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Research paper

The relationship between individuals' use of complementary and alternative medicine during the pandemic in Turkey and their attitudes towards perceived COVID-19 risk

Zeynep Karaman Özlü^{a,*}, Tülay Kılınç^a, İbrahim Özlü^b, Harun Ünal^c, Rümeysa Lale Toraman^a

^a Department of Surgical Nursing, Faculty of Nursing, Ataturk University, Erzurum 25240, Turkey

^b Emergency Department, Atatürk University, Erzurum, Turkey

^c Van Vocational School of Health Services, Van Yuzuncu Yil University, Van, Turkey



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ABSTRACT

Introduction: The perceived COVID-19 risk may lead to the use of various complementary and alternative medicine (CAM) modalities to reduce the potential risks of this disease. This study was conducted to investigate the relationship between individuals' use of complementary and alternative medicine during the pandemic in Turkey and their attitudes towards perceived COVID-19 risk.

Methods: The study was conducted in Turkey between November 2021 and March 2022 and 1003 individuals voluntarily participated. The Personal Information Form, Attitude Towards Holistic Complementary and Alternative Medicine Scale (HCAMS), and Perceived COVID-19 Risk Scale (PCRS) were used for data collection. To evaluate the data descriptive statistics, Pearson's correlation, and Cronbach's alpha reliability analysis were used.

Results: In the study, 54.2% of the individuals were found to use CAM during the pandemic, and 56.2% believed that CAM practices were useful in preventing or recovering from COVID-19. It was revealed that 53.8% of the individuals drank herbal tea, 55.2% used religious and spiritual healing to manage, 6.6% used massage, and 10.1% applied aromatherapy. The mean total score of the HCAMS was 28.29 ± 4.99 , and the mean total score of the perceived COVID-19 risk scale was 27.78 ± 6.35 . A statistically significant positive correlation was identified between the CAM subscale and the emotional risk subscale ($p < 0.05$).

Conclusion: Individuals had a positive attitude towards using CAM during the pandemic period, the risk perception of COVID-19 was high and CAM methods were widely used. The literature should be supported by increasing the current and scientific studies in which CAM methods are questioned and their benefits are investigated during epidemic periods.

1. Introduction

The new type of coronavirus (COVID-19) pandemic, which emerged in Wuhan, China, in December 2019 and spread rapidly, continues to be a health problem worldwide [1]. The COVID-19 pandemic affects individuals, especially physiologically and psychologically, causing many different mental problems such as nervousness, fear, and anxiety. While trying to protect themselves from the pandemic, individuals may also try to stay psychologically healthy during this period [2]. High infection rates, increased mortality and morbidity, insufficiency of preventive and

therapeutic measures, and rapid spread also increase the perceived COVID-19 risk in individuals [3]. Perceived risk can encourage individuals to exhibit protective and preventive behaviors to reduce potential risks related to the disease [4]. Therefore, individuals exposed to health-related risks and uncertainties may tend to take self-care precautions and resort to solutions such as CAM practices to decrease the risks and manage the process better [5].

During the pandemic, it is of great importance to boost immunity, reduce the side effects of drugs, and protect ourselves against the disease [6]. CAM practices help with enhancing the quality of life, self-care and

Abbreviations: CAM, Complementary and alternative medicine; HCAMS, Holistic Complementary and Alternative Medicine Scale; HH, Holistic Health; PCRS, Perceived COVID-19 Risk Scale; SPSS, Statistical Package for Social Science.

* Corresponding author.

E-mail address: zynp_krmnzi@hotmail.com (Z. Karaman Özlü).

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improving health. It has been shown that various CAM practices, including herbs, various vitamins, aromatherapy, and mind-body practices, are useful in reducing stress and anxiety and enhancing immunity. Therefore, these practices can increase the physical and mental resilience of individuals during the COVID-19 pandemic [7]. CAM practices have been reported to be effectively used in the prevention, treatment, and rehabilitation of COVID-19 infection in China [8,9]. The treatment protocol for COVID-19 emphasizes the combination of traditional medicine and modern medicine. Traditional medicine is said to be necessary and effective in the management of COVID-19 infection due to the increased rate of recovery, shortening of disease duration, and decreasing mortality rate in the current practice [8]. In the literature, it has been highlighted that such approaches may be useful in fighting infectious diseases [10,11] and have antiviral effects [12].

