

Traditional And Complementary Medicine Practices Used To Prevent Covid-19 Pandemic: A Cross-Sectional Study From Türkiye

Figen Türk Düdükçü¹, Rabia Şener², Ayşe Türkmen³, Canan Gazel⁴

¹Department of Nursing, Faculty of Health Sciences, KTO Karatay University, Konya-Turkey

²Private Rabia Health Cabin, Konya-Turkey
Ankara Etlik Zubeyde Hanım Gynecology Training and Research Hospital, Ankara-Turkey

³Department of Nursing, Faculty of Health Sciences, KTO Karatay University, Konya-Turkey

Figen Türk Düdükçü
0000-0003-1767-5197
Rabia Şener
0000-0002-8773-7042
Ayşe Türkmen
0000-0002-8823-5503
Canan Gazel
0000-0001-5464-3173

Abstract

Purpose: The COVID-19 pandemic has shown its effect worldwide and has caused people to experience hard times. This study aims to determine the traditional and complementary medicine (T&C) practices applied to protect from COVID-19 and attitudes toward them.

Methods: This is a cross-sectional study. Individuals aged 18 years and older were included in the study. A questionnaire form was delivered between April 1 and April 30, 2021, to the participants online through social media due to the measures implemented throughout the country due to the COVID-19 pandemic. In this study, descriptive statistics (mean, standard deviation, median value, minimum, maximum, number, and percentile) were given for categorical and continuous variables. Whether there is a difference between the ratios of a single categorical variable and the relationships between two categorical variables were analyzed using Fisher's exact and chi-square tests. A $p < 0.05$ was considered statistically significant.

Results: About half of those surveyed used T&C to ward off the COVID-19 outbreak. The most used method was herbal mixtures. The prevalence was strongly associated with gender and previous diagnosis of COVID-19. Most of the participants believed that T&C practices were necessary.

Conclusion: Societies' T&C experiences are valuable and worth learning. There is an opportunity to test the true value of T&C in prevention and treatment of COVID-19. Considering the frequency of use of T&C practices, it can be suggested that this should be implemented more frequently by health professionals as a policy.

Keywords: T&C, Complementary medicine, Traditional medicine, COVID-19, protection.

Özet

Amaç: COVID-19 pandemisi dünya genelinde etkisini göstermiş ve insanların zor zamanlar yaşamasına neden olmuştur. Bu çalışma, COVID-19'dan korunmak için uygulanan geleneksel ve tamamlayıcı tıp uygulamalarını ve bunlara yönelik tutumları belirlemeyi amaçlamaktadır.

Yöntemler: Bu, kesitsel bir çalışmadır. 18 yaş ve üzeri bireyler çalışmaya dahil edildi. COVID-19 pandemisi nedeniyle ülke genelinde uygulanan tedbirler nedeniyle katılımcılara 1 Nisan-30 Nisan 2021 tarihleri arasında sosyal medya üzerinden online olarak anket formu ulaştırıldı. Bu çalışmada kategorik ve sürekli değişkenler için tanımlayıcı istatistikler (ortalama, standart sapma, ortanca değer, minimum, maksimum, sayı ve yüzdelik) verilmiştir. Tek bir kategorik değişkenin oranları arasında fark olup olmadığı ve iki kategorik değişken arasındaki ilişkiler Fisher'in kesin ve ki-kare testleri kullanılarak analiz edildi. Bir $p < 0,05$ istatistiksel olarak anlamlı kabul edildi.

Bulgular: Ankete katılanların yaklaşık yarısı COVID-19 salgınına önlemek için geleneksel ve tamamlayıcı tıp uygulamaları kullandı. En çok kullanılan yöntem fitoterapi yani bitkisel karışımlardı. Prevalans, cinsiyet ve önceki COVID-19 tanısı ile güçlü bir şekilde ilişkiliydi. Katılımcıların çoğu geleneksel ve tamamlayıcı tıp uygulamalarının gerekli olduğuna inanıyordu.

Sonuç: Toplumların geleneksel ve tamamlayıcı tıp deneyimleri değerlidir ve öğrenmeye değerdir. COVID-19'un önlenmesi ve tedavisinde geleneksel ve tamamlayıcı tıp uygulamalarının gerçek değerini test etme fırsatı oldu. Geleneksel ve tamamlayıcı tıp uygulamaları kullanım sıklığı göz önüne alındığında bunun bir politika olarak sağlık profesyonelleri tarafından daha sık uygulanması önerilebilir.

