

Knowledge, Attitudes and Behaviours of University Students on Traditional and Complementary Medicine Practices; the Case of Alanya: A Cross-Sectional Study

Üniversite Öğrencilerinin Geleneksel ve Tamamlayıcı Tıp Uygulamalarına İlişkin Bilgi, Tutum ve Davranışları; Alanya Örneği: Kesitsel Çalışma

İsmail SARIKAN^a, Erhan DAĞ^b, Saliha ÖZPINAR^c

^aAlanya Alaaddin Keykubat University Faculty of Medicine, Department of Family Medicine, Antalya, Türkiye

^bKütahya University of Health Sciences Gediz Vocational School of Health Services, Department of Pharmacy Services, Kütahya, Türkiye

^cAlanya Alaaddin Keykubat University Faculty of Medicine, Department of Public Health, Antalya, Türkiye

ABSTRACT Objective: Traditional and complementary medicine (T&CM) practices are ancient methods that support modern methods and contribute to protecting and improving people's health. The study aimed to determine university students' knowledge, attitudes and behaviours about T&CM practices and their determinants. **Material and Methods:** The study was cross-sectional. Research data were collected between 01.11.2022/31.12.2022. The study population consists of undergraduate students studying at Alanya Alaaddin Keykubat University in the 2021-2022 academic year (n=11,975). It was aimed to reach 760 students in total. Data were collected in three forms: A socio-demographic questionnaire form, a knowledge and experience form about T&CM applications, and a T&CM Attitude Scale. **Results:** The mean age of the participants was 20.98±1.76 years (minimum: 18-maximum: 29), and 57.9% (n=440) were over 20 years old. 62% (n=471) of the participants were female. Of the research group, 48.8% (n=371) stated that they had no knowledge about T&CM applications, 42.5% (n=323) stated that they had some knowledge, and 8.7% (n=66) stated that they knew in detail. A significant difference was found between the total score of the attitude scale towards using complementary therapies and the participants' department, class, smoking status and T&CM experience (p<0.05). **Conclusion:** Knowledge and experience in T&CM applications positively affect the attitude towards T&CM applications.

ÖZET Amaç: Geleneksel ve tamamlayıcı tıp (GETAT) uygulamaları, modern yöntemleri destekleyen, insan sağlığının korunmasına ve geliştirilmesine katkı sağlayan kadim yöntemlerdir. Araştırmanın amacı, üniversite öğrencilerinin GETAT uygulamaları ve bunların belirleyicileri hakkındaki bilgi, tutum ve davranışlarını belirlemektir. **Gereç ve Yöntemler:** Çalışma kesitseldir. Araştırma verileri 01.11.2022/31.12.2022 tarihleri arasında toplanmıştır. Araştırmanın evrenini 2021-2022 eğitim-öğretim yılında Alanya Alaaddin Keykubat Üniversitesinde öğrenim gören lisans öğrencileri (n=11.975) oluşturmaktadır. Toplamda 760 öğrenciye ulaşılması hedeflendi. Veriler üç formda toplanmıştır: Sosyodemografik anket formu, GETAT uygulamalarına ilişkin bilgi ve deneyim formu ve GETAT Tutum Ölçeği. **Bulgular:** Katılımcıların yaş ortalaması 20,98±1,76 (en az: 18-en fazla: 29) olup, %57,9'u (n=440) 20 yaşın üzerindedir. Katılımcıların %62'si (n=471) kadındır. Araştırma grubunun %48,8'i (n=371) GETAT uygulamaları hakkında bilgisi olmadığını, %42,5'i (n=323) biraz bilgisi olduğunu, %8,7'si (n=66) detaylı bildiğini belirtti. Tamamlayıcı tedavi kullanımına yönelik tutum ölçeği toplam puanı ile katılımcıların bölümü, sınıfı, sigara içme durumu ve GETAT deneyimi arasında anlamlı fark bulundu (p<0,05). **Sonuç:** GETAT uygulamalarına ilişkin bilgi ve deneyim, GETAT uygulamalarına yönelik tutumu olumlu yönde etkilemektedir.

