

## ORIGINAL RESEARCH

# Traditional and Complementary Medicine According to Physicians in A Tertiary Hospital in Türkiye: A Cross-Sectional Study

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### Abstract

**Objective:** This study aims to assess the use of traditional and complementary medicine (T&CM) practices as well as the attitudes and behaviors of physicians in the health sector regarding T&CM.

**Material-Method:** Our study was planned as a cross-sectional observational study. The researchers created a questionnaire that was applied to the physicians working in our hospital using the facilitated sampling method of a face-to-face interview after they filled out the informed consent form. The data were evaluated using the SPSS program.

**Results:** A total of 236 physicians participated in the study, with a mean working experience of 6.4±7.05 years. Among the participants, 26.3% held ministry-approved T&CM certificates, predominantly for cupping therapy. Slightly more than half of the physicians (54.7%) stated that they recommend T&CM methods to their patients. While 50.4% of physicians reported insufficient scientific evidence on T&CM, 19.5% stated that T&CM methods should only be used as a last resort when modern medicine cannot offer a solution. A statistically significant correlation was found between having a ministry-approved T&CM course certificate and the participants' age and length of practice ( $p<0.001$ ,  $p<0.001$ ). However, there was no significant correlation between having a T&CM certificate and the participants' gender or department of medicine ( $p=0.961$ ,  $p=0.130$ ).

**Conclusion:** The results of our study indicate that although nearly half of the physicians believe there is insufficient scientific evidence supporting T&CM, slightly more than half still recommend T&CM methods to their patients.

**Keywords:** Traditional Medicine, Cupping Therapy, Primary Care, Complementary Therapies

### INTRODUCTION

Traditional and Complementary Medicine (T&CM) refers to an approach that includes a series of practices that have been used to protect, diagnose, treat, and maintain the physical and mental health of people since ancient times and have been fed from different geographical regions and cultures.<sup>1</sup> Although these practices have been used throughout human history, they have remained in the background for a while due to factors such as the rapid development of modern medicine, the rise of the pharmaceutical industry, and the invention of antibiotics. However, in recent years, T&CM methods have attracted increasing interest among health professionals and physicians and have become more accepted not only in developing countries but also in developed countries.<sup>2</sup>

T&CM applications are widely used in Asian countries, particularly in regions such as China, Korea, Japan, and India<sup>3-4</sup>. In Türkiye, the use of T&CM is still developing, with a 2014 report indicating a usage rate of approximately 27%<sup>3,5</sup>. It is

important to note that T&CM in Türkiye has a rich history dating back to ancient times, with practices such as cupping and phytotherapy being integral parts of Turkish culture. T&CM is officially recognized and regulated by the Ministry of Health, which has established guidelines to ensure its safe and effective use alongside conventional medicine.

The World Health Organisation, in its Traditional and Complementary Medicine Strategy, published between 2013-2017, emphasized the need for more dissemination of T&CM practices and more clinical studies in this field and encouraged countries to make legal arrangements in this field. In Türkiye, the Department of Traditional, Complementary and Alternative Medicine Practices was established within the Ministry of Health in 2012. Its name was changed to the Department of Traditional and Complementary Medicine Practices in 2014. In this context, several practices such as Acupuncture, Apitherapy, Phytotherapy, Hypnosis, Hirudotherapy, Homeopathy, Chiropractic,

Cupping, Larva therapy, Mesotherapy, Prolotherapy, Osteopathy, Ozone therapy, Reflexology and Music therapy are included in this field. The Ministry of Health has authorized medical doctors and dentists who have received certificates in the relevant fields, but dentists are only allowed to practice in their areas of specialization.<sup>6</sup>

T&CM certificates issued by the Ministry of Health in the last decade have significantly increased the interest in these practices. In recent years, physicians from different medical branches have started to obtain T&CM certificates, T&CM units have been established in hospitals, and the lack of supervision in this field has started to be regulated. However, in addition to these developments, we observe that some physicians are not interested in or criticize T&CM. Amid these developments, it has been a matter of curiosity how physicians view T&CM applications and handle patients' questions about T&CM. This study aims to investigate the perspectives, approaches, and knowledge levels of physicians working in internal, surgical, and basic sciences toward T&CM practices. Understanding healthcare providers' attitudes towards T&CM is crucial as it directly influences the integration of T&CM practices into conventional medical treatments, potentially improving patient outcomes and expanding holistic care approaches.

