Original Article

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Turkish Primary Care Patients' Overviews and Attitudes About Traditional and Complementary Medicine: A Cross-Sectional Study

Pinar Bilgili*, Raziye Sule Gumustakim**, Murat Cevik***, Duygu Ayhan Baser****, Adem Doganer*****, Erkut Coskun******, Ozgur Akbaba*******, Selda Handan Karahan Saper********, Melahat Akdeniz*********, Ahef Bilim Kurulu**********

*Muratpasa No. 19 Guzeloba Family Health Center, Family Medicine, Antalya, Turkey
**Kahramanmaras Sutcu Imam University Faculty of Medicine, Family Medicine, Kahramanmaras, Turkey
***Sokullu Mehmet Pasa Family Health Center, Family Medicine, Ankara, Turkey
****Hacettepe University Faculty of Medicine, Family Medicine, Ankara, Turkey
*****Kahramanmaras Sutcu Imam University Faculty of Medicine, Department of Biostatistics, Kahramanmaras, Turkey
******Istanbul Ataşehir 12. Family Health Center, Family Medicine, Istanbul, Turkey
*******Family Health Center, Family Medicine, London, United Kingdom
********Istanbul Kartal Yakacık Family Health Center, Family Medicine, Istanbul, Turkey
*********Akdeniz University Faculty of Medicine, Family Medicine, Antalya, Turkey
**********Ahef Bilim Kurulu, Family Medicine, Istanbul, Turkey

Abstract

Aim: Primary care physicians need to be aware of the types of traditional and complementary medicine (TCM) used by patients to be able to guide patients away from harmful approaches and to aim them toward useful or at least seeming benign approaches. This study aimed to determine the prevalence of the usage of TCM methods in Turkey and the level of knowledge and attitudes of applicants about these methods.

Methods: The universe of this cross-sectional study consisted of individuals aged 18 and over who applied to the Family Health Centers and agreed to participate in the study in 12 provinces in different regions of Turkey between July and December 2016. The questionnaires were applied to the volunteer participants by the researchers using face-to-face interview techniques. The questionnaire had 25 questions.

Results: 80.6% of the participants benefited from TCM, and 86.4% stated they believed in the effectiveness of TCM. Women, university graduates of college who had private insurance used TCM (respectively; p=0.031; p=0.004; p=0.000), and women (83.3%) found TCM more useful than men (p=0.005). The most frequent reason for using TCM was "heard that it was useful".

Conclusion: The results of our study indicated that a large portion of Turkish primary care patients use TCM and recommend it to their relatives. Therefore, health policies and academic knowledge should be developed in this sense.

Keywords: Complementary alternative medicine, family health center, attitude, knowledge

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Address for Correspondence: Raziye Sule Gumustakim, Kahramanmaras Sutcu Imam University Faculty of Medicine, Family Medicine, Kahramanmaras, Turkey
Phone: +90 505 957 78 82 E-mail: sulesu82@gmail.com ORCID: orcid.org/0000-0003-0195-0895
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Introduction

When individuals encounter health issues, they actively seek solutions. These quests often lead individuals to explore traditional and complementary medicine (TCM) either in conjunction with or as an alternative to modern medical treatments (1). While significant strides in technology and scientific advancements have revolutionized the diagnosis and treatment of numerous diseases, the use of TCM alongside modern medicine has been on the rise since the twentieth century, with the aim of promoting overall health and treating illnesses (2).

According to the World Health Organization (WHO), traditional medicine encompasses a vast body of knowledge, skills, and practices rooted in the beliefs and experiences of diverse cultures. These practices are employed not only to maintain one's current state of health under improved conditions but also to prevent physical and mental illnesses and enhance treatment outcomes (3). Within the framework of existing healthcare services, these therapeutic approaches are referred to as "traditional and complementary", regardless of whether they align with societal traditions. Furthermore, "traditional and complementary" encompasses all treatment modalities employed outside the realm of modern medicine (4-8).

The prevalence of TCM usage has steadily increased in our country since the twentieth century. In a study conducted by Tulunay among individuals with chronic illnesses, it was observed that women use herbal therapies more frequently than men, with television programs being the most frequently cited source of information (9).

