

Research on Taking TCM Health Cultivation as General Education Course for College Students and its Optimization by Using Information or AI Technology

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Abstract. The culture of Traditional Chinese medicine (TCM) health cultivation is vast and profound, with a long history of making significant contributions to disease prevention and treatment for people. In universities, TCM health education can not only cultivate college students' noble ethics and sentiments, but also improve their physical fitness. Through analyzing the results of an investigation on TCM health literacy among college students, the necessity, the feasibility and the promotion function of taking TCM health cultivation as a general education course for college students are discussed in this paper. To deal with the possible teaching problems, the advantages and the measures of course optimization by using information or artificial intelligence (AI) technology are also presented. The use of modern technology to optimize the course can not only promote Chinese culture but also provide more scientific and viable methods and technologies for people's health cultivation.

Keywords: TCM health cultivation; general education course; course optimization; information technology; artificial intelligence

1 Introduction

The culture of health cultivation in Traditional Chinese Medicine (TCM) is an important component of the 5000-year-old culture of our Chinese nation and a gem of world culture. The science of TCM health cultivation with rich content is summarized from several thousand years of practical experience, which emphasizes holistic concept and dialectical treatment and can help people to achieve the goal of maintaining health and longevity through adjusting diets, physical activities and other means guided by the TCM theory. With the improvement of people's material and spiritual life, health has become an important issue, and the demand for health knowledge is becoming increasingly urgent. College students are the future of our country. As a famous saying goes, well equipped youths lead to a powerful country. Therefore, only by valuing the cultivation of more young talents can our country be strong. Health is the cornerstone for the success of every young people. Without health, everything is just an empty talk. In 2014, the National Health and Family Planning Commission identified the education of TCM health cultivation as one of the important contents about health education [1]. Therefore, it is an effective way to take TCM health cultivation as a general education course

in universities which can provide students with more in-depth and comprehensive health knowledge and help improve their health awareness and health cultivation skills[2].

2 Investigation on TCM Health Literacy among College Students

2.1 Investigation Content

This investigation was conducted in September 2022 after students had enrolled in China University of Geosciences (Wuhan). A total of about 2000 college students were randomly selected as the research subjects. A self-designed questionnaire on TCM Health Literacy [3] was used, including gender, age, major, knowledge of TCM health, lifestyle and dietary habits. As a result, a total of 1839 valid questionnaires were collected and then analyzed using the SPSS software.

2.2 Investigation Results

Regarding knowledge of TCM health culture, 15% of the college students had some knowledge, 64% had no knowledge, and only 21% had a good grasp of it. As for the understanding of the holistic concept, adapting to the four seasons, individual differences, and integration of form and mind of TCM health cultivation, only 5% of the students had a certain level of knowledge. In terms of the methods of TCM health cultivation, the percentage from high to low was 87% (cupping), 83% (massage), and 62% (medicated diet). In addition, 67% of the college students had tried the practices of TCM health cultivation, 91% had expressed the willingness to learn the knowledge of TCM health cultivation, 67% had unhealthy lifestyles, and 34% of the college students had suffered from long-term emotional issues.

2.3 Result Analysis

The investigation results indicate that contemporary college students have a relatively high awareness of health cultivation, have some knowledge of health cultivation methods, and have strongly desire to learn the knowledge of TCM health cultivation, but know very little about the theoretical knowledge of TCM health cultivation. The reason mainly lies in the difficulty in understanding the academic concepts and thinking methods in TCM, and a lack of systematic learning of TCM health cultivation knowledge. In addition, the health status of college students is worrying, which is related to their irregular eating habits, staying up late, lack of exercise, poor emotional regulation and tense interpersonal relationships [4].

With the improvement of living standards and the changes in lifestyle, the incidence of chronic diseases has been increasing year by year with a trend towards young people. In recent years, sudden death incidents among college students have become common, highlighting the urgent need for the popularization of TCM health cultivation knowledge. General education courses provide good opportunities for college students to expand their knowledge and enhance their cultural literacy. Therefore, it is necessary to take TCM health cultivation as a general education course in universities. This course mainly teaches college students the basic knowledge and methods of TCM health cultivation such as TCM diet, TCM massage, TCM gymnastics and others, as well as introducing the basic theories of TCM to pass on the traditional culture to the younger generation so as to spread the Chinese culture and enhance our cultural confidence.