The ease of access to CAM practices and their low costs contribute to the increase in their use [13]. Individuals who feel at risk for infections and diseases tend to resort to CAM to reduce the risk [5]. The increase in the perceived risk of COVID-19 may cause individuals to use various protective and preventive practices to reduce the potential risks of this disease. Taking measures to reinforce the immune system before getting sick during the COVID-19 pandemic is extremely important in terms of decreasing the current risks. When the literature was reviewed, no studies investigating the relationship between individuals' attitudes towards complementary and alternative medicine and perceived COVID-19 risk during the pandemic in our country were encountered. Therefore, this study will contribute to the literature by filling the existing gap. The study was conducted to examine the relationship between individuals' use of complementary and alternative medicine during the pandemic in Turkey and their attitudes towards perceived COVID-19 risk.

2. Methods

2.1. Study design

The research was conducted as a descriptive and cross-sectional trial between November 2021 and March 2022. Data were collected between November and December 2021. A mix of convenience and snowball sampling approaches were used in the study. The study population was comprised of individuals living in different regions of Turkey, and 1011 individuals who volunteered to participate in the study were included in the study sample. It was presented as an example of the country, as participants from every region of Turkey were reached. However, when the data were analyzed, it was seen that 8 participants were under the age of 18. For this reason, 1011 participants accepted to participate in the study, and it was completed with 1003 participants. Individuals who were 18 years old and older, could use a smartphone and were literate took part in the study.

2.2. Data collection tools

For data collection, the "Personal Information Form," "Attitude Towards Complementary and Alternative Medicine Scale," and "Perceived COVID-19 Risk Scale" were used.

2.2.1. Personal information form

The form was created by the researchers and consists of 2 parts. The first part contains a total of 8 questions related to age, gender, marital status, occupation, educational status, presence of chronic disease, catching COVID-19 infection, and COVID-19 infection of any family member. In the second part of the form, there are 9 questions about individuals' knowledge about and use of CAM.

2.2.2. Attitudes towards holistic complementary and alternative medicine scale

The Turkish validity and reliability study of the scale, which was

developed by Hyland et al. in 2003 [14], was conducted by Erci in 2007 [15]. The scale, which consists of 11 items in total, is of a 6-point Likert type. The scale contains two subscales: Complementary and Alternative Medicine (CAM) (2nd, 4th, 6th, 8th, 9th, and 11th) and Holistic Health (HH) (1st, 3rd, 5th, 7th, and 10th). Items 2, 4, 6, and 9 of the scale are coded reversely. The lowest score that can be received from the scale is 11, and the highest score is 66. Low scores received from the scale indicate a more positive attitude towards complementary and alternative medicine. Cronbach's alpha value, which is the reliability coefficient of the scale, is 0.72 [15], and Cronbach's alpha value for this study was calculated as 0.87.

2.2.3. Perceived COVID-19 risk scale (PCRS)

Yıldırım and Güler [16] adapted the SARS Risk Perception Scale, which was developed by Brug et al. in 2004 [17], to COVID-19 in 2020, resulting in the Perceived COVID-19 Risk Scale. The scale consists of two subscales, cognitive and emotional, and eight items. The cognitive subscale includes items 1, 2, 3, and 4, while the emotional subscale includes items 5, 6, 7, and 8. The total score of the 5-point Likert-type scale ranges between "8" and "40." High scores obtained from the scale show that the perceived COVID-19 risk is also high [16].

2.3. Data collection

Since COVID-19 is transmitted by droplets and contact, data collection tools were prepared online to avoid infection. Thus, an online data collection link prepared through Google Form was created. The online data collection form consists of 4 parts. The first part includes the purpose of the study and the informed consent statement. In the other sections, there are questionnaires consisting of 36 questions. A pilot test was conducted with 20 volunteers to check the comprehensibility of the online data collection forms. Individuals were asked to rate the length and clarity of the questions in the questionnaire. Some questions were rearranged based on the feedback received. One week later, the online data collection forms were retested on the same individuals to evaluate their reliability and suitability. Data from the pilot test were not included in the final data analysis. Data were collected with an online survey prepared using Google Form. The research started in Eastern of Turkey. Our aim was to see the general situation regarding the perceived risk of COVID-19 and the use of CAM during the pandemic process in Turkey. A mix of convenience and snowball sampling approaches were used to increase the number of participants in the study. Participants were requested to share the link with their acquaintances. In snowball sampling, sampling process starts by reaching one individual subject providing information about just one other subject. The researcher tries to reach new subjects by asking the subjects previously reached to provide other referrals [18]. First, the researchers shared the online survey link with the participants who met the research criteria from their Instagram, Facebook, WhatsApp and e-mail accounts and invited them to the research. Afterwards, the participants were asked to share the online survey link from their own social media tools (Instagram, Facebook, WhatsApp and e-mail). Thus, participants living in Turkey were provided with access to the online survey link. Individuals who participated in the online survey were anonymous. Informed consent was obtained from all individuals included in the study. An informed consent form was designed in the Google Forms web survey platform in the study. The individuals were required to approve this form before starting the study. To control for multiple submissions, repeated entries were blocked by clicking the "submit only once" button from google docs settings. Thus, the participants were allowed to complete the survey only once and data security was ensured. At the same time, since "the participants will not be allowed to send the survey if they do not answer all the questions" option is checked in the settings section; the effective response rate was 100%. The online questionnaire was started after the "I agree to participate in the study" button was ticked. 1011 participants agreed to participate in the study. However, when the data were