The primary responsibility of family physicians lies in preventive medicine (4). However, TCM is not typically incorporated into the medical curriculum, potentially leaving physicians with knowledge gaps and biases regarding TCM (10). This circumstance often leads patients to withhold information about their TCM practices from their physicians, even though the use of such therapies is widespread globally. Primary care physicians need to be informed about the types of TCM utilized by their patients, enabling them to guide patients away from potentially harmful approaches and toward those that are beneficial or at the very least seemingly benign. In all cases, it is crucial for physicians to establish an open dialog with patients regarding complementary therapies, ensuring that patients are under the care of a comprehensively trained medical professional (11).

In this study, our primary objective is to assess the knowledge and attitudes of individuals concerning TCM, with the secondary aim of raising awareness about the most commonly employed TCM methods in Turkey.

Methods

Compliance with Ethical Standards

Our research is in thorough compliance with the Declaration of Helsinki. Ethics approval was obtained from the ethics committee of the Akdeniz University Faculty of Medicine Clinical Research for the study (approval number: 309, date: 01.06.2016). After the Ethics Committee's approval, the required authorization from the Turkish Public Health Institute was obtained.

Study Design

The design of the study is cross-sectional. The reporting of the study was conducted in accordance with the STROBE criteria. As a result of the literature screening, a 25-question survey was developed by the researchers. A pilot study was conducted with 20 people to evaluate the comprehensibility, readability, and applicability of the survey. As a result of the criticisms and suggestions received after the pilot study, the questionnaire was finalized. The questionnaires were administered to the volunteer participants using the face-to-face interview technique by the researcher and family physicians. The questionnaire includes questions about sociodemographic information, chronic diseases and drug use, knowledge levels, attitudes, and experiences about TCM.

Data Collection

The universe of this descriptive study consists of individuals aged 18 and over who apply to the Family Health Centers (FHC) and who agree to participate in the study in Antalya, Denizli, Nevsehir, Sakarya, Gaziantep, Sanliurfa, Bursa, Istanbul, Malatya, Balikesir, Ankara, and Canakkale. Assuming that the population over the age of 18, whose sample size is connected to a family physician, is 3400; taking $p<0.01$; calculated using random selection criteria at 1% margin of error and 99% confidence interval. In similar studies, the percentage of individuals using TCM was found to be 33%. While calculating the sample size, the 33% rate was used. The sample size was calculated at 1060. All participants who applied to the FHCs determined for the research for any reason and were over the age of 18 agreed to participate in the study and filled out the consent form.

Statistical Analysis

In the evaluation of the data, the relationship between categorical variables was examined using the chi-square test and the exact test. Statistical parameters are expressed as ratios (%) and frequencies (n). Statistical significance was set as $p<0.05$. The data were analyzed using the IBM SPSS version 22 package program (IBM SPSS for Windows version 22, IBM Corporation, Armonk, New York, United States).

Results

One thousand seventy people participated in the study. 61.1% of the participants were women, and 45.7% were in the 30-50 age group. 67.1% were married, and 69.4% had children. 29.8% of the participants were primary school graduates, and 48.5% were working. 66.4% of employees did not work; 54.5% of those were housewives. The social security of 90.8% of individuals was social security insurance (SSI) (Table 1).

35.4% of individuals had chronic diseases. The two most common chronic diseases were diabetes (21.1%) and hypertension (17.6%).

While 80.6% (n=863) of the participants had a TCM method that they had previously benefited from, 86.4% (n=925) stated that they believed in the effectiveness of TCM methods. The most common reasons for application of TCM were cough (58.1%) and immune system weakness (49.5%); the most frequently used TCM method was herbal therapy (96.1%). The two most commonly used plants were lemon (80.4%) and linden (65.8%). The other grouped plants were green tea, turmeric, gojiberry, onion, thyme, and echinacea.