Anahtar Kelimeler: COVID-19, Geleneksel ve Tamamlayıcı Tıp, korunma, salgın hastalıklar.

Correspondence:

Figen Türk Düdükçü
KTO Karatay Üniversitesi
Phone: +90 (553) 358 30 09
E-mail: figen.turkdudukcu@karatay.edu.tr

Received: 24 April 2023
Accepted: 13 September 2023

Introduction

COVID-19 was first reported on December 29, 2019, in Wuhan, Hubei Province, China, as cases of pneumonia of unknown cause at the time. On January 5, 2020, it was defined as a new coronavirus that had never been detected before (1). On March 12, 2020, the World Health Organization (WHO) declared COVID-19 a pandemic. The first case was confirmed in Turkey on March 11, 2020 (2, 3). The spread of COVID-19 has varied in each country. The common idea about the transmission of COVID-19 is person-to-person and respiratory droplet transmission. Research shows that the virus is transmitted by respiratory droplets and direct contact, and this is the most important point in the transformation of COVID-19 into an epidemic. To break the chain of transmission, the WHO recommended washing hands frequently with soap for 20 seconds, covering the mouth with the inside of the arm when coughing or sneezing, not touching body cavities such as eyes, mouth, and nose, and keeping a minimum distance of six feet between people (4). In addition to these measures, in line with the COVID-19 guidelines and treatment algorithms prepared by the Scientific Committee of the Ministry of Health in Turkey, medical treatment is applied to patients diagnosed with or suspected of COVID-19 (3).

The WHO announced that \$1.96 billion under the COVID-19 Strategic Preparedness and Response Plan will be spent to prevent transmission, reduce exposure, counter misinformation and disinformation, protect vulnerable areas, reduce death and disease rates, and increase equity. Fighting against coronavirus, including prevention, treatment, and vaccine studies, is costly in all aspects (2). While the emergence of effective vaccines offers hope to governments, the scientific community, and the public, no definitive pharmacotherapy has yet been established to prevent and treat COVID-19 (5). However, many publications from different countries on the use of traditional and complementary medicine (T&CM), which are popular in some cultures, in the COVID-19 pandemic are entering the literature.

T&CM has been used to treat numerous epidemics in human history, which offers hope to combat COVID-19 in some regions. But governments often remain silent about these practices because of the potential harm. This difference results from inconsistency in culture, history, and philosophical views on healthcare and medicine (6). While some countries, including China and India, report the use of various T&CM practices (7-9), European and North American countries remain silent on these practices (10). There is also news that T&CM is being used in Turkey (11).

The WHO defines T&CM as “physical and mental therapy, which is the total of knowledge, skills, and practices used

in the prevention, diagnosis, improvement, or treatment of diseases as well as in the maintenance of health, based on theories, beliefs, and experiences specific to different cultures, whether explainable or not.” The WHO and the health ministries of many countries consider T&CM necessary (12).

The subject of curiosity, which is the basis of this study, is to determine the T&CM methods used by people living in Turkey within the scope of the measures during the COVID-19 epidemic, for which modern/scientific medicine has not yet found a full cure. This study aims to determine the T&CM uses and attitudes toward them to protect from COVID-19.

The study questions are as follows

1. Which T&CM methods have been used to protect from the COVID-19 pandemic?
2. Are T&CM methods used to protect from the COVID-19 pandemic related to sociodemographic characteristics?

Materials And Methods

Study Design

This is a cross-sectional study, which is one of the descriptive study types. The study included individuals aged 18 years and older. A survey form was prepared by the researchers using Google forms. The questionnaire form was delivered between April 1 and April 30, 2021, to the participants online through social media due to the measures implemented throughout the country due to the COVID-19 pandemic. The preliminary questionnaire that was tested in the pilot study. Later, the questionnaire was revised, and data were collected via Google form on social media.

Participants

Adults over the age of 18 were included in the study. The sample selection method was not used, and those who filled out the online questionnaires at the time of data collection constituted the study group. The data of 549 participants were collected. Five participants were excluded from the study group because they were under the age of 18, and the number of participants decreased to 544.