## MATERIALS AND METHODS

### Materials

Our cross-sectional observational study was conducted between July 12, 2022, and August 12, 2022. Physicians working at the Republic of Türkiye Ministry of Health Prof. Dr. Cemil Taşcıoğlu City Hospital who agreed to participate were included in the study through facilitated sampling selection. Informed consent forms were completed, and the researchers administered the questionnaire via face-to-face interviews.

### Methods

**The approximate number of physicians working** at the Republic of Türkiye Ministry of Health Prof. Dr. Cemil Taşcıoğlu City Hospital, where the study was conducted, is 967. The minimum sample size needed, with a 95% confidence interval and a  $\pm 5\%$  margin of error, is 236 participants.

The questionnaire used in our study consists of 29 questions and measures various factors, including age, gender, years of professional experience, departments in which the physicians work, attitudes and behaviors towards T&CM applications, and knowledge levels about T&CM applications. It was

selected using a purposive sampling method and administered to the physicians. A pilot test was conducted with 30 participants before administering the questionnaire to the calculated sample size.

The study aims to measure the participants' level of knowledge and evaluate the relationships between factors such as age, gender, years in the profession, job description, and their knowledge level, perceptions, and behaviors regarding T&CM.

### Statistical analysis

The analysis of the data was performed using SPSS v. 21 package program. The normality of continuous variables was assessed with the Kolmogorov-Smirnov test. Continuous variables with normal distribution were presented as mean  $\pm$  standard deviation, and those without normal distribution were presented as median (minimum-maximum). Categorical variables were shown as frequency and percentage. The Mann-Whitney U test was used to compare two groups of continuous variables with independent samples. The Chi-square test was used for the analysis of categorical data. Bonferroni correction was applied in the evaluation of the groups. A p-value of  $<0.05$  was considered significant.

## RESULTS

71.2% (168/236) of the participants were female; the mean age was 30.7 years. 86.4% (204/236) were working in internal medicine, 7.6% (18/236) in basic medical sciences, and 5.9% (14/236) in surgery. The mean duration of active medical practice was 6.4 years. 61.8% (146/236) of the participants held a T&CM certificate, with cupping and mesotherapy being the most commonly possessed certifications (Figure 1).

A statistically significant correlation was found between the participants' age and duration of practice of medicine and the status of recommending any of the T&CM practices to their patients or relatives ( $p<0,005$ ) (Table 1). A statistically significant relationship was found between attending a ministry-approved T&CM course or certificate and the age and medical experience of the participants. The mean age of those who had previously taken a T&CM course (33.8 years) was significantly lower than the mean age of those who had not taken a course (29.7) ( $p<0,001$ ). The duration of medical experience of those who had taken a T&CM course was significantly shorter than those who had not ( $p<0,001$ ).