Table 1. Socio-demographic characteristics of the participants

Socio-demographic characteristics	Number (percent)
Region	
East	458 (43.6%)
West	593 (56.4%)
Age	
18-29	298 (27.8%)
30-50	486 (45.4%)
51-64	189 (17.6%)
65≤	97 (9%)
Gender	
Female	624 (59.8%)
Male	419 (40.2%)
Marital status	
Single	253 (24.2%)
Married	697 (66.7%)
Divorced	38 (3.6%)
Widow	57 (5.5%)
Child presence	
Yes	713 (71.2%)
No	288 (28.8%)
Level of education	
Literate	84 (8.2%)
Primary education	286 (27.8%)
High school	283 (27.6%)
College	98 (9.5%)
University	276 (26.9%)
Social security	
SSI	906 (90.2%)
Green card	26 (2.6%)
Special insurance	32 (3.2%)
No	40 (4%)

SSI: Social security insurance

The most common reason for using TCM was "having heard it was useful" (72.7%). In terms of education level, primary school graduates recommend TCM to other people more than other groups (30.5%) ($p<0.001$).

According to their socio-demographic characteristics, the most commonly known and used TCM methods and the most common reasons for their use are shown in Table 2.

The most commonly used TCM method in all age groups was herbal therapy. Herbal therapy was known mostly between the ages of 30 and 50 (97.5%) ($p<0.001$). The group that believed in the effectiveness of TCM was the 18-29 age group (90.3%) ($p=0.002$). Although not statistically significant, the group that found TCM most useful was 18-29 years old (82.6%) ($p>0.05$). The most common reason for using TCM among all age groups was to have heard that it was useful.

Compared with gender, the most well-known method of TCM was herbal therapy; women used herbal therapy more than men ($p=0.031$). Although the frequency of believing in the effectiveness of TCM was not statistically different, it was higher in women (87.8%) than men ($p>0.05$). Women (83.3%) found TCM more useful than men ($p=0.005$).

When the groups were compared according to marital status, it was observed that the most known and used method, herbal therapy, and divorced group were known and used it more than other groups ($p<0.001$).

When the groups were compared according to their educational status, it was seen that those who graduated from the university knew herbal therapy more ($p<0.001$) and that the graduates of the college used herbal therapy more (97.3%) ($p=0.004$). The most frequent reason for use was "having heard it is useful", and it was observed that it was statistically significantly more expressed by the literate (88.9%) ($p<0.001$).

When the groups were evaluated in terms of the presence of children, it was found that those who did not have children (96.3%) knew the herbal therapy much more ($p<0.001$).

When the people were grouped according to profession, it was seen that herbal therapy was significantly more known (96.9%) in the non-working group ($p<0.001$). It has been observed that the most frequent reason for using TCM is "to have heard that it is beneficial" ($p=0.003$).

The level of knowledge of the people about TCM with social security SSI was significantly higher than that of the others. Those who had private insurance also used TCM because they found it more useful and safer than the other groups ($p=0.007$).

The most common reason for using TCM was "heard that it was useful" for housewives (81%), and "difficulty

Table 2. TCM methods known and used according to their socio-demographic characteristics and reasons for their use			
	Known TCM method	**Used TCM method**	**Reason for using TCM**
Age			
18-29	Prayer (50.7%) Meditation (22.1%) Larva (8.7%)	Meditation (3.2%)	
30-50	Herbal therapy (97.5%) Hacamat (53.6%) Acupuncture (48%) Ozone therapy (26.8%)	Herbal therapy (96.2%) Manipulation (9.2%)	Worrying about drug side effects (30.9 %)
51-64	Thermals (77.2%) Leech (53.4%)		
65≤	Manipulation (30.9%)	Thermals (33.3%) Hacamat (14.5%) Acupuncture (13%) Leech (8.7%)	Having heard it is useful (81.4%) Finding TCM reliable (34.4%) Tired of using medication (32.9%) To think that TCM is cheaper (5.7%)
Gender			
Female	Herbal therapy (96.9%)	Herbal therapy (94.8%) Acupuncture (6.8%) Meditation (2.9%) Larva (2%) Mesotherapy (1.7%) Ozone therapy (1.5%)	Having heard it is useful (73%)
Male	Herbal therapy (95%)	Herbal therapy (93.4%)	Having heard it is useful (72.4%)
Marital status			
Married	Leech (51.5%)	Hacamat (11.6%)	
Single	Acupuncture (47.6%) Meditation (28.6%) Ozone therapy (24.6%) Larva (10.1%)	Meditation (4.9%)	
Divorced	Hacamat (57.1%) Manipulation (36.7%) Mesotherapy (22.4%)	Herbal therapy (97.6 %) Acupuncture (7.3%) Mesotherapy (4.9%) Ozone therapy (2.4%)	Finding TCM reliable (43.9%) Tired of using medication (41.5%) Avoiding drug side effects (36.6%) To think that TCM is cheap (7.3%)
Widow	Thermals (75.5%) Praying (54.7%)	Thermals (38.1%) Praying (35.7%) Leech (16.7%) Manipulation (11.9%)	Having heard it is useful (83.7%)
Level of education			
Literate			Having heard it is useful (88.9%)
Primary education			
High school			
College		Herbal therapy (97.3%)	
University	Herbal therapy (97.7%)		
Presence of chronic disease			
Yes	Herbal therapy (95.8%) Thermals (69.7%)	Thermals (29.6%) Hacamat (29.6%) Acupuncture (7.6%)	Having heard it is useful (76.7%)
No		Herbal therapy (95.3%) Prayer (26.6%) Meditation (2.9%)	Having heard it is useful (70.7%)