Keywords: Traditional medicine; knowledge; attitude

Anahtar Kelimeler: Geleneksel tıp; bilgi; davranış

Traditional and Complementary Medicine (T&CM) practices are ancient methods that support modern methods and contribute to protecting and im-

proving people's health. In its T&CM 2019 report, the World Health Organization (WHO) defines traditional medicine as: "A set of knowledge, skills, and

Correspondence: İsmail SARIKAN

Alanya Alaaddin Keykubat University Faculty of Medicine, Department of Family Medicine, Antalya, Türkiye

E-mail: ismail.sarikan@alanya.edu.tr



Peer review under responsibility of Journal of Traditional Medical Complementary Therapies.

Received: 25 Dec 2023

Received in revised form: 13 Mar 2024

Accepted: 14 Mar 2024

Available online: 15 May 2024

2630-6425 / Copyright © 2024 by Türkiye Klinikleri. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

practices based on the beliefs and experiences of different cultures, which can be explained or sometimes unexplained, used in maintaining health, preventing, diagnosing or treating physical and mental illnesses.” T&CM practices are an often-neglected reference source with many applications, especially in preventing and managing chronic diseases.¹ Many countries are looking for ways to expand the scope of basic health services at a time when their citizens’ expectations for health care are increasing and treatment costs are rising. Considering the diversity of health problems today, there is a renewed interest in T&CM practices.

Considering the frequency of T&CM use in the countries, more than 40% of the population in countries such as the United States, Switzerland, Germany, Japan, Chile, and Cuba, 60% of the population in China according to 2017 data, 86% of the population in Korea, 60% to 90% of the population in Uganda, Rwanda, Tanzania, Benin, and Ethiopia.²⁻⁵

Monitoring health trends is a fundamental task of WHO. Therefore, WHO supports countries to develop evidence-based policies and strategic plans. According to the report, after 2000, more and more countries have recognised the positive contribution of T&CM practices in their national health systems. According to WHO, while 25 of the member states had a national policy on T&CM practices in 1999, this number increased to 98 in 2018.¹ Traditional medical knowledge and practices may change over time; some may even be forgotten because they have lost their function. However, historically, “folk” treatment methods have existed in various forms and reproduced in various ways, and people have never stopped applying this traditional health knowledge.⁶ According to the T&CM Regulation published in 2014, T&CM practices can be applied by certified physicians and dentists in a total of 15 different fields, including acupuncture, apitherapy, phytotherapy, hypnosis, leech therapy, homoeopathy, chiropractic, cupping, larva therapy, mesotherapy, prolotherapy, osteopathy, ozone therapy, reflexology, and music therapy.⁷

After the T&CM Regulation was published in Türkiye, a widely participated survey study on

T&CM knowledge and awareness of undergraduate university students was not found in the literature. It was aimed to contribute to the relevant literature with this study conducted not only in the field of health but also for all undergraduate students.

This study aims to determine university students’ knowledge, attitudes and behaviours about T&CM practices and their determinants.

MATERIAL AND METHODS

The study is cross-sectional type. The research data were collected between 01.11.2022/31.12.2022. The population of the study consists of undergraduate students studying at Alanya Alaaddin Keykubat University in the 2021-2022 academic year (n=11,975). The sample size was determined to be a minimum of 745 at a 95% confidence limit, 50% prevalence, and 0.05 error level, taking the design effect as 2. It was aimed to reach 760 students in total. The number of students from each faculty in the study was determined by weighting. The departments constituting the sample and the students in the branches of the departments were randomly selected. Data were collected in three forms: Socio-demographic questionnaire form, knowledge and experiences about T&CM applications form, and T&CM Attitude Scale. The socio-demographic questionnaire consisted of 13 questions: age, gender, mother education, and father education. T&CM applications knowledge and experiences form: The survey comprises five questions that assess participants’ knowledge of T&CM and an additional ten questions that explore their experience with T&CM practices.

Attitude Scale for T&CM Practices: The Attitude Scale Towards Using Complementary Therapies, developed by Bilge et al., measures the attitudes of individuals towards complementary and modern treatment methods that they apply when they experience health problems.^{4,8} The scale consists of 13 items and is a 4-point Likert type. The 9th item in the scale is reverse coded. The minimum score obtained from the scale between 0 and 3 is 0, and the maximum is 39. The high score obtained from the scale indicates a positive attitude towards complementary therapies.

In the original scale, Cronbach's alpha reliability coefficient was 0.79 for the whole scale.