analyzed, it was seen that 8 participants were under the age of 18. For this reason, 1011 participants accepted to participate in the study, and it was completed with 1003 participants.

2.4. Data evaluation

Research data were evaluated using SPSS 18.0 (Statistical Package for Social Science) software. For data evaluation, percentage, mean, Pearson’s correlation, and Cronbach’s alpha reliability analysis were used. Statistical significance was evaluated at $p < 0.05$.

2.5. Ethical approval

Ethical approval was obtained from the Ethics Committee of Atatürk University Faculty of Medicine (30.09.2021 dated 2021-06/68). The principles of the Declaration of Helsinki were adhered to throughout the research. A consent form was accompanied by an explanation about the voluntary aspect of participation and was included with the online questionnaire. Moreover, individuals were informed that their personal information would not be shared with anyone, and attention would be paid to complying with the "Privacy and Privacy Protection Principle". The Anonymity and Security Principle" was obeyed by keeping the information obtained and the identity of the respondent confidential. Subjects were told that they were able to withdraw from the study at any time.

3. Results

In the study, the mean age of the individuals was 30.39 ± 11.59 years, 65.9% were female, 53.7% were married, 24.7% were housewives, 60% had university or higher education, 86.6% had chronic diseases, 62.2% had COVID-19 infection, and one of the relatives of 87.4% had COVID-19 infection (Table 1).

In the study, the distribution of individuals’ uses of CAM during the pandemic is given in (Table 2). It was revealed that 59.2% of the individuals did not obtain any information about CAM from any health personnel, 56.2% believed that CAM practices were useful in preventing

Table 1
Distribution of individuals’ descriptive characteristics (n = 1003).

Characteristics	n	%
Gender		
Female	661	65.9
Male	342	34.1
Marital status		
Married	539	53.7
Single	464	46.3
Occupation		
Self-Employed	100	10.7
Worker	127	12.7
Retired	35	3.5
Housewife	248	24.7
Officer	239	23.8
Academician	42	4.2
Student	212	21.1
Educational status		
Literate	41	4.1
Primary Education	137	13.7
High School	223	22.2
University and Higher	602	60.0
Presence of chronic disease		
Yes	134	13.4
No	869	86.6
COVID-19 infection		
Yes	379	37.8
No	624	62.2
COVID-19 infection of family members/relatives		
Yes	877	87.4
No	126	12.6

Table 2

Distribution of individuals’ use of complementary and alternative medicine during the pandemic (n = 1003).