TCM: Traditional and complementary medicine

in applying to the health institution" was more common for students (11.9%).

According to the socio-demographic characteristics, the sources from which patients obtain information about TCM are shown in Table 3.

Discussion

The studies conducted in this regard in our country are generally at the regional level and/or conducted with few people. In addition, most studies focused on the use of TCMs for only one disease. Our study presents a comprehensive and overall assessment conducted in primary health care, which makes us superior to other studies.

80.6% of the participants stated that they use TCM, and this ratio is higher than the studies conducted abroad and the studies conducted in our country (8,10,11). The fact that our study was a primary care study and the large sample size may have contributed to this result.

According to the results of our study, the most commonly used TCM method was herbal therapy, in accordance with studies conducted by Oral et al. (12) and Uysal et al. (13). While herbal therapy was followed by nutritional medicine in the study of Thomson et al. (14),

Table 3. Comparison of socio-demographic characteristics and ways to learn about TCM

Socio-demographic features	The most common way of obtaining information	Significance
Age		
18-29	Internet (36.1%)	**p<0.001**
30-50	Others (58.4%)	
51-64	Radio/TV (20.3%)	
65≤	Radio/TV (11.8%)	
Gender		
Female	Others (70.8%)	p=0.673
Male	Herbalist (41.9%)	
Child presence		
Yes	Radio/TV (75.5%)	**p<0.001**
No	Others (44.2%)	
Marital status		
Single	Radio/TV (71.8%)	**p<0.001**
Married	Others (33.6%)	
Divorced	Herbalist (7.3%)	
Widow	Friends (6.1%)	
Level of education		
Literate	Radio/TV (12.4%)	**p<0.001**
Primary education	Family and relatives (32.1%)	
High school	Internet (27.3%)	
College	Others (17.7%)	
University	Others (56.6%)	
Job		
Still workers	Others (94.7%)	**p<0.001**
Workers	Friends (36.2%)	
Officials	Internet (18.8%)	
Self-employment	Herbalist (28%)	
Doctors	Others (18.7%)	
Midwives/Nurses	Others (65.4%)	
Assistant medical staff	Health workers (10.4%)	
Pharmacists	Others (6.5%)	
Dietitians	Others (0.9%)	
Unemployed	Family and relatives (43.1%)	
Housewives	Radio/TV (89.5%)	
Students	Others (66.7%)	
Retirees	Radio/TV (15.8%)	
Social security		
SSI	Others (99.1%)	**p=0.01**
Green card	Friends (1.6%)	
Special insurance	İnternet (5.7%)	
No	Family and relatives (4.1%)	
Presence of chronic disease		
Yes	Radio/TV (43.4%)	**p<0.001**
No	Others (78.8%)	

Chi-squared test
SSI: Social security insurance, TCM: Traditional and complementary medicine

Arab participants mostly used traditional medicine and herbal treatments, whereas Jews used dietary products and dietary supplements more. Other studies indicated that the most preferred TCM methods were vitamin supplements, massage, and traditional Chinese medicine (15-17). In studies conducted in Turkey, in a study in Izmir, prayers, and in a study in Kayseri, thermals were mentioned as the most frequently used TCMs (18,19). The reason why the patients mostly prefer herbal products may be because their advertisements are more prominent, because of their easy accessibility and cheapness, and because they may be harmless because they are obtained naturally (14). The TCM method's usage is affected by the region where the patient lives, cultural differences, and health or disease beliefs. In this study, we found the reasons why herbal therapy was preferred over other methods were the lack of sufficient knowledge about these methods and the high costs.

