



## Applicable to Family Health Centers Detection of Attitudes and Behaviors About Traditional and Complementary Medicine

### Aile Sağlığı Merkezlerine Başvuranların Geleneksel ve Tamamlayıcı Tıp Hakkındaki Tutum ve Davranışlarının Saptanması

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#### Abstract

**Aim** This study aims to determine the attitudes and behaviours of individuals aged 18 and over referred to family health centres in Ankara regarding traditional and complementary medicine practices.

**Material and Method** This cross-sectional study was conducted with 443 people aged 18 and over referred to family health centres in Ankara and agreed to participate in the study. The data source used was the questionnaire forms the research team developed. The questionnaire form was applied face to face.

**Results** All participants stated having heard about T&CM applications. A statistically significant difference was found between the status of getting information about T&CM applications regarding age and marital status. A statistically significant difference was found between the status of getting information about T&CM applications regarding age and marital status, presence of chronic disease and regular drug use. The frequency of using T&CM applications at least once in their life is 40.2%.

**Conclusion** This study determining the attitudes and behaviours of individuals regarding traditional and complementary medicine practices in the case of increasing frequency of use is essential in creating scientific evidence for the studies to be carried out in this field.

**Keywords** Attitudes, behaviors, complementary medicine, traditional medicine

#### Özet

**Amaç** Ankara'da, aile sağlığı merkezlerine başvuran, 18 yaş ve üstü bireylerin, geleneksel ve tamamlayıcı tıp uygulamaları ile ilgili tutum ve davranışlarının saptanmasıdır.

**Gereç ve Yöntem** Kesitsel tipte olan bu çalışma, Ankara'da aile sağlığı merkezlerine başvuran ve çalışmaya katılmayı kabul eden 18 yaş ve üzeri 443 kişi ile gerçekleştirilmiştir. Araştırmada veri kaynağı olarak araştırma ekibi tarafından geliştirilen anket formu kullanılmıştır. Anket formu yüz yüze uygulanmıştır.

**Bulgular** Katılımcıların tamamı GETAT uygulamalarını duyduğunu belirtmiştir. Yaş ve medeni durumuna göre GETAT uygulamaları hakkında bilgi alma durumu arasında istatistiksel olarak anlamlı bir fark saptanmıştır. Kronik hastalık varlığı ve düzenli ilaç kullanım durumuna göre GETAT uygulamaları hakkında bilgi alma durumu arasında istatistiksel olarak anlamlı fark saptanmıştır. Katılımcıların GETAT uygulamalarını hayatında en az bir kez kullanma sıklığı %40,2'dir.

**Sonuç** Bireylerin geleneksel ve tamamlayıcı tıp uygulamalarına ilişkin kullanım sıklığının artması durumunda tutum ve davranışlarını belirleyen bu çalışma, bu alanda yapılacak çalışmalara bilimsel kanıt oluşturmaya açısından önem taşımaktadır.

**Anahtar Kelimeler** Davranış, geleneksel tıp, tamamlayıcı tıp, tutum

## INTRODUCTION

According to the World Health Organization (WHO), traditional medicine is expressed as the whole of knowledge, skills and practices used for the protection, diagnoses, improvement or treatment of physical and mental illnesses as well as the maintenance of good health and that can or cannot be explained based on theories, beliefs and experiences specific to different cultures.<sup>1</sup> All around the world, Traditional & Complementary Medicine (T&CM) applications like acupuncture, homoeopathy, ozone therapy, oxygen therapy, mesotherapy, cryotherapy, ayurveda, phytotherapy, aromatherapy, hypnosis, massage, yoga, meditation, osteopathy, reflexology, spa therapy, thermal therapy, SPA therapy, hydrotherapy, musicotherapy, pilates have been applied in a wide range for hundreds of years despite varying from country to country and from patient to patient.<sup>2</sup>

It has been reported in the literature that, many factors that affect the frequency of use, such as; tradition, custom, belief, orientation to the natural, emotional and sociocultural characteristics, behaviours and attitudes, and access to T&CM applications<sup>3-4</sup>. The frequency of use varies between 5-86% according to countries.<sup>4-6</sup> In our country, the frequency of use varies according to the study group; it is reported that it varies between 18.4%-95.0% in children, 22.1-84.1% in cancer patients, 51.3%-74.3% in hypertension patients, and 34.0%-92.0% in diabetes patients.<sup>7</sup>

Especially in providing primary care services, T&CM applications are used increasingly being constantly affected by the needs and wishes of individuals, as well as the developments and changes in the health system worldwide and in our country.<sup>8</sup>

This study aims to determine the attitudes and behaviours of individuals aged 18 and over referred to family health centres in Ankara regarding traditional and complementary medicine practices.