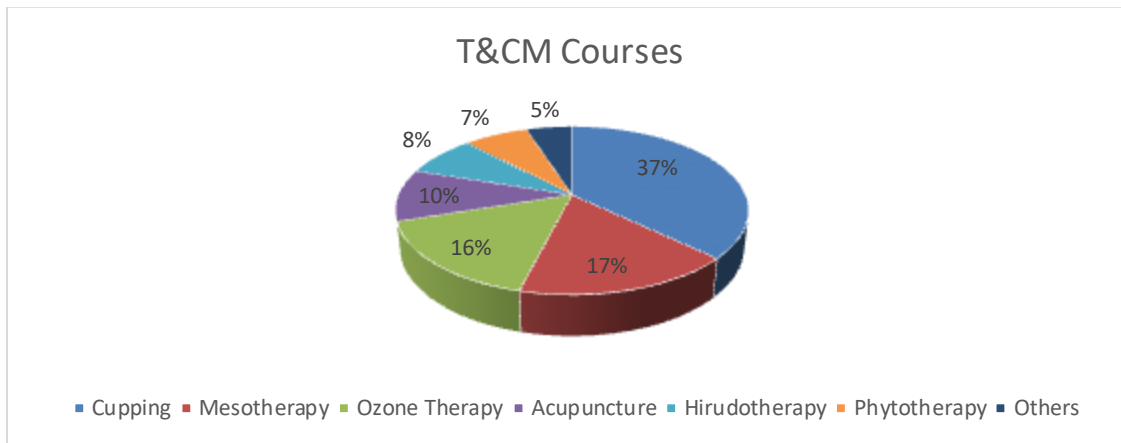


Figure 1. Distribution of the types of T&CM course certificates held by the participants

Table 1. The Relationship Between T&CM Recommendation Status and Physician's Age and Years of Medical Practice

	Have you ever recommended any of these T&CM practices to your patients or relatives?	n	Mean ± SD	Median (Min-Max)	p
Age	Yes	129	32,2±7,8	30(24-63)	<0,001
	No	107	29±3,8	28(24-53)	
How many years have you been practicing medicine?	Yes	129	7,7±8,5	5(1-45)	0,002

There was no significant relationship between having a ministry-approved T&CM course/certificate and the gender of the participants and the department in which they practiced medicine. There was a statistically significant correlation between having a ministry-approved T&CM course/certificate and the institution where the participants were working, the participants thought that T&CM practices had positive effects in

terms of 'Preventive Medicine' practices, wanting to apply T&CM practices to their patients themselves, and thinking that the widespread use of T&CM practices in health centers would lead to a decrease in treatment costs. There was no statistically significant correlation between having a ministry-approved T&CM course/certificate and the participants thinking that T&CM methods could replace modern medicine (Table 2).

Table 2. The relationship between participants' T&CM certification status and some factors

	Have you attended a T&CM course/certificate program approved by the Ministry before?		p	
	Yes	No		
Gender	Female	44(%26,2)	124(%73,8)	0,961
	Male	18 (%26,5)	50 (%73,5)	
In which department do you practice medicine?	Basic Sciences	3 (%16,7)	15 (%83,3)	0,130
	Internal Medicine	58 (%28,4)	146 (%71,6)	
	Surgical Medicine	1 (%7,1)	13 (%92,9)	
Do you think that T&CM practices have positive effects on 'Preventive Medicine' practices?	Yes	56 (%38,4)	90 (%61,6)	<0,001
	No	1 (%3,7)	26 (%96,3)	
	Indecisive	5 (%7,9)	58 (%92,1)	
Would you like to apply T&CM applications to your patients yourself besides modern medicine?	Yes	56(%36,6)	97(%63,4)	<0,001
	No	2 (%4,9)	39 (%95,1)	
	Indecisive	4 (%9,5)	38(%90,5)	
Will the widespread use of T&CM applications in health centers lead to a decrease in treatment costs?	Yes	49 (%41,5)	69 (%58,5)	<0,001
	No	3 (%7,1)	39 (%92,9)	
	Indecisive	10 (%13,2)	66 (%86,8)	
T&CM methods can replace modern medical methods	I agree	7 (%50)	7 (%50)	0,072
	No opinion	5 (%35,7)	9 (%64,3)	

\*: Chi-square test

## DISCUSSION

In contemporary healthcare, the utilization of complementary and alternative medicine (CAM), also known as traditional and complementary medicine (T&CM), is increasingly serving both preventive and therapeutic purposes.<sup>7</sup> Although they have positive effects, considering the potential side effects, it is evident that these procedures should be carried out by healthcare personnel, particularly physicians.