The SPSS (IBM Statistical Package for Social Science, Version 15.0, New York, USA) program was used to evaluate the data. Ordinal data obtained from the data collection forms were calculated as arithmetic mean, standard deviation, minimum and maximum values, and nominal data were evaluated as frequency and percentage. The study examined the normal distribution of the data by comparing the independent variables with the scale's total mean scores. The suitability of continuous variables for normal distribution was evaluated by Kolmogorov-Smirnov test. In comparing paired groups, the Student t-test was used for variables with normal distribution, and the one-way analysis of variance test was used for comparisons of more than two groups. Kruskal-Wallis non-parametric test was used for data not showing normal distribution. The results were evaluated at a 95% confidence interval and $p < 0.05$ significance level. This study was conducted in accordance with the principles of the Declaration of Helsinki. For the study, ethical permission dated 05.06.2020 and numbered 19-26 was obtained from the Alaaddin Keykubat University Medical Faculty Clinical Research Ethics Committee, and permission to use the scale was obtained from the scale owner. The students participating in the study were informed, and their written consent was obtained.

RESULTS

The mean age of the students who participated in the study was 20.98 ± 1.767 (minimum: 18-maximum: 29), and 62% ($n=471$) were female. 57.9% ($n=440$) of the participants were over 20 years of age. 21.1% ($n=160$) of the participants were from the Faculty of Engineering, 20% ($n=152$) from the Faculty of Education, 18.7% ($n=142$) from the Faculty of Economics, 10% ($n=76$) from the Faculty of Health Sciences, 8.9% ($n=68$) from the Faculty of Tourism, 7.1% ($n=54$) Faculty of Medicine, 4.9% ($n=37$) Faculty of Sport Sciences, 3.9% ($n=30$) Faculty of Dentistry, 3.2% ($n=24$) Faculty of Architecture, 2.1% ($n=16$) Faculty of Aviation.

When the mother's education level of the participants was analysed, 30.4% ($n=231$) were high school or university graduates, and when the father's education level was analysed, 45.7% ($n=348$) were high school or university graduates. When the monthly income of the participants' families was analysed, it was found that 9.9% ($n=75$) were below the minimum wage, 48.5% ($n=369$) were at the minimum wage level, 33.1% ($n=259$) were 2-3 times the minimum wage and 7.5% ($n=57$) were more than 3 times the minimum wage. Ninety-two per cent of the participants stated that they were not employed in an income-generating job, and 94.1 per cent ($n=715$) stated that they had no chronic disease (Table 1). The study group's responses to questions investigating their knowledge of T&CM were as follows: To the question, "Are you knowledgeable about T&CM applications?" 48.8% ($n=371$) of the students reported having no knowledge, 42.5% ($n=323$) had some knowledge, and 8.7% ($n=66$) claimed detailed knowledge.

When asked, "If you are knowledgeable about T&CM application methods, how did you acquire this information?" 21.3% ($n=162$) of the students mentioned they acquired it from their family, 17% ($n=129$) through the internet, 8.3% ($n=63$) from health personnel, and 53.4% ($n=406$) from friends, newspapers, television, and herbalists (Figure 1).

Responding to "What comes to mind first when you think of T&CM applications (or methods)?" 22.10% ($n=168$) thought of cupping therapy, 16.5% ($n=126$) of herbal (phytotherapy) treatments, 8.6% ($n=66$) of leech therapy, 3.9% ($n=30$) of bonesetters and dislocation specialists, 3.1% ($n=24$) of acupuncture, 2.1% ($n=16$) of alternative medicine, and the remaining 42.7% ($n=325$) had no idea or did not know. To the question, "Who should perform T&CM methods?" 54.3% ($n=413$) of the students answered that only certified physicians should, 17.1% ($n=130$) believed anyone knowledgeable about T&CM could, 15.7% ($n=119$) said only certified health personnel should, and 12.9% ($n=98$) thought all doctors and health personnel could (Table 2).

The responses of the study group to questions concerning their attitudes towards T&CM were as

TABLE 1: Distribution of participants regarding some characteristics.