## MATERIALS and METHODS

This cross-sectional study was conducted with 443 people aged 18 and over who applied to family health centers in Ankara and agreed to participate in the study after obtaining the necessary administrative permissions and the approval of the Yenimahalle Training and Research Hospital Clinical Research Ethics Committee (11.05.2019). (2022 and decision number E-2022-32).

The population of the research consists of individuals aged 18 and over who receive health services from Family Health Units in Ankara. According to Turkish Statistical Institute 2021 data, the population of Ankara province over the age of 18 is 4,354,289.9. It is seen in the literature that the frequency of knowing T&CM applications varies between 60-90%.<sup>10</sup> The sample size was calculated as 403, with a frequency of knowing T&CM practices of 60%, a deviation value of 5%, a 95% confidence interval and a design effect value of 1. A replacement sample was not collected due to non-response; The estimated sample size was increased by 10% and the target was 443 people. The first 443 people who applied to Family Health Centers within the study dates and agreed to participate in the study were included. The data source used is the survey forms developed by the research team. It was applied face to face. The first part of the survey includes questions regarding sociodemographic characteristics, the second part includes questions determining attitudes and behaviors towards T&CM practices and the factors affecting them, and the third part includes the "Attitude Scale Towards Traditional and Complementary Medicine".<sup>11</sup>

The attitude scale consists of 8 items and two subscales. Items 1, 5, 6 and 8 of the scale measure "attitude towards alternative medicine", and items 2, 3, 4 and 7 measure "attitude towards complementary medicine". Each item in the scale is evaluated with a score between 1 and 5 (1: I strongly disagree, 2: I disagree, 3: I am undecided, 4: I agree, 5: I completely agree. Three items in the scale are reverse coded (Items 5, 6 and 8). The total score varies between 8-40.

The higher the total score, the more positive the development attitude towards T&CM applications, and the higher the full score, the more a positive attitude towards T&CM applications develops.

In the study, scientifically accepted practices specified in the Ministry of Health regulations were questioned, and other traditional methods used among the public were excluded.<sup>11-12</sup>

### Statistics

Research data was evaluated with IBM Statistics 22.0 SPSS package program. For statistical analysis, variables assessed with the test of conformity to a normal distribution (Kolmogorov-Smirnov/Shapiro-Wilk Tests), categorical variables presented as numbers, percentages, and continuous variables as mean±standard deviation and median (most significant, smallest value) in the descriptive findings section. In examining the relationships between nominal variables, the chi-square test was used. Non-normally distributed and ordinal variables were evaluated with the Mann-Whitney U test. Independent predictors of using T&CM applications in multivariate analysis were examined using logistic regression analysis. The possible factors determined in the previous studies such as; age, gender, marital status, employment status, occupation, income-generating job status, place of residence for a long time, alcohol use status, regular physical activity status, presence of chronic disease, perceived health status, regular drug use status were included. Hosmer Lemeshow Test was used for model fit. For statistical significance, the accepted value was  $p < 0.05$ .

## RESULTS

### Sociodemographic Characteristics

The mean age of the 443 people participating in the study was  $41.0 \pm 12.0$  years. Of the participants, 58.7% are women, 67.5% are married, 35.7% are in high school, 43.6% have an associate degree, undergraduate and graduate degrees, 42.0% are civil servants, 36.3% of them are workers,

21.7% are housewives, students or retired. 16.3% of the participants stated that they spent their life outside the city centre for a long time, 28.0% said that they are not currently working in a job that generates income, 51.0% perceive their income level as a medium, and 41.3% perceive it nicely.

### Some Characteristics of Health Status and Behaviors Affecting Health

The distribution of the participants were as follows; 31.6% still smoked, 19.0% quit smoking, 2.9% regularly consumed alcohol, 20.3% drank alcohol occasionally, 4.3% consumed alcohol before, 50.1% did not have regular physical activity, 37.7% had a diagnosed chronic disease requiring continuous medication, 1.1% had poor and 24.8% had moderate health status. When the disorders of the patients with a diagnosed chronic illness requiring ongoing drug use were questioned; 42.7% were endocrinological, metabolic and autoimmune diseases, 28.7% were circulatory system diseases, 17.7% were musculoskeletal system diseases, 6.7% were gastrointestinal system diseases, and 12% were other chronic diseases (chronic kidney failure, COPD, polycystic kidney disease, depression, breast cancer, glaucoma).