3 The Feasibility of Taking TCM Health Cultivation as General Education Course

3.1 The Guide Value of TCM Health Cultivation Culture for College Students

TCM health cultivation culture has a long history and is an essential treasure bestowed upon Chinese people by their ancestors, including the social environment, thinking mode, and philosophical ideas [5]. The core values of TCM culture can be summarized by the words of "benevolence, harmony, precision, and sincerity", reflected in the fundamental concepts of humanism, benevolent medicine, unity of heaven and man, harmonious balance, and the basics of medicine's earnestness and sincerity. By incorporating TCM health cultivation course into general education courses, college students can be guided to cultivate good professional ethics and noble sentiments, and establish harmonious interpersonal relationships.

Firstly, benevolence is the foundation of all morality. TCM culture contains the virtue of benevolence, which emphasizes that a good physician should possess a compassionate heart and noble morality and is also the requirement for medical practitioners in the development of TCM culture. Incorporating good medical ethics and medical style as part of TCM culture can cultivate college students' sense of dedication and benevolence, promote constant improvement of professional skills to meet job demands, and foster good professional ethics.

Secondly, the thoughts of harmony contained in TCM health cultivation culture have important significance for college students to understand and reflect on the relationship of man with nature, society and people. The concept of "unity of heaven and man" in TCM health cultivation culture can help college students establish the concept of "interpersonal harmony" in interpersonal communication. Overall, college students are good at handling interpersonal relationships, but self-consciousness may be too strong, with individualism being prioritized over cooperation, leading to inadequate handling of complex relationships and causing tension between classmates. The thoughts of harmony in TCM culture can help college students cultivate a positive and optimistic attitude, cultivate the spirit of teamwork that emphasizes unity and cooperation, and achieve harmonious and friendly interpersonal relationships.

3.2 The Promotion Function of TCM Health Cultivation Knowledge for College Students

To learn the knowledge of TCM health cultivation, there are several benefits for the promotion of college students' health.

(1) Adapting to the four seasons and preventing diseases. The thoughts of "working at sunrise and resting at sunset," and "spring-growing, summer-blossoming, autumn-harvesting, and winter-storing" are summary of human experience gained through observing nature. The changes in the climate of the four seasons have a significant impact on human body. The physiological functions of human body's internal organs can only remain healthy and long-lasting if they adapt to the changes in four seasons, maintain coordination and balance with the external environment. It is essentially consistent with the principles of "adapting to the season" in TCM health cultivation culture, that is, only by adapting to the changes in four seasons while taking appropriate measures can the physiological activities of the human body sync with the natural changes which will maintain the coordination of the internal and external environments. Through the course of TCM health cultivation, college students can master the

principles of adapting to the season and actively adopt various health cultivation measures to adapt to changes, which can maintain the balance of Ying and Yang and prevent diseases.

(2) Moderate diet and regular life. In TCM health cultivation culture, attention has been paid to the regularity of living habits, combined with nutritious diets to maintain suitable body temperature to keep healthy. Many ancient books of TCM recorded the practices of regulating the diet for health and the do's and don'ts of health cultivation through diet. Unfortunately, many college students have bad eating habits, such as irregular meals, picky eating, only eating certain food, and dieting. The poor diet habits will damage the spleen and stomach and hurt the physical health. Throughout the course of TCM health cultivation, college students can be taught to form good living habits of regular daily routines, learning and entertainment with moderation so as to maintain good physical and mental health.

(3) Combine movement and stillness, and choose suitable exercises. TCM exercise emphasizes the combination of TCM theory and Chinese traditional philosophy for the purpose of promoting health and longevity by enhancing physical health through physical exercise, combined with breath control to regulate Qi and blood flow, as well as to regulate organ functions. TCM believes that both movement and stillness need to be moderate. Only by combining movement and stillness can the aim of health cultivation and disease prevention be achieved. TCM has always valued the role of "movement" in health cultivation, and has also developed many national fitness exercise methods, the most famous one of which is Tai Chi. Exercise is vital for health, and there are many forms, including walking, running, fitness routines, yoga, hiking, swimming and martial arts. Throughout the course of TCM health cultivation, college students can be taught to do some TCM exercises to promote metabolism, improve organ structure and function, boost the immune system.