Ethical Aspect

For this research, which aims to collect data on the use of T&CM during the COVID-19 pandemic period, permission was obtained first from the Ministry of Health of the Republic of Turkey and then from the Ethics Committee of Non-Interventional Clinical Researches of KTO Karatay University. The participants were given written information about the study, and their consent was obtained before starting the survey.

Statistics

SPSS 25 (IBM SPSS Statistics for Windows, Released 2017, IBM Corp., Armonk, NY) statistical package program was used to evaluate the data. In this study, descriptive statistics (mean, standard deviation, median value, minimum, maximum, number, and percentile) were given for categorical and continuous variables. Whether there is a difference between the ratios of a single categorical variable and the relationships between two categorical variables were analyzed using Fisher's exact test and chi-square test. $p < 0.05$ was considered statistically significant.

Results

The demographic data of the 544 participants are presented in Table 1.

The data revealed that 51% of the participants were aged between 18 and 29 years, 21% between 30 and 39 years, 16% between 40 and 49 years, and 13% 50 years and over. 25% of the participants were males, and 75% were females. 9% of the participants had primary school education level, 4% secondary school education level, 9% high school education level, 76% university education level, and 2% postgraduate education level. 27% reported that their income was low, 61% reported that their income was equal to expenses, and 12% reported that their income was high. While 19% of the participants were diagnosed with COVID-19 at a previous time, 81% were undiagnosed. The rate of those with a chronic disease was 20%. 96% of the participants thought that they had enough information about the COVID-19. In the study, it was found that 63% of the participants took the recommended measures for COVID-19, while 36% took them partially and 1% did not take any precautions (Table 1).

TABLE 1: Demographic characteristics (n = 544).

		n	%
Age group (years)	18-29	273	51
	30-39	113	21
	40-49	89	16
	50 +	69	13
Gender	Male	134	25
	Female	410	75
Level of Education	Primary Level	48	9
	Middle School	24	4
	High School Level	49	9
	Undergraduate Leve	413	76
	Post-Graduate Level	10	2
Income perception	Low income	145	27
	Income equals expense	332	61
	High income	67	12
Being diagnosed with Covid-19 at a previous time	Yes	101	19
	No	443	81
Chronic disease	Yes	110	20
	No	434	80
Knowing what kind of disease COVID-19 is	Yes	521	96
	No	23	4
Complying with all necessary measures to protect from COVID-19	Yes	343	63
	No	5	1
	Partially	196	36

The beliefs and practices of the participants about T&CM are presented in Table 2. 36% of the participants stated that they had knowledge about T&CM, 51% had partial knowledge, and 13% did not have knowledge. 15% of the

participants found their knowledge sufficient, 55% found it partially sufficient, and 30% found it insufficient. While 96% of the participants stated that they had a source of information about T&CM, 4% stated that they did not have

any. The participant reported that the information sources were Internet (32%), physicians (16%), friends (15%), family (13%), books (13%), and herbalists (10%). 71% of the participants reported that T&CM was necessary, 28% were unsure, and 1% found it unnecessary. When they got sick, 44% of the participants first used T&CM and 56% applied to health institutions. In case of illness, 9% relied on T&CM, 38% on physician recommendations, and 53% on both. 79% of the participants thought that T&CM was beneficial, 20% had no idea, and 1% thought that it

was harmful. When the T&CM used by the participants to protect themselves from COVID-19 was examined, 65% of the participants reported that they used any method. 53% of the methods used were herbal mixtures, 28% okuma, 10% other methods, 4% acupuncture, 4% hijama, and 1% hirudotherapy. While 11% of the participants found T&CM sufficient, 89% thought that it was insufficient. 13% of those who used T&CM recommended it to others, 87% did not recommend it to anyone else (Table 2).

		n	%
Knowledge about T&CM	Yes	198	36
	No	71	13
	Partially	275	51
Status of finding sufficient T&CM related information	Yes	84	15
	No	163	30
	Partially	297	55
T&CM information resource	Family	195	13
	Herbalist	140	10
	Friends	222	15
	Physician	240	16
	Books	195	13
	Internet	475	32
Believing in the necessity of T&CM	Necessary	385	71
	Unnecessary	8	1
	To be not sure	151	28
The most trusted application in case of illness	T&CM	49	9
	Physician recommendations	205	38
	Both of them	290	53
Believing in the benefit of the T&CM used	Damaging	3	1
	No idea	111	20
	Beneficial	430	79
Using T&CM to protect Covid 19	Yes	353	65
	No	191	35
T&CM used to protect from Covid-19	Herbal Mixtures	232	53
	Okuma	121	28
	Acupuncture	16	4
	Hacamat	19	4
	Other	44	10
	Hirudoterapi	5	1
Believing in T&CM stand-alone sufficiency	Yes	58	11
	No	486	89
Recommend used T&CM to someone else	Yes	70	13
	No	474	87

