be provided for them based on their specific constitution characteristics, including dietary education, living habits, emotional regulation, physical exercise, acupuncture, and Chinese medicine, to improve their biased constitution state, promote physical and mental health, and prevent and treat diseases.

5 Conclusion

To improve the quality of life of the elderly, personalized Chinese medicine health guidance should be given based on their constitution type characteristics, including adjustments in diet, daily habits, and exercise. In addition, medicinal food, Chinese

medicine, and acupuncture and massage therapy can also be used to gradually correct biased constitution and achieve a balanced state, aiming to improve suboptimal health conditions and lay a foundation for disease prevention. And in the health management services for the elderly, modern Western medicine and traditional Chinese medicine should be combined, and personalized programs should be developed based on elderly individuals' health examinations and constitution status.

In summary, TCM constitutional identification is an important part of health management services for the elderly, which plays a positive role in the retired elderly of university communities^[4-5]. In the future, more effort is needed to promote it, so that more elderly individuals can better understand their constitution type through its identification, and receive guidance about diet, emotional regulation and other aspects, which is helpful to improve their health conditions, prevent the diseases and enhance their quality of life.

References

1. Liu HX. Application of patient management based on Traditional Chinese Medicine Constitution Identification in community elderly health management [J]. *Chinese Community Doctors*, 2021, 37(30): 184-185.
2. Wang Q, Zhu YB, Xue HS, et al. Preliminary Development of Traditional Chinese Medicine Constitution Scale [J]. *Chinese Journal of Clinical Rehabilitation*, 2006, 10(3): 12-14.
3. Chinese Association of Traditional Chinese Medicine. Constitution classification and identification of Traditional Chinese Medicine [M]. Beijing: China Traditional Chinese Medicine Press, 2009: 1-7.
4. Yang R, Li P, Wen XP, et al. Analysis on Medication Rules of 9 Traditional Chinese Medicine Constitution Nourishing Diets [J]. *Guide of Traditional Chinese Medicine and Pharmacy*, 2019, 25(11): 38-41+58.
5. Gong JF, Jia X, He YC. Application of Traditional Chinese Medicine Constitution Identification in Health Management for Elderly Population [J]. *Chinese Journal of Management of Traditional Chinese Medicine and Pharmacy*, 2019, 27(24): 156-157.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