While the most common reason for using TCM is cough and immune system weakness, lemon and linden are the most commonly used herbs for herbal treatment. Those who use lemon and mint have difficulty applying to the health institution, and those who use linden prefer this method because it is cheaper. In a study that investigated the use of TCM in individuals with chronic disease, the rate of TCM use was found to be 62.3%, and 58.5% were using herbal products similar to our study. Similar to our study, the most commonly used herbal products were lemon, garlic, and linden. The purposes of use are defined as disease and pain problems in a systematic review (20). In a study conducted in Korea, the most common uses were gastrointestinal and dental diseases (16). In the study by Nural et al. (21), the most common reasons for using TCM were lowering blood pressure (38.8%) and reducing pain (30.2%). There are national and regional differences in their use, and our study is different from other study results. This may be because the study was conducted on a wider population, not just people with a particular disease.

In our study, the most common reason for using TCM was hearing that it was beneficial (72.7%), that it was thought to be reliable (30.7%), and that it was used due to drug side effects (29.9%). Similar to our study, the most common reason for using TCM in some studies was to believe that TCM is beneficial (1,17). Recently, people have turned to natural methods and moved away from modern methods. This is valid for both our country and the world. As a result, people believe, find, and use TCM more effectively because they find TCM more natural than modern medicine methods and believe that it is harmless and will not have side effects like medicines.

In our study, in accordance with the studies in the literature, there were people who suffered from the use of TCM in or around the participants (19,21).

When TCM is heard and used according to various variables, it is found that people who are more educated, younger, live in centers, and have better economic status know these methods at a higher rate (12). While the rate of knowing TCM in individuals in Saudi Arabia is 88.8%, this rate was found to be 69.7% in a study conducted on people over 60 years of age in a rural part of Izmir (17,19). The perception of TCM as beneficial, being a primary school graduate, having high health awareness, having positive attitudes toward TCM, and having more information about TCM have been positively associated with the use of TCM (19).

The 18-29 age group has the most faith in TCM's effectiveness and has benefited from it in the past. Although the most known and used method among the age groups is herbal therapy, the age group that knows and uses this method the most is the 30-50 age group. In studies, it was found that the use of TCM increased in middle and advanced ages (14,21). In individuals with chronic disease, TCM use was found to be significantly higher in patients aged 65 years and over (12,21,22). Although different studies have shown that the use of TCM is higher in young patients or that there is no age effect on the use of TCM (12,21), in our study, in parallel with this, the youngest group believes that the effectiveness of TCM is the greatest, but the middle-aged group uses it the most. The relationship between advanced age and the use of TCM can be attributed to the increase in chronic diseases as people grow older and seek solutions other than modern treatment methods.

While there was no difference in our study in terms of methods used between genders and believing in the effectiveness of TCM, it was significantly higher for women in the past to benefit from TCM, and women use TCM more. Although there are studies in the literature that do not find any difference between genders in terms of TCM use (13,21,22), there are also many studies supporting women using TCM in accordance with our findings (23,24). Although it is clearly shown in most studies that women use TCM more than men, national and regional differences are remarkable in terms of the method used. The most commonly used TCM method in our study was herbal therapy, and the majority of women in our study group may have caused this result.

In terms of educational status, it was determined that university graduates knew more about TCM and high school graduates used herbal therapy more. Although there is no difference, the group that believes in the

effectiveness of TCM is the group of university graduates, while the group that has benefited from TCM in the past is the group of primary school graduates. Although there are many studies in the literature showing that the use of TCM increases as the level of education increases (23-25), unlike the literature, low education level and TCM use were found to be related in another study (13). Among the reasons for the use of TCM among educated people is to have more information and to search for reliable alternative methods to improve their medical condition (25).