Variables	n	%
Gender		
Female	471	62.0
Male	289	38.0
Family income level		
Below minimum wage	75	9.9
At the minimum wage level	369	48.5
Salary 2-3 times above the minimum wage	259	33.1
Salary more than 3 times above the minimum wage	57	7.5
Employment status		
Employed	61	8.0
Unemployed	699	92.0
Smoking		
Yes	278	36.6
No	482	63.4
Alcohol consumption habits		
Yes	273	35.9
No	487	64.1
Chronic health conditions		
Yes	45	5.9
No	715	94.1
Current living arrangements		
Living with family	139	18.3
Sharing a house with friends	76	10.0
Residing in a dormitory	439	57.8
Staying with relatives	7	0.9
Living in hostels or apartments	66	8.7
Other	33	4.3
Academic department of field of study (faculty)		
Medicine	54	7.1
Education	152	20.0
Tourism	68	8.9
Engineering	160	21.1
Sports sciences	37	4.9
Dentistry	30	3.9
Health sciences	76	10.0
Architecture	24	3.2
Aviation	16	2.1
Economics	142	18.7
Preference ranking of current field of study		
Among my top 5 preferences	368	48.4
Ranked between 6 th and 10 th	178	23.4
Ranked between 11 th and 15 th	106	13.9
Ranked 16 th or above	108	14.2
Total	760	100.0

follows: In response to “In which situations should T&CM applications be performed?” 8% (n=61) of the students believed they should never be applied,

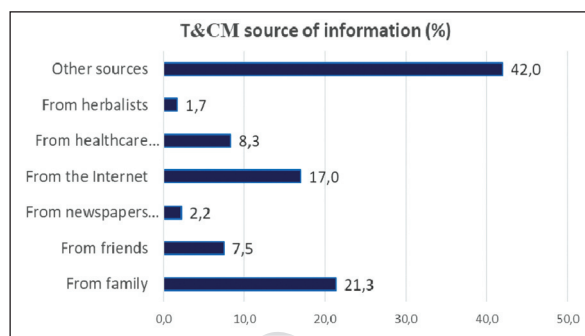


FIGURE 1: Distribution of participants' sources of information on T&C. T&CM: Traditional and complementary medicine.

9.9% (n=75) suggested T&CM should be the first choice, 43.4% (n=330) thought they should be used as a supplement to modern medical practices, and 27.8% (n=211) opined that they should be applied palliatively in cases where modern medicine is in-

TABLE 2: Knowledge levels of the study group on T&CM.

Variables	n	%
Awareness about T&CM practices		
No knowledge	371	48.8
Heard only	175	23.0
Some knowledge	148	19.5
Detailed knowledge	66	8.7
*Source of information about T&CM practices (if aware)		
From family	162	21.3
From friends	57	7.5
From newspapers and TV	17	2.2
From the Internet	129	17.0
From healthcare professionals	63	8.3
From herbalists	13	1.7
Other sources	319	42.0
*First thought on T&CM practices or methods		
Cupping therapy	168	39.1
Herbal (phytotherapy) treatments	126	29.3
Leech therapy	66	15.3
Bonesetters	30	7.1
Acupuncture	24	5.5
Alternative medicine	16	3.7
Opinions on who should practice T&CM methods		
Only certified doctors	413	54.3
All doctors	57	7.5
Only certified healthcare professionals	119	15.7
All healthcare professionals	41	5.4
Anyone knowledgeable about T&CM	130	17.1

*More than one answer has been given; T&CM: Traditional and complementary medicine.

sufficient. When asked, “Would you like a course explaining T&CM applications in your department?” 35.9% (n=273) of the students expressed interest, while 64.1% (n=487) did not wish for such a course.

Regarding the question, “Do you find it appropriate that T&CM applications are not covered by the Social Security Institution (SSI)?” 22% (n=167) of the students agreed with this, 32% (n=243) disagreed, and 46% (n=350) were undecided. To the statement, “Medical practices should be considered as a whole, without distinguishing between modern and traditional,” 37.5% (n=285) of the students agreed, 30.9% (n=235) disagreed, and 31.6% (n=240) were undecided (Table 3).

A study group was surveyed regarding their behavioural characteristics in relation to T&CM applications. The responses to the questions were as follows: In response to the question, “Have you had any experience with T&CM applications to date?” 12.5% (n=95) of the students indicated they had, whilst a significant majority of 87.5% (n=665) stated they had not. When asked, “You mentioned you have undergone T&CM applications. What were your reasons/purposes for these applications?” 65.3% (n=64)

of the students who had previously engaged in T&CM reported doing so as a supplement to medical treatment.

