
Survey and Analysis of Traditional Chinese Medicine Cultural Identity Among Vocational College Medical Students

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Abstract: *Objective:* This study aims to understand the current status of traditional Chinese medicine (TCM) cultural identity among vocational college medical students and provide strategies and recommendations to further enhance their recognition of TCM culture. *Methods:* From May to June 2024, a convenience sampling method was used to survey medical students from four vocational colleges in Anhui Province using the Traditional Chinese Medicine Cultural Identity Scale. A total of 1,488 valid questionnaires were collected. *Results:* The overall average score for TCM cultural identity among medical students was 4.50 ± 0.48 , indicating a relatively high level. Among the three dimensions, the cognitive dimension scored the highest, followed by the affective dimension, while the behavioral dimension scored the lowest. Significant differences were found in TCM cultural identity among students based on gender, grade, major, and method of major selection. *Conclusion:* It is recommended to strengthen the practical teaching of TCM culture, with a particular focus on female students, lower-grade students, students from non-autonomously selected majors, and those without a background in TCM, to effectively enhance their recognition of TCM culture.

Keywords: Traditional Chinese medicine cultural identity; Medical students

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1. Introduction

Traditional Chinese medicine culture is an important component of Chinese traditional culture. It embodies the characteristics and connotations of Traditional Chinese Medicine (TCM) and includes multiple dimensions, such as cognitive, affective, and behavioral aspects [1]. The “Strategic Plan for the Development of Traditional Chinese Medicine (2016–2030)” proposed vigorous promotion of TCM culture [2]. Medical students are the main force in the

inheritance of TCM culture, and the higher their recognition, the more beneficial it is for TCM culture inheritance [3]. However, with globalization, there has been a continuous weakening of TCM cultural inheritance, and even phenomena such as contempt for, disbelief in, and refusal to use TCM have emerged [4,5]. Therefore, this study aims to investigate the TCM cultural identity of medical students, providing strategies and recommendations to further enhance their level of TCM cultural recognition.

2. Subjects and methods

2.1. Subjects

From May to June 2023, a convenience sampling method is used to conduct a questionnaire survey among medical students from four vocational colleges in Anhui Province. The inclusion criteria are: (1) full-time vocational college medical students, (2) voluntary participation in the study, and (3) ability to fully comprehend and respond. The exclusion criteria are: (1) incomplete questionnaires, missing information, or logical errors, and (2) students who were on leave or had withdrawn from school.

2.2. Survey tools

2.2.1. General information survey

A general information survey is designed by the researchers based on literature review and expert consultation, including gender, age, grade, major, and method of major selection.

2.2.2 Traditional Chinese medicine cultural identity scale

The Traditional Chinese Medicine Cultural Identity Scale, developed by Pan (2019), is used. The scale includes 18 items across three dimensions: cognitive, affective, and behavioral. It uses a 5-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree,” corresponding to scores from 1 to 5. Higher scores indicate a higher level of TCM cultural identity. In this study, the overall Cronbach’s α coefficient is 0.953, and the dimensions ranged from 0.844 to 0.953, indicating good reliability and validity.

2.3. Data collection and quality control methods

Data are collected using both online and offline methods. After obtaining consent from teachers at the four vocational colleges, online questionnaires are distributed through the Wenjuanxing link, and offline questionnaires were distributed in class. Before filling out the questionnaires, participants are provided with instructions, explaining the research purpose and precautions. All participants are informed about the study and gave consent. The survey is anonymous, with a single-use device and account to ensure data authenticity and reliability. A total of 1,595 questionnaires are distributed, and invalid questionnaires with identical answers, incomplete information, or obvious errors were excluded. Ultimately, 1,488 valid questionnaires are collected, with a valid response rate of 93.3%.

2.4. Statistical methods

Data are analyzed using SPSS 24.0 software, with data accuracy ensured through double-checking. Measurement data are expressed as mean \pm standard deviation ($\pm s$). Inter-group differences are tested using independent sample t-tests or analysis of variance (ANOVA), with $P < 0.05$ indicating statistically significant differences or correlations.

3. Results

3.1. Medical students' TCM cultural identity scores

The total average score for TCM cultural identity among medical students was 4.50 ± 0.48 . The cognitive dimension had the highest average score (4.52 ± 0.48), while the behavioral dimension had the lowest (4.43 ± 0.54). The total average score for major recognition was 3.94 ± 0.70 , with the cognitive dimension scoring the highest (4.00 ± 0.74) and the appropriateness dimension scoring the lowest (3.88 ± 0.77). The details are shown in **Table 1**.

Table 1. TCM cultural identity and major recognition scores among medical students (n=1488)

Item	M \pm SD	<i>t</i>	<i>P</i>
Cognitive	4.52 \pm 0.48	122.476	<i>P</i> < 0.001
Affective	4.54 \pm 0.50	119.785	<i>P</i> < 0.001
Behavioral	4.43 \pm 0.54	102.143	<i>P</i> < 0.001
Traditional Chinese Medicine cultural identity	4.50 \pm 0.48	120.860	<i>P</i> < 0.001

3.2. Comparison of TCM cultural identity average scores among medical students with different characteristics

The TCM cultural identity of medical students was influenced by gender, grade, major, and method of major selection, with significant statistical differences (*P* < 0.001), as detailed in **Table 2**.