Our study revealed that the average age of the participating physicians was 30.7 years and their average professional experience was 6.4 years. This demographic profile provides a clearer understanding of young physicians' views and attitudes towards T&CM. Cupping and mesotherapy were the most commonly used T&CM methods among the participating physicians. Similarly, a study conducted in Turkey reported that cupping and phytotherapy were more common among physicians compared to other methods.<sup>7</sup> In addition, a study conducted in Isparta found that acupuncture, phytotherapy, and cupping were the most commonly used T&CM methods among family physicians.<sup>8</sup> In another study conducted among primary care physicians in Turkey, cupping therapy was the best-known and most recommended treatment to patients.<sup>9</sup> When the level of knowledge about T&CM methods was evaluated, 12% of physicians rated their level of knowledge as low, 30.1% as medium, and 64.8% as high. These findings contrast with previous studies indicating a relatively lower level of knowledge among physicians about T&CM.<sup>10-11</sup> It should be noted that our study's relatively higher level of self-reported knowledge may be attributed to the fact that nearly one-fourth of our sample had T&CM certification.

In our study, 73.7% of the participants stated that they had not received training in Traditional and Complementary Medicine (T&CM), while 78% expressed a desire to receive such training. Comparable studies have shown that the rate of T&CM training among physicians has increased in recent years. In a study conducted on family physicians in Turkey, 71.6% of the participants had not received formal training, while 16% expressed a desire to receive training if given the opportunity.<sup>9</sup> In our study, 54.7% of physicians reported that they had recommended T&CM methods to their patients at least once. Other studies reported different rates: 48% in a study in the United States,<sup>12</sup> 57.9% in a study in Italy,<sup>13</sup> and 44.1% in Koçdaş's study.<sup>14</sup> Approximately 21.6% of the physicians in our study

indicated that they had previously applied T&CM methods to their patients. This rate was lower compared to findings from Yüksel et al.'s study<sup>15</sup> and studies conducted in Canada<sup>16</sup> and Qatar<sup>17</sup>, which reported 19.8% and 30.1%, respectively, for physicians who applied T&CM methods to their patients. Interestingly, our study did not find a significant correlation between the age and gender of physicians and their tendency to recommend T&CM to patients. However, similar studies have reported that female and younger physicians were more likely to recommend T&CM methods.<sup>13,17</sup> Furthermore, our study identified a statistically significant relationship between physicians having a Ministry-approved T&CM certification and their belief in the positive impact of T&CM methods on preventive healthcare, their willingness to administer T&CM methods to patients personally, and their perception that the widespread use of T&CM methods in healthcare centers would reduce treatment costs. Similar research has demonstrated that physicians who use T&CM methods are more likely to recommend them to their patients.<sup>12,18-19</sup>

In a study conducted among physicians in Italy who treat cancer and chronic disease patients, 59% of doctors accept and prescribe T&CM interventions. It was found that doctors with limited knowledge of T&CM are less likely to recommend these treatments. T&CM is most commonly used for cancer (76%), chronic disease (74%), terminal (49%), and elderly (47%) patients.<sup>20</sup> In our study, we found a statistically significant relationship between age, years of medical practice, and the likelihood of recommending T&CM practices to patients or relatives. Doctors with T&CM certification had more positive views compared to those without certification. Participants who believed in the positive effects of T&CM in preventive medicine were more likely to apply these practices themselves and believed that widespread use in health centers would reduce treatment costs. Both studies highlight the increasing acceptance of T&CM practices among physicians and show that education and experience levels influence these practices. This underscores the importance of T&CM education programs and regulations, which can help physicians gain more knowledge and safely offer these treatments to their patients.

Limitations of our study include the relatively small sample size and the self-reported nature of the data, which may introduce bias. Future research should aim to include larger, more diverse populations and



objective measures of T&CM knowledge and usage. Additionally, longitudinal studies could provide insight into how physicians' attitudes and practices regarding T&CM evolve over time.

## CONCLUSION

In conclusion, our study reflects an increasing awareness of T&CM practices among physicians compared to previous researchs. Given the widespread use of traditional practices within the Turkish population, it is imperative to conduct further scientific research and enhance knowledge dissemination among healthcare professionals. The practical applications of our findings suggest that integrating T&CM education into medical training programs could better prepare healthcare

professionals to meet the needs of patients using these practices. Just as in other countries, in Türkiye, the use of these methods should be regulated according to established standards, ensuring that healthcare professionals can administer them safely and in line with the "first, not harm" principle.

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