### Knowledge, Attitudes and Behaviors Regarding T&CM Applications

All participants stated having heard about T&CM applications. The distribution was as follows; 15.0% cupping therapy (hijama), 13.0% acupuncture, 12.7% ozone, 12.3% hydrotherapy (leech application), 10.1% music therapy, 7.8% hypnosis, 7.8% mesotherapy, 6.7% phytotherapy, 3.2% chiropractic, 3.1% reflexology, 2.1% homoeopathy, 2.0% osteopathy, 1.7% apitherapy, 0.9% kinesiotherapy, 0.9% prolotherapy, and 0.7% maggot (larvae) application. 77.0% of the participants stated that they have received any kind of information about T&CM applications. Source of information received on T&CM practices is indicated as 27.6% environment (family, friends, neighbours), 25.8% social media/internet, 19.6% health workers, 13.6% T.V./radio, and 13.4% newspapers/books /magazine.

A statistically significant difference was found between the status of getting information about T&CM applications regarding age and marital status ( $p < 0,05$ ). The married, 41 years and older group are more likely to have information about T&CM applications. By gender, educational background (status), occupation, income-earning job, long-term residence, and perceived income level, no statistically significant difference existed between the quality of getting information about T&CM applications. ( $p > 0,05$ ).

A statistically significant difference was found between the status of getting information about T&CM applications according to the presence of chronic disease and regular drug use ( $p < 0,05$ ). The frequency of getting information about T&CM applications is less in those who do not have chronic illnesses and do not use regular medication. According to smoking, alcohol consumption status, regular physical activity status, and perceived health status, there was no statistically significant difference between the status of getting information about T&CM applications ( $p > 0,05$ ).

**Table 1.** Results of Logistic Regression Analysis of Factors Affecting Participants' Information on T&CM Applications, Ankara, 2022.

Factor	RR (95% GA)	p
Presence of Chronic Disease	1.9 (1.0-3.5)	0.044
Good/Very Good/Perceived Health Status Perception of Good/Very Good Health	2.7 (1.4-5.2)	0.003

**Table 2.** Distribution of Participants' Participation in the Propositions on the T&CM Practices Attitude Scale, Ankara, 2022.

Propositions (n=443)	I disagree	I agree	I'm undecided
	%*	%*	%*
1. My thoughts on T&CM are generally positive.	18.1	52.6	29.3
2. Patients should be directed to T&CM applications when the disease is incurable.	18.8	51.0	30.2
3. In case of illness of a relative, I can direct them to T&CM practices and medical treatment.	19.9	48.0	32.1
4. T&CM applications can be used in diseases that modern medicine cannot treat.	24.4	50.5	25.1
5. I think T&CM practices are quackery.	70.2	17.6	12.2
6. Only modern medicine should be used in curing diseases.	53.4	23.3	23.3
7. T&CM applications can be used to assist treatment as well as modern medicine.	18.1	60.9	21.0
8. I think it is ignorant to use T&CM apps.	71.9	15.7	12.4

The median score of the participants in the T&CM practices attitude scale is 30.0 (8.0-40.0).

**Table 3.** Distribution of Participants' Attitude Scale Scores According to their Status of Obtaining Information about T&CM Applications and Using T&CM Applications, Ankara, 2022.

Status of Receiving Information About T&CM Applications (n=443)	No Information Received	Received Information	p
The Median of the Scores Received from the Attitude Scale	25.5 (8.0- 40.0)	31.0 (8.0- 40.0)	0.001
Status of Using T&CM Applications (n=443)	Not using	Using	p
The Median of the Scores Received from the Attitude Scale	30.0 (8.0- 40.0)	32.0 (10.0- 40.0)	0.002

Those who get information about T&CM applications and those who use T&CM applications have higher attitude scores (Table 3).

**Table 4.** Distribution of Participants' Views on Using T&CM Applications, Ankara, 2022.

Opinions of Participants on Using T&CM Applications (n=443)	Number	%*
I have not used and do not intend to use any T&CM methods	77	17.4
I have not used T&CM methods but may wish to use them if necessary	164	37.0
I plan to use a T&CM method	24	5.4
I have used a T&CM method for the last year	51	11.5
I have used a T&CM method for over a year	47	10.6
I've used it in the past	80	18.1

The frequency of using T&CM applications at least once in their life is 40.2%. Of those having used T&CM applications; 67.7% use it regularly, 60.1% benefit from using T&CM applications, and 29.8% get partial help. Of the 329 participants who recommended T&CM applications, 57.1% recommended and 32.2% partly recommended.