Meanwhile, 11.2% (n=11) pursued it due to the ineffectiveness of modern medical treatments, 7.1% (n=7) because it was more economical, and 4.0% (n=4) due to distrust in modern medical practices (reactive), and for its lesser side effects 6.0% (n=6). In response to “You mentioned you have undergone T&CM applications. Whom did you receive these applications from?” 51.7% (n=47) of the students who had experienced T&CM mentioned family, relatives, or acquaintances as the providers, 21.5% (n=21) mentioned herbalists or spice sellers, and 15.4% (n=14) received it from physicians. To the question, “Were you satisfied with the outcome of the T&CM application?” 65.2% (n=62) of those who had undergone T&CM expressed satisfaction, 14.7% (n=14) were dissatisfied, and 20.1% (n=19) remained undecided. Regarding the question, “You stated you have never undergone T&CM applications. What is your reason for not doing so?” 53.7% (n=357) of the students who had never participated in T&CM stated it was due to the absence of illness and thus no neces-

TABLE 3: Attitudinal characteristics of the study group towards T&CM.

Variables	n	%
Opinions on when T&CM practices should be applied		
Only as a palliative approach when modern medicine fails to find a solution	211	27.8
Only as complementary and supportive to modern medical treatments	330	43.4
As a first choice for mild ailments like flu and cold	83	10.9
Should be the first choice for all diseases, resort to medication (modern medicine) if insufficient	75	9.9
Should never be applied	61	8.0
Desire for T&CM-related courses in your department/field		
Yes	273	35.9
No	487	64.1
Opinion on T&CM practices not being covered by social security		
Yes	167	22.0
No	243	32.0
Undecided	350	46.1
Agreement with the statement; “medical practices should be considered as a whole, without differentiating between modern and traditional”		
Agree	285	37.5
Disagree	235	30.9
Undecided	240	31.6
Total	760	100.0

T&CM: Traditional and complementary medicine.

sity, 14.2% (n=94) cited lack of recommendation from a doctor, another 14.2% (n=94) expressed concerns over its safety, and 5.2% (n=34) attributed it to the inaccessibility of the service when needed (Table 4). The participants in the study had an average score of 15.73 on the Attitude Towards Using Complementary Therapies Scale (ATTS), with a standard deviation of 6.778. The scores ranged from a minimum of 0 to a maximum of 39. The analysis showed that there was no statistically significant link between the overall ATTS score and characteristics such as gender, alcohol intake, educational levels of parents, employment status, or place of residence ($p>0.05$). In contrast, notable disparities were noted with regard to the field of study, academic year, smoking habit, and previous exposure to T&CM ($p<0.05$, Table 5).

DISCUSSION

This study is one of the first studies conducted at the level of university undergraduate students after the WHO's policy of promoting T&CM practices applied in all countries. Because all previous survey studies on traditional medicine were evaluated under the title of "alternative medicine". Today, the fact that these practices are carried out on a legal basis and that the Ministry of Health has made certification procedures compulsory for each application area has led to changes in the attitudes and behaviours of undergraduate students receiving health-related education. For this reason, a comparison was made in the discussion part of the present study, especially with research articles conducted in 2017 and later.

TABLE 4: Behavioural characteristics of the study group regarding T&CM.

Variables	n	%
Experience with T&CM practices to date		
Yes	95	12.5
No	665	87.5
*Reasons for utilising T&CM practices (among those who have used T&CM)		
For supplementary benefits to medical treatment	64	65.3
Due to the lack of results from modern medical practices	11	11.2
Distrust in modern medical practices	4	4.0
More economical (cost-effective)	7	7.1
Fewer side effects	6	6.2
Other reasons	6	6.2
*Providers of T&CM practices (among those who have used T&CM)		
Physician	14	7.6
Nurse/Midwife	3	1.7
Herbalist/Spice seller	21	11.5
Family/Relative/Close associate	47	25.8
Other	6	3.4
Total	91	50.0
Satisfaction with T&CM practices (among those who have used T&CM)		
Yes	62	65.2
No	14	14.7
Partially	19	20.1
* Reasons for not utilising T&CM practices (among those who have not used T&CM)		
Not recommended by a doctor	94	14.1
No need due to not being ill	357	53.7
Concerns about health risks	94	14.2
Inaccessibility when needed	34	5.2
Not covered by social security (expensive)	16	2.4
Other reasons	69	10.4

T&CM: Traditional and complementary medicine.

TABLE 5: Comparison of the average scores on the attitude scale towards complementary therapies based on certain variables (n=760).