(4) Cultivate mental well-being and physical harmony. TCM mental health practice is guided by TCM theory, which is applied according to different personality types and psychological conditions to help maintain a healthy mind and body [6]. An ancient book about TCM, named "Inner Classic", points out that "joy harms the heart, anger harms the liver, worry harms the lungs, thinking harms the spleen, and fear harms the kidneys." Changes in mental health are closely related to physiological and pathological variations in the body. Emotional factors are crucial in the development of sub-health status among college students. Therefore, maintaining a positive and optimistic attitude in daily life contributes to physical and mental well-being. Modern medical research confirms that people can change their physiological and pathological states by self-adjustment to prevent and cure diseases. Throughout the course of TCM health cultivation, college students can be taught to protect their physical and mental health by maintaining a positive and optimistic attitude, keeping calm and serene, and striving to be positive in all aspects.

(5) Everyone is unique, and personalization is crucial for health. Physical constitution is an objective biological phenomenon, a relatively stable trait that integrates one's physical structure, physiological functions, and psychological states based on genetic inheritance and acquired factors. According to the "Classification and Determination Standards of TCM Constitution," modern TCM theory has roughly classified body constitutions into nine categories: moderate, Yang deficiency, Qi deficiency, Yin deficiency, phlegm dampness, dampness heat, blood stasis, Qi depression, and special body constitution. TCM health cultivation based on body constitution means adapting to constitution stability, using

constitution adjustability, and adopting targeted health cultivation methods in line with individual constitution to improve biased or deficient constitution, and achieve the goal of healthy living [7]. Thought the course of TCM health cultivation, college students can learn more knowledge about the physical constitution of themselves. Given the diversity of physical constitutions, personalized health cultivation methods are necessary. According to this standard, college students can be taught to adjust their lifestyles timely, as well as alleviate symptoms of sub-health or disease.

4 Course Optimization by Using Information Technology or Artificial Intelligence (AI) Technology

Although it plays a crucial role in safeguarding the physical and mental health of college students to take TCM health cultivation as a general education course, there are some practical problems. The short duration of the course and the lack of medical background knowledge among many college students make it difficult for them to understand the TCM theory. Therefore, the key to improve the teaching of this course is to strengthen students' understanding of the TCM theory. Additionally, due to the shortage of teaching staff and medical resources, the teaching content is currently limited to the theory and students cannot participate in practical activities. To deal with these possible problems, it is a good way to reform and optimize the course by using information technology or Artificial Intelligence (AI) technology [8]. The advantages and the measures to be taken can be summeried as the follows.

Firstly, it can improve the interactivity and the interest. Through virtual simulation, the concepts of meridians, acupoints and other TCM health cultivation knowledge can be directly presented to students, which will enhance their learning interest and initiative. For example, Virtual Reality (VR) [9-11] technology can provide students with the panoramic map of TCM acupoints, allowing them to observe the location and function of these acupoints.

Secondly, it can provide more comprehensive and abundant teaching resources. Digitizing a large number of TCM ancient books, classics, cases, etc., can provide teachers with more professional and in-depth teaching tools, and allow students to fully understand the theoretical knowledge of TCM health cultivation.

Thirdly, it can increase the practicality. Information or AI technology can realize many simulation funcitons of TCM diagnosis and treatment, whihc allows students to have the opportunity for practical operation, and help them better understand the practical skills and experiences of TCM health cultivation.

Finally, it can provide a more convenient studing environment. Students can carry out flexible learning and communication through online courses, online Q&A, etc., avoiding the limitations of time and space.

5 Conclusions

In this papar, an investigation on TCM health literacy among college students is firstly carried out and analyzed, then the necessity, the feasibility and the promotion funciton of taking TCM

health cultivation as general education course for college students are discussed. To deal with the possible teaching problems, the advantages and measures of course optimization by using information technology or AI technology are also presented. By studying TCM health cultivation course, college students can form a correct understanding of TCM and be guided to apply reasonable health cultivation measures in daily life, eliminate bad habits, maintain a healthy diet, exercise scientifically, enhance their health awareness and improve their ability to prevent diseases [12]. The optimization of TCM health cultivation course by using information or AI technology is innovative and practical. Although TCM health cultivation is a traditional discipline, the use of modern technology to reform and optimize it can not only promote Chinese culture but also provide more scientific and viable methods and technologies for health cultivation of modern people. In the future, the TCM health cultivation course must be continuously optimized according to the practical situation of students, truly integrating TCM health cultivation content into their learning and daily life, providing health protection, and achieving sustainable development of higher education.

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