Table 3 shows the T&CM used to protect from COVID-19 according to the participants' sociodemographic characteristics. The use of T&CM for protection from COVID-19 showed a statistically significant relationship with gender ($\chi^2 = 9.717$; $p = 0.002$) and being diagnosed with COVID-19 ($\chi^2 = 8.287$; $p = 0.004$). 20.4% of those who used T&CM to protect themselves from COVID-19 were men, and 79.6% were women. 32.5% of nonusers

were male, and 67.5% were female. 22.1% of those who used T&CM to protect themselves from COVID-19 had been diagnosed with COVID-19 before, and 77.9% had not. 12% of those who did not use T&CM were diagnosed with COVID-19, and 88% did not. There was no statistically significant relationship between other demographic characteristics and the use of T&CM to protect from COVID-19 ($p > 0.05$) (Table 3).

TABLE 3: Evaluation of demographic characteristics by T&CM use for protection from COVID-19					
		Using T&CM to protect Covid 19		Critical value	p*
		Yes (%)	No (%)		
Age group, years	18-29	171 (%48,4)	102 (%53,4)	5,177	0,270
	30-39	71 (%20,1)	42 (%22)		
	40-49	67 (%19)	22 (%11,5)		
	50 +	44 (%12,5)	25 (%13,1)		
Gender	Male	72 (%20,4)	62 (%32,5)	9,717	0,002 **
	Female	281 (%79,6)	129 (%67,5)		
Level of education	Primary Level	27 (%7,6)	21 (%11)	4,724	0,317
	Middle School	12 (%3,4)	12 (%6,3)		
	High School Level	34 (%9,6)	15 (%7,9)		
	Undergraduate Level	273 (%77,3)	140 (%73,3)		
	Post-Graduate Level	7 (%2)	3 (%1,6)		
Income perception	Low income	86 (%24,4)	59 (%30,9)	2,703	0,259
	Income equals expense	222 (%62,9)	110 (%57,6)		
	High income	45 (%12,7)	22 (%11,5)		
Being diagnosed with Covid-19 at a previous time	Yes	78 (%22,1)	23 (%12)	8,287	0,004 **
	No	275 (%77,9)	168 (%88)		
Chronic disease	Yes	69 (%19,5)	41 (%21,5)	0,283	0,595
	No	284 (%80,5)	150 (%78,5)		
Knowing what kind of disease COVID-19 is	Yes	339 (%96)	182 (%95,3)	0,17	0,68
	No	14 (%4)	9 (%4,7)		
Complying with all necessary measures to protect from COVID-19	Yes	224 (%63,5)	119 (%62,3)	1,386	0,500
	No	2 (%0,6)	3 (%1,6)		
	Partially	127 (%36)	69 (%36,1)		

It is the prayer done by a holistic person or by yourself.

^bAcupuncture: it is a healing therapy that is used around the world and dates back 3000 years. Acupuncture, which is used in various diseases, is a treatment method with needles placed at some special points of the body (13).

^cHijama: it is a treatment method dating back to BC. Hijama is the sunnah of Prophet Muhammad. It is a method in which blood is taken from the patient through the skin to prevent and treat diseases (14).

^dHirudotherapy: hirudotherapy is a form of treatment that has been used to treat diseases for centuries using medicinal leeches. Leeches have been used therapeutically for many years, but their use has decreased as pharmacotherapy progresses. Today, several biologically and pharmacologically active bioactive substances have been identified in the secretion of leeches they give to tissues they bite during blood sucking (15).

Others: other methods include apitherapy, yoga, and mesotherapy.

T&CM applications used to protect from COVID-19 were evaluated (Table 4). When T&CM applied to protect from COVID-19 was examined, it was determined that 53% of the participants used herbal mixtures, 28% reading, 4% acupuncture, 4% hijama, and 1% hirudotherapy, and 10% other methods. A statistically significant difference was observed between these rates ($\chi^2 = 538.419$; $p = 0.001$) (Table 4). The study findings support the literature information.