52.2% of those who received information about T&CM applications stated that they had used T&CM applications at least once in their life. There is a statistically significant difference between the status of using T&CM applications and the level of getting information about them ( $p < 0,001$ ). A statistically significant difference was found between using T&CM applications according to age, marital status, educational status, and occupational status ( $p < 0,05$ ). Married, age 41 and above, workers are more likely to use T&CM applications. By gender, place of residence for a long time, working status and perceived income level, no statistically significant difference was found between the use of T&CM applications. ( $p > 0,05$ ).

A statistically significant difference was found between the participants using ES&CM applications either regarding alcohol consumption or regular physical activity. ( $p < 0,05$ ).

For those who do not consume alcohol and do not do regular physical activity, the frequency of not using T&CM applications is higher. According to smoking, presence of chronic disease, perceived health status, and frequent drug use, no statistically significant difference was found between the use of T&CM applications ( $p > 0,05$ ).

**Table 5.** Results of Logistic Regression Analysis of Factors Affecting the Participants' Use of T&CM Applications, Ankara, 2022.

Risk Factor	RR (%95 GA)	p
≥ 41 years old	2.3 (1.5-3.5)	<b>0.001</b>
to be a worker	2.4 (1.3-4.1)	<b>0.003</b>
Not Doing Regular Physical Activity	1.8 (1.2-2.7)	<b>0.004</b>

When the reasons for preferation were questioned; 16.8%, 15.8%, 13.0%, 14.6%, 10.2%, 10.2%, 9.4%, 5.0%, 5.0% of the participants stated that they preferred T&CM applications for; being useful, natural, being used it in addition to medical treatment, having fewer side effects and being safe, acceleratating the healing process, the side effects of drugs, the increase of body resistance, the improvement physical appearance; and for economic and cultural reasons, respectfully.

The applications used by the T&CM users were as follows; 27.7% cupping therapy (hijama), 14.5% acupuncture, 14.1% hydrotherapy (leech application), 11.5% music therapy, 7.0% ozone application, 5.5% mesotherapy, 5.1% chiropractic, 3.9% phototherapy, 3.5% hypnosis, 2.0% homoeopathy, 2.0% kinesiotherapy, 0.8% osteopathy, 0.8% reflexology, 0.8% prolotherapy, and % 0.8 apitherapy.

The answers given to the question of which T&CM applications you would recommend were as follows; 22.6% cupping therapy (hijama), 16.5% acupuncture, 13.0% hydrotherapy (leech application), 12.1% ozone application, 9.5% music therapy, 5.8% hypnosis, 5.8% mesotherapy, 4.9% phytotherapy, 2.9% chiropractic, 1.7% reflexology, 1.4% apitherapy, 1.4% homoeopathy, 0.9% prolotherapy, 0.9% kinesiotherapy, and 0.6% osteopathy.

## DISCUSSION

Although the descriptive characteristics of the participants are similar to many studies in the literature, they differ from studies conducted in rural areas, participants with lower education levels and perception of income levels, and young and elderly groups. An analysis by researchers from the National Center for Complementary and Integrative Health published in the *Journal of Integrative and Complementary Medicine* showed that complementary health-related visits primarily included individuals ages 45 and older. Similar to the findings of other studies, women use T&CM methods more frequently.<sup>13-14</sup>

The studies in the literature show that the rate of knowing T&CM methods varies between 60-90%. In the survey conducted by Odabaş et al. in 2021, the frequency of knowing at least one of the T&CM methods was reported as 81.6%.<sup>13</sup> In another study reported that 68.5% of the participants knew T&CM methods<sup>10</sup>. In İzmir, 69.7% of individuals over 60 living in rural areas knew traditional and alternative methods with a similar frequency reported in a study conducted in Kayseri. The frequency of having heard about any type of T&CM applications was 98.4%.<sup>3,10,13</sup> In our study, 77.0% of the participants stated having received information about T&CM applications. This finding is identical to the literature.

In the literature the most common sources to get information about T&CM applications are stated to be magazines, the internet, circle of friends and experts on the subject.<sup>15-16</sup> Similar to this, the sources of information about T&CM practices in our study are; the environment (family, friends, neighbours), social media/internet, health workers, T.V./radio, newspaper/book/magazine. Although it is pleasing that experts on the subject are preferred at the point of obtaining information, it is troubling that internet is also the preferred method to obtain information, because access to false information is as easy as accessing correct information.