Variables	n	$\bar{X}\pm SD$	Test result p-value
Gender			
Male	289	15.9±6.8	*p=0.600
Female	471	15.6±6.7	
Faculty			
Health-related faculties	160	17.0±6.6	*p=0.007
Non-health faculties	600	15.3±6.7	
Year of study			
1	184	15.3±6.8	**p=0.000
2	183	15.9±6.7	
3	184	15.6±6.7	
4	185	15.0±6.6	
5 and above	24	23.2±3.4	
Smoking			
Yes	278	16.5±6.9	*p=0.019
No	482	15.3±6.6	
Alcohol consumption			
Yes	273	15.9±7.2	*p=0.612
No	487	15.6±6.5	
Experience with T&CM			
Yes	95	31.9±6.2	*p=0.000
No	665	28.2±6.7	
Knowledge about T&CM			
Aware	214	17.8±5.7	*p=0.000
Unaware	546	14.9±6.9	

*Student t-test; **Kruskal-Wallis test; SD: Standard deviation; T&CM: Traditional and complementary medicine.

In Türkiye, in the study conducted by Yeşil et al. in 2018 with 240 medical faculty students, it was stated that 75% (n=180) of the students had previously undergone T&CM application, and 73.3% (n=132) of those who had T&CM application had done it “to reduce stress”. In the same study, 67.2% (n=121) of those who had T&CM applications stated that they benefited from the application.⁹ In a study conducted by Öcal Kırsoy et al. in 2018 with 825 medical faculty students, 22.1% of the students used T&CM methods. It was observed that students mostly used herbal treatment. It was found that the most common reason for use was to reduce stress.¹⁰ In a study conducted by Sönmez et al. in 2018, with 276 medical faculty students, the most commonly known T&CM methods were acupuncture, cupping, phytotherapy, hypnosis, hirudotherapy, while the most frequently used T&CM methods were herbal

treatment and cupping.¹¹ In this study, 87.5% (n=665) of the participants had never used T&CM in their lives, and in those who had, it was most commonly used to support medical treatment.

In the study conducted by Doğanay et al. in 2015 with 637 medical faculty and health services vocational school students, it was observed that T&CM applications were primarily performed for relaxation, i.e. relaxation, relaxation.¹²

In addition, it was found that the participants obtained information about T&CM methods from the internet in the first place, from television in the second place, and from friends/relatives/neighbours in the third place.¹² In this study, it was found that the first place was from my family, the second place was from the internet, and the third place was from health personnel.

In a study conducted by Sayın Kasar et al. using the same T&CM Attitude Scale with patients over 65 years of age hospitalised in the internal medicine clinic of a training and research hospital in 2018-2019, the mean score of the Attitude Towards Using Complementary Therapies Scale (ATTS) was found to be 12.82±7.45. No significant difference was found between the total score of the scale and age, gender, marital status, educational status, employment status, income level, cohabitant, continuous drug use, pain region and method used (p>0.05).¹³ The mean score of TTTS developed by Bilge et al. (12.82±7.45) was found to be close to the mean score in this study (15.73±6.778).⁸

Tozun M. et al. searched the Turkish and English articles in Google Academy in the year 2000 and later with the appropriate words and reached the following results. The frequency of those who think that training on T&CM applications should be included in the curriculum of medical and health schools varies between 36.7% and 90.4%. The most commonly used T&CM applications are massage in the first place, herbal treatments in the second place and acupuncture in the third place. The most well-known methods were found to be acupuncture in the first place, herbal treatments in the second place and massage in the third place.¹⁴ Since most of the T&CM applications in the current legislation were applied by physi-

cians trained after 2014, it was thought that they were not included in the ranking here.

In a study conducted by Karahan et al. in 2019 with 320 medical faculty students, 19.1% of the students had previously used any T&CM method, and the most commonly used method was cupping and leech treatment. 95.6% of the students were of the opinion that physicians should be consulted before applying any T&CM method. 79.1% of the students thought that there should be considered on T&CM methods in medical education.¹⁵ In this study, 35.9% (n=273) said yes, and 64.1% (n=487) said no, they would like to have a course on T&CM applications in the curriculum. The majority of the participants had a negative approach to the course on T&CM. This situation was attributed to the low level of T&CM knowledge of the participants.

In a study conducted by Ateş Sarı et al. on 41 physiotherapy and rehabilitation undergraduate students in 2022, it was observed that 87.8% (n=36) of the students wanted to have a course on T&CM applications in their education curriculum.¹⁶ Here, a sample size that was too small was considered a limitation of the study. In a study conducted by Ayraller et al. in 2019, it was observed that the most common T&CM application known by medical faculty students was cupping treatment.¹⁷ In the present study, cupping treatment (cupping) was the first, herbal (phytotherapy) treatments were in second place, and leech treatment was in third place.