TABLE 4: Evaluation of T&CM according to use case for protection from COVID-19.

	n	%	Critical value	p [*]
Herbal Mixtures	232	53	538,419	0,001 **
^a Okuma	121	28		
^b Acupuncture	44	10		
^c Hacamat	19	4		
^d Hirudoterapi	5	1		
Other	16	4		
Total	437	100		

Discussion

This study was conducted to determine the T&CM practices used to protect from the COVID-19 pandemic in Turkey and attitudes toward them. More than half of the participants (65%) use T&CM to protect themselves from the COVID-19 pandemic. It is consistent with the results of studies investigating the frequency of T&CM use in Turkey (12, 16).

Considering the sociodemographic data in the study, it was found that only the gender factor made a significant difference in terms of T&CM use (Table 3). The study results showed that women use T&CM applications more frequently than men. This finding is consistent with different T&CM study results (12). In another study, no difference was found between the genders (17).

In a study by Cetin (2007) in Turkey, it was stated that the majority of people who turned to T&CM had a severe illness (cancer, asthma, kidney failure, etc.) in the last year (16). The fact that T&CM is among the types of treatment sought for the disease and the orientation of people shows us that these applications are necessary. This study shows that those who have been diagnosed with COVID-19 at a previous time tend to use T&CM at a high rate. COVID-19 is a difficult disease in many ways. Individuals who had the disease may once have resorted to more protective measures to avoid relapse.

In this study, very few participants recommended the method they used to someone else. In the study by Şimşek et al. (2017), more than half of the participants stated that they used T&CM applications with the advice of the individuals around them (12).

In this study, the source of information for one-third of the participants is the Internet. The reason why the Internet is an important source of information may be that COVID-19 was thought of as an uncertain disease in society for a long time. Another reason is that T&CM in Turkey started to be used in institutions affiliated to the Ministry of Health after the regulations were published by the ministry in 2014 (3), but its application is still uncommon in T&CM health institutions (12).

In a previous study, it was found that the majority of the participants thought that T&CM delayed the timely and correct treatment of sick individuals and that it should be used in cases where medical treatment was not sufficient (18). In this study, it was found that nearly half of the participants first applied T&CM in case of illness.

Since herbal mixtures, one of the T&CM methods, are natural products, it is thought that they will have more beneficial effects than harmful effects, so people have

turned to herbal products instead of using chemical drugs. At the same time, when people want to take a more active role in their health, they may turn to T&CM applications and natural health products based on the assumption that "it is harmless because it is natural." One of the reasons for this orientation may be the desire for a healthy lifestyle (19). In a study covering the whole of Vietnam, more than half of the participants used herbal medicines during the COVID-19 pandemic period (20).

In this study, more than half of the participants think that T&CM applications are beneficial. Similar to our study findings, participants in some studies find T&CM methods useful (19, 21). A very small part of the participants in this study think that T&CM applications are harmful. The underlying reasons for this thought may be the lack of knowledge in that area and how T&CM applications are used or information pollution. In a study parallel to this study, few participants stated that T&CM applications were harmful (22). In another study, a small number of participants reported that they did not find herbal medicines safe (20).

In this study, one of every two T&CM users preferred herbal mixtures. According to the study by Şimşek et al. (2017), the most commonly used T&CM method in Turkey is herbal mixtures (12). Herbal mixtures are widely used worldwide (12, 17, 20).

Limitations

There are several limitations to the studies included in this study. Research findings depend on participants' self-report. No observations were made.

Conclusion

T&CM has accumulated hundreds of years of experience in prevention and treatment of endemic and pandemic diseases. There is still a need to provide complementary and alternative therapies for prevention of COVID-19 and the management of infected patients. Societies' T&CM experiences are valuable and worth learning. There is an opportunity to test the true value of T&CM in prevention and treatment of COVID-19.

The tendency of people to T&CM has increased due to the sudden emergence of the COVID-19 epidemic and its rapid spread among countries and accordingly the slow development of treatment and vaccine methods in Turkey. During the pandemic period, T&CM was used extensively to protect from COVID-19. However, the participants learned and applied this information from unreliable sources such as the Internet, friends, or family, not from health professionals. Considering the frequency of use of T&CM, it can be recommended that it be carried out more widely by health professionals.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Financial support

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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