Our study is similar to many other studies, and the average scores obtained from the attitude scale are similar.<sup>17-18</sup> In a study in the literature, participants had lower attitudes towards T&CM.<sup>19</sup>

Some studies have found that those who know about T&CM have more positive attitudes towards T&CM.<sup>20-21</sup> In our study, the average scores of those who stated that they had received information about T&CM from the attitude scale were similarly higher.

More than half of the participants agreed with the positive propositions in the T&CM Practices Attitude Scale. Negative propositions had lower participation rates. The literature shows that the perspective towards T&CM applications shifts positively as age progresses. The positive outlook on T&CM applications obtained in this study consistent with the literature may be due to the fact that the average age of the participants is 40 years and over.<sup>22-23</sup>

The participants did not use and did not consider using any T&CM method in our study with a slightly higher frequency (17.4%) than in other studies.<sup>24-25</sup>

Frequency of use in the literature has reported to be 5-86%, but in some developed countries, it varies between 30% and 90%.<sup>4-6,10</sup> The popularity of use has increased in North America, Australia and Europe in recent years. It is reported that; T&CM applications are used with a frequency of 70-90% in some developed countries. The frequency is reported as; 70% in Canada, 80% in Norway, England, Italy, Germany and Japan, 49% in France and 42% in the United States. There are studies indicating that the highest frequency of T&CM use in European countries is Switzerland (48.6%) and the lowest frequency is Greece (14.8%).<sup>26-27</sup>

According to the 2006 national policy documents of China and Congo, 99.0% of the population uses T&CM applications. Traditional and modern medicine are intertwined in 95% of hospitals in China.<sup>28</sup> In Malaysia the prevalence

of use has been reported as approximately 56.0% and as 73.7% in conducted in Iran. It is estimated that 80% of the population in Ethiopia and 60-79% of the people in Chad use T&CM methods. In the study conducted in Nigeria, 84.7% of the participants used T&CM methods.<sup>17,29-30</sup>

The frequency of use of T&CM applications in our country varies according to the study groups. For example, the frequency of use of T&CM applications was reported as 53.2% in the study by Alasırt (2021), 43.5% in the survey by Güner (2021), 48.9% in the study by Ünal (2019), 59.4% in the survey by Kocabaş et al. (2019), 60.5% in the study by Şimşek et al. (2017), 42.3% in the survey by Özyazıcıoğlu et al. (2011), 33.0% in the study by Orhan et al. (2019).<sup>17,31-36</sup> In this study, the frequency of using T&CM applications was determined as 40.2%. This frequency is similar to the frequencies reported in studies conducted in all countries and our country.

One of the important reasons that increase the use of T&CM is the perception that these applications do not have any harm to health. Main reasons for preferring T&CM applications in the literature were; considering as beneficial, feeling better physically, the thought of being safer, having fewer side effects, fearing the side effects of drugs, the accelerating the healing process, being easily accessible and low cost. In this study, similar reasons were stated as justification for use.<sup>6,37</sup>

Among the treatment methods included in the "T&CM Regulation", phytotherapy was the most common in the studies conducted.<sup>38</sup> In a study by Şahin et al. (2019) conducted with students in Balıkesir the most frequently used method was found to be music therapy. In our study, cupping therapy (hijama) was the most preferred and recommended method, differently.<sup>15,17-18,22,36</sup>

## CONCLUSION

The frequency of use of T&CM has increased significantly in our country and around the world recently. Therefore,

determining individuals' attitudes and behaviors towards traditional and complementary medicine practices in case the frequency of use increases is important in terms of providing scientific evidence for studies in this field.

As seen in this study, individuals with chronic diseases over the age of forty prefer ES and T&M applications more frequently for the following reasons; having fewer side effects, being considered safe, accelerating the healing process, fewer side effects of medications, increasing body resistance and improving physical appearance. It is seen that information about the applications is mostly obtained from close circle such as friends/neighbors/relatives and social media/internet. It is important for primary health-care professionals to inform individuals.

## Limitations of the Study

Since it was conducted on people applying to a Family Health Center, it cannot be generalized to the society.

## Ethical Approval

Yıldırım Beyazıt University, Yenimahalle Education and Research Hospital ethics Committee and following the Declaration of Helsinki (decision no: No. EtikKurul-2022-32).

## Peer-review

Externally and internally peer-reviewed.

## Authorship Contributions

Concept: A. A., Design: A. A., T. Ö., Z.B.Ş., Data collection or Processing: A. A., Analysis or interpretation: T. Ö., Z.B.Ş., Literature Search: A. A., T. Ö., Z.B.Ş., Writing: A. A., T. Ö., Z.B.Ş.

## Conflict of Interest

The authors declare that they have no conflict of interest.

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