Studies have been conducted to evaluate university students' knowledge and attitudes about T&CM applications for undergraduate or associate degree students who will serve in the field of health when they graduate. However, in this study, all undergraduate students receiving education both in the field of health and in other service areas were selected as a sample. Therefore, the frequency values in this study are different from other studies. For example, in the study conducted by Öcal Kırsoy et al., whose sample size was close to the study, it was determined that students mostly used herbal treatment, while in the study, it was determined that students used cupping in the first place and herbal treatments in the second place.¹⁰

T&CM applications are widely preferred by society due to their easy accessibility, low cost and cultural effects. After the current legislative changes, university students' knowledge and attitudes towards T&CM applications are at a low level, so there is a need for educational policies to increase students' level of knowledge with courses, conferences, and seminars on T&CM applications. The Limitations of the Study: The sample comprises only undergraduate students enrolled at Alanya Alaaddin Keykubat University.

CONCLUSION

The utilisation of T&CM practices is preferred alongside modern methods for reasons such as cultural compatibility, low cost and easy accessibility. According to this study, university undergraduate students also prefer T&CM practices to a considerable extent. In addition, this study showed that competence and familiarity with T&CM practices have a beneficial effect on one's attitude toward T&CM practices. These findings show that community education on the subject is very significant.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: İsmail Sarıkan, Saliha Özpınar; **Design:** İsmail Sarıkan, Saliha Özpınar; **Control/Supervision:** İsmail Sarıkan, Saliha Özpınar, Erhan Dağ; **Data Collection and/or Processing:** Erhan Dağ; **Analysis and/or Interpretation:** İsmail Sarıkan, Saliha Özpınar, Erhan Dağ; **Literature Review:** İsmail Sarıkan; **Writing the Article:** İsmail Sarıkan, Saliha Özpınar, Erhan Dağ; **Critical Review:** İsmail Sarıkan, Saliha Özpınar, Erhan Dağ; **References and Fundings:** İsmail Sarıkan, Erhan Dağ; **Materials:** İsmail Sarıkan, Erhan Dağ.