When evaluated in terms of job, the group that did not work knew the herbal therapy better and believed more in the effectiveness of TCM. In this group, the rate of using a TCM that has been beneficial in the past is higher. While the working group used more herbal treatments, there was no difference between the statistically working and non-working groups. Although some studies (24-26) have shown that the working group uses TCM more than the non-working group, TCM is used mostly by the working group in our study. In the study of Erci (27), it was shown that the group who did not work against TCM had a positive attitude and the officers had a negative attitude (26). The explanation of TCM being used more by the working group may be that this group investigates, knows the TCM methods more, and shares this information with each other in the workplace, because of which they are affected.

Those who have chronic illnesses but do not use drugs regularly have a higher rate of benefit from TCM in the past. Many people with chronic illnesses are afraid of drug side effects, so they cannot take their medication regularly or quit. As a result, they turn to TCM, which they find more natural and reliable.

When socio-demographic characteristics were evaluated with those who used any TCM and benefited from this treatment, a statistical difference was found only in the presence of chronic disease. More than half (52.2%) of those with chronic diseases have previously used this treatment and benefited from it. Although some studies (24-26) stated that healthy people develop negative attitudes toward TCM and use less, in our study, healthy people without chronic disease wanted more information about this issue and suggested more TCM in their environment.

The desire to obtain information about TCM was found more in the 30-50 age group: women, married people, children with children, primary school graduates, workers, housewives, SSIs, and those without chronic diseases. Those living in eastern provinces, women aged 18-29 years, divorced, people with children, university graduates, non-employed, green card holders, those without chronic illness, and drug users want information about TCM.

Study Limitations

Our study was conducted in various provinces across different regions of Turkey; however, it may not fully represent the entire country. Another limitation of our study is that we did not inquire about the utilization of TCM by family physicians. This omission stems from the fact that the surveys are typically administered by family physicians themselves, raising concerns about potential bias. Our research results are limited to certain cities with patients in FHCs and cannot be generalized to all of Turkey.

One of the strengths of our study lies in its broad geographical scope, which encompasses diverse provinces across Turkey. However, it is important to acknowledge that our study may not offer a comprehensive representation of the entire country. In addition, we took a cautious approach by not investigating the use of TCM among family physicians, as this decision was driven by concerns about potential bias inherent in surveys administered by the physicians themselves.

Conclusion

The use of TCM is very common in Turkey. The most known and used form of TCM is herbal therapy in primary care. Young people believe in the effectiveness of TCM more, whereas middle-aged people use TCM more. While university graduates know more about TCM, collage graduates use it more. While those without children know more about TCM, women have benefited more from using TCM in the past. The non-working group (housewives, students) had a better understanding of herbal treatment, believed more in the effectiveness of TCM, and the rate of using a TCM that has been beneficial in the past was higher in this group. SSI members have more information about TCM. Information about TCM is obtained from family members. The desire to obtain information about TCM was found more in the 30-50 age group, women, married people, who have children, primary school graduates, workers, housewives, SSIs, and those without chronic diseases. In this respect, family physicians have special importance and should be able to direct patients who want to receive information correctly and safely. Family physicians are actually advantageous in this respect, as patients who want information are more frequently referred to FHCs. Therefore, health policies and academic knowledge should be developed in this context.

Ethics

Ethics Committee Approval: Ethics approval was obtained from the ethics committee of the Akdeniz University Faculty of Medicine Clinical Research for the study (approval number: 309, date: 01.06.2016).

Informed Consent: Informed consent was obtained from all patients.

Peer-review: Externally and internally peer-reviewed.

Authorship Contributions

Concept: R.S.G., Design: R.S.G., Data Collection or Processing: R.S.G., M.C., E.C., O.A., S.H.K.S., M.A., Ahef Bilim Kurulu, Analysis or Interpretation: A.D., Literature Search: P.B., R.S.G., D.A.B., Writing: P.B., R.S.G., D.A.B.

Conflict of Interest: The authors have no conflicts of interest to declare.

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