Table 2. Comparison of TCM cultural identity average scores among medical students with different characteristics (n=1488)

Variable	N	Cognitive dimension (M \pm SD)	Affective dimension (M \pm SD)	Behavioral dimension (M \pm SD)	Traditional Chinese medicine cultural identity (M \pm SD)
Gender	Male (n=550)	4.591 \pm 0.473	4.614 \pm 0.490	4.531 \pm 0.527	4.579 \pm 0.469
	Female (n=938)	4.478 \pm 0.477	4.503 \pm 0.497	4.371 \pm 0.539	4.451 \pm 0.477
	<i>t</i>	4.409	4.179	5.595	5.029
	<i>p</i>	< 0.001	< 0.001	< 0.001	< 0.001
Grade	Freshman (n=588)	4.572 \pm 0.463	4.584 \pm 0.493	4.464 \pm 0.544	4.540 \pm 0.475
	Sophomore (n=488)	4.470 \pm 0.478	4.519 \pm 0.489	4.406 \pm 0.531	4.465 \pm 0.468
	Junior (n=412)	4.504 \pm 0.495	4.517 \pm 0.510	4.410 \pm 0.543	4.477 \pm 0.491
	<i>F</i>	6.451	3.179	1.920	3.857
Major	<i>p</i>	0.002	0.042	0.174	0.021
	Traditional Chinese medicine (n=883)	4.608 \pm 0.426	4.633 \pm 0.447	4.528 \pm 0.492	4.589 \pm 0.429
	Acupuncture and	4.568 \pm 0.454	4.623 \pm 0.457	4.538 \pm 0.481	4.577 \pm 0.427

Method of Major Selection	Tuina (n=198)				
	Rehabilitation therapy (n=13)	3.910 ± 0.633	3.846 ± 0.694	3.714 ± 0.787	3.824 ± 0.660
	Nursing (n=394)	4.318 ± 0.521	4.329 ± 0.534	4.180 ± 0.564	4.276 ± 0.511
	<i>F</i>	44.69	48.39	53.012	54.983
	<i>p</i>	< 0.001	< 0.001	< 0.001	< 0.001
	Self-selection (n=1122)	4.547 ± 0.466	4.575 ± 0.484	4.467 ± 0.528	4.530 ± 0.467
	Parental or others' choice (n=306)	4.421 ± 0.513	4.425 ± 0.536	4.290 ± 0.568	4.379 ± 0.506
	Major adjustment (n=60)	4.511 ± 0.467	4.570 ± 0.449	4.450 ± 0.513	4.510 ± 0.452
	<i>F</i>	8.414	11.257	13.097	12.194
	<i>p</i>	< 0.001	< 0.001	< 0.001	< 0.001

4. Discussion

4.1. Medical students' traditional Chinese medicine cultural identity scores

This study shows that the overall average score of Medical Students' Traditional Chinese Medicine Cultural Identity is (4.50 ± 0.48), which is at a relatively high level. This is consistent with Wu et al. (2022), suggesting that Medical Students generally hold a positive attitude toward Traditional Chinese Medicine (TCM) culture [5]. This may be related to the recent efforts made by the government to promote TCM culture. From the ranking of scores across dimensions, it is clear that the cognitive and affective dimensions have higher scores, indicating that students perform well in theoretical recognition and emotional resonance with TCM culture and have a strong interest in it [6]. However, the behavioral dimension scored the lowest (4.43 ± 0.54), possibly because students have fewer opportunities for clinical practice, leading to a disconnect between knowledge and practice. Based on this, it is recommended to strengthen practical teaching in TCM culture, such as offering training in cupping, acupoint plaster application, and massage, to integrate theory with practice and improve medical students' TCM cultural identity.

4.2. Analysis of the impact of demographic characteristics on traditional Chinese medicine cultural identity

This study shows that gender, grade, major, and method of major selection have statistically significant differences in medical students' traditional Chinese medicine cultural identity ($P < 0.01$). Among them, male students have a higher level of TCM cultural identity than female students, which differs from the results of Chen *et al.* [7]. This may be due to the different expectations regarding professional roles based on gender. Higher-grade students have lower levels of TCM cultural identity, possibly because some students work in fields that are less related to TCM, which is consistent with the results of Pan (2020). The identity of TCM students is significantly higher than that of students from other majors, which may be because the TCM curriculum is closely related to TCM culture. Students who self-select their major may have stronger intrinsic motivation for learning, which helps enhance their identification with TCM culture.

Based on these results, it is recommended that educators consider gender differences and adopt flexible and diversified teaching strategies to promote balanced development of TCM cultural identity among male and female students. For higher-grade students, career planning and employment guidance should be provided to help them find positions that match their original major. For students from non-TCM majors, opportunities to engage with TCM culture should be increased, such as by organizing activities like Chinese medicinal herb specimen making or TCM acupuncture and massage experiences to boost their interest and sense of identity. Additionally, schools should establish a long-term and comprehensive employment guidance system to encourage students to choose their major based on personal interests and career plans [8].

5. Conclusion

In conclusion, effectively enhancing recognition of Traditional Chinese Medicine (TCM) culture among the broader student population necessitates a targeted approach to practical teaching. It is recommended that educational institutions prioritize strengthening these practical components, with particular emphasis on engaging female students, lower-grade students, those enrolled in non-self-selected majors, and students lacking a prior TCM background. By focusing resources and tailored experiential learning on these specific groups, TCM cultural education can achieve significantly greater impact and foster deeper appreciation across diverse student demographics.

Disclosure statement

The authors declare no conflict of interest.

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