REFERENCES

1. World Health Organization. WHO Global Report on Traditional and Complementary Medicine 2019. Geneva: World Health Organization; 2019. <https://iris.who.int/bitstream/handle/10665/312342/9789241515436-eng.pdf?sequence=1>
2. Biçer İ, Yalçın Balçık P. Geleneksel ve tamamlayıcı tıp: Türkiye ve seçilen ülkelerin incelenmesi [Traditional and complementary medicine: investigation of Turkey and the selected countries]. *HSİD*. 2019;22(1):245-57. <https://dergipark.org.tr/tr/download/article-file/670588>
3. Park YL, Huang CW, Sasaki Y, Ko Y, Park S, Ko SG. Comparative study on the education system of traditional medicine in China, Japan, Korea, and Taiwan. *Explore (NY)*. 2016;12(5):375-83. PMID: 27546589.
4. Han SY, Kim HY, Lim JH, Cheon J, Kwon YK, Kim H, et al. The past, present, and future of traditional medicine education in Korea. *Integr Med Res*. 2016;5(2):73-82. PMID: 28462101; PMCID: PMC5381420.
5. Kırıcı Güneysu ÇT. Ankara Şehir Hastanesi Aile Hekimliği Polikliniği'ne başvuran hastaların geleneksel ve tamamlayıcı tıp tutumları ve sağlıklı yaşam farkındalıkları arasındaki ilişki [Tıpta uzmanlık tezi]. Ankara: Sağlık Bilimleri Üniversitesi; 2023. [Erişim tarihi: 03 Mart 2024]. Erişim linki: <https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp> https://tez.yok.gov.tr/UlusalTezMerkezi/TezGoster?key=a0OMTmEd_3mfOBxT8SiBTN1GQgl1m1J0tnByoqop22C8iKlg4bmaSo9Bzl4peCh
6. Cay T, Güner Emül T. Ebe ve hemşirelerin premenstrüel sendromda kullanılan tamamlayıcı ve bütünlük uygulamaları ilişkin görüşleri [The views of midwives and nurses on complementary and integrated practices used in premenstrual syndrome]. *J Tradit Complem Med*. 2020;3(1):11-7. doi: 10.5336/jtracom.2019-71648
7. Republic of Turkey Ministry of Health, General Directorate of Health Services, Department of Traditional and Complementary and Functional Medicine Practices. "Regulation on traditional and complementary medicine practices dated 27.10.2014". Available at: <https://shgmgetatdb.saglik.gov.tr/TR-82169/regulationontraditionalandcomplementarymedicinepractices.html> (Accessed November 25, 2023). (Linke erişim sağlanamamaktadır, kaynağa direkt ulaşılacak link eklenerek erişim tarihi güncellenmelidir.)
8. Bilge A, Uğuryol M, Dülgerler Ş, Yıldız M. Tamamlayıcı Tedavileri Kullanmaya Yönelik Tutum Ölçeği'nin geliştirilmesi [Development of the Attitude Scale for Using Complementary Therapies]. *Ege University Faculty of Nursing J*. 2018;34(2):55-63. <https://dergipark.org.tr/en/download/article-file/528882>
9. Yeşil T, Gümüştakım RŞ, Kuş C, Cesur ŞE. Usage, attitude and knowledge levels of medical faculty students towards traditional and complementary medicine practices: an analytical study. *J Tradit Complem Med*. 2023;6(1):1-10. doi: 10.5336/jtracom.2022-92022.
10. Öcal Kırsoy H, Pirinççi E, Kurt O. Medical school students' knowledge, attitudes and behaviors regarding traditional and complementary medicine. *Ahi Evran Med J*. 2022;6(2):106-14. doi: 10.46332/aemj.972230
11. Sönmez Cİ, Ayhan Başer D, Küçükdağ HN, Kayar O, Acar İ, Döner Güner P. Tıp fakültesi öğrencilerinin geleneksel ve tamamlayıcı tıp ile ilgili bilgi durumlarının ve davranışlarının değerlendirilmesi [Evaluation of medical faculty students' knowledge and behaviors regarding traditional and complementary medicine]. *Konuralp Med J*. 2018;10(3):276-81. <https://dergipark.org.tr/tr/download/article-file/558887>
12. Doğanay S, Guzel D, Öztürk D, Tanyeli A. Complementary and alternative medicine: understanding, attitude and usage among Turkish health sciences and medical students. *J Contemp Med*. 2018;8(1):48-54. doi: 10.16899/gopctd.414746
13. Sayın Kasar K, Ünal E, Çapacı S, Kütmeç Yılmaz C, Duru Aşiret G. Yaşlı bireylerin ağrıya yönelik tamamlayıcı ve alternatif tedavi kullanım durumu ve tutumu [Complementary and alternative treatment use and attitudes towards pain of elderly individuals]. *Hacettepe University Faculty of Nursing J*. 2020;7(3):271-7. doi: 10.31125/hunhemsire. 834195
14. Tozun M, Kucukkefe Bag H, Pektas M, Soyacikgoz E, Tekindal MA. Knowledge, attitudes, and opinions of health professionals and students on traditional and complementary medicine practices in Turkey: a systematic review and meta-analysis. *Eur J Env Public Hlt*. 2022;6(2):em 0115. doi.org/10.21601/ejeph/12186
15. Karahan S, Ağadayı E, Karagöz N. Evaluation of medical school students knowledge, attitudes, and behaviors regarding traditional and complementary medicine. *Cumhuriyet Med. J*. 2020;42(4):434-40. <http://cmj.cumhuriyet.edu.tr/en/download/article-file/1454274>
16. Ateş Sarı Y, Morgil A, Nematı F, Ünlüer NÖ. Fizyoterapistlerin ve fizyoterapi lisans öğrencilerinin geleneksel ve tamamlayıcı tıp tutumu ve öz yeterliliğinin incelenmesi: kesitsel araştırma [Examination of traditional and complementary medicine attitudes and self-efficacy of physiotherapists and physiotherapy undergraduate students: cross-sectional research]. *J Tradit Complem Med*. 2023;6(2):132-41. doi: 10.5336/jtracom.2022-94889
17. Ayraler A, Öztürk O, Oruç MA, Yavuz E. Tıp fakültesi öğrencilerinin geleneksel ve tamamlayıcı tıp hakkındaki bilgi düzeyleri ve görüşleri [The knowledge level and opinions of medical faculty students about traditional and complementary medicine]. *Turkish J of Fam Med*. 2020;24(4):196-202. doi: 10.15511/tahd.20.00496