Characteristics	n	%
Obtaining information about CAM from health personnel		
Yes	409	40.8
No	594	59.2
Believing that CAM is useful in preventing or recovering from COVID-19		
Yes	564	56.2
No	112	11.2
Undecided	327	32.6
Believing that CAM is more useful than the drugs used for the treatment of COVID-19		
Yes	342	34.1
No	255	25.4
Undecided	406	40.5
Using CAM during the pandemic		
Yes	544	54.2
No	459	45.8
Reasons for using CAM during the pandemic*		
Using CAM for protecting against diseases	306	30.5
Using CAM due to hearing about its usefulness from people	159	15.9
Using CAM to boost the immune system	450	44.9
Using CAM for psychological relaxation	76	7.6
Using CAM methods by thinking that they are safe	193	19.2
Using biology-based practices during the pandemic*		
Drinking herbal tea (chamomile, Hypericum perforatum, sumac, clove-cinnamon, rosemary, sage, echinacea, ginger, turmeric, mint, thyme, green tea)	540	53.8
Consuming green vegetables and fruits (lemon, artichoke, red cabbage, pomegranate, strawberry, hot pepper, etc.)	533	53.1
Consuming meat, fish, and eggs	494	49.3
Consuming yogurt, kefir, milk and dairy products	492	49.1
Eating ginger, turmeric, black cumin or consuming them in food	331	33.0
Eating plenty of onion/garlic or drinking their juice	485	48.4
Consuming walnuts, almonds, hazelnuts, nuts, dried fruits	385	38.4
Drinking water with vinegar, eating pickles	373	37.2
Applying apitherapy (consuming honey, propolis)	191	19.0
Taking B12, C, D, E, or omega capsules	273	27.2
Using mind-body practices during the pandemic*		
Listening to relaxing music	147	14.7
Pilates, yoga, exercise, proper breathing techniques, diverting attention	112	11.2
Religious and spiritual healing (prayer, etc.)	553	55.2
Using manipulative and body-based practices during the pandemic*		
Massage or massage with rose, basil oil	66	6.6
Cupping	42	4.2
Using other practices during the pandemic*		
Hirudotherapy/Hijama	75	7.5
Aromatherapy	101	10.1

* Multiple responses were given; CAM: Complementary and Alternative Medicine

or recovering from COVID-19, 40.5% were not sure that CAM practices were more useful than drugs used for the treatment of COVID-19, 54.2% used CAM during the pandemic, and 44.9% used CAM to boost their immune systems. During the pandemic, 53.8% of the individuals drank herbal tea, 55.2% used religious and spiritual healing to manage, 6.6% massaged, and 10.1% applied aromatherapy.

In the study, the mean total score of the HCAMS was 28.29 ± 4.99 , the mean total score of the complementary and alternative medicine subscale was 19.08 ± 3.61 , the mean total score of the holistic health subscale was 9.2 ± 3.12 , the mean total score of the Perceived COVID-19 Risk Scale was 27.78 ± 6.35 , the mean score of the cognitive risk subscale was 12.20 ± 3.64 , and the mean score of the emotional risk subscale was 15.58 ± 4.16 (Table 3).

In the study, a statistically significant positive correlation was identified between the complementary and alternative medicine subscale and the emotional risk subscale ($p < 0.05$, Table 4).

Table 3

Total score and subscale mean scores obtained from the attitudes towards holistic complementary and alternative medicine scale and perceived COVID-19 risk scale.

Scales and Subscales	Min	Max	X \pm SD
Complementary and Alternative Medicine Subscale	7	31	19.08 \pm 3.61
Holistic Health Subscale	5	30	9.2 \pm 3.12
HCAMS-Total Score	14	46	28.29 \pm 4.99
Cognitive Subscale	4	20	12.20 \pm 3.64
Emotional Subscale	4	20	15.58 \pm 4.16
Perceived COVID-19 Risk Scale-Total Score	8	40	27.78 \pm 6.35

HCAMS: Holistic Complementary and Alternative Medicine Scale

Table 4

The relationship between the mean scores of the attitudes towards holistic complementary and alternative medicine scale and perceived COVID-19 risk scale.

Scales		Cognitive Risk	Emotional Risk	Perceived COVID-19 Risk
Complementary and Alternative Medicine	r	-0.023	0.078	0.038
	p	0.466	0.013	0.229
Holistic Health	r	0.033	-0.039	-0.006
	p	0.289	0.223	0.850
HCAMS	r	0.004	0.033	0.024
	p	0.893	0.303	0.452

HCAMS: Holistic Complementary and Alternative Medicine Scale; $p < 0.01$ significant

4. Discussion

In recent years, CAM practices have been used extensively to prevent and treat infectious diseases. During the COVID-19 pandemic, the interest in CAM methods, especially herbal treatments, is said to have increased significantly. When both healthy and sick individuals face the threat of infectious diseases, they resort to CAM to take preventive measures against the disease, reduce the risk and manage the disease process better. The study was conducted to examine the relationship between individuals' attitudes towards complementary and alternative medicine during the pandemic and perceived COVID-19 risk. The study findings were discussed in line with the relevant literature and research findings.

The study revealed that 54.2% of the individuals used CAM during the pandemic, and 44.9% benefited from CAM practices to boost their immune systems. Recently, there has been intense interest in CAM. In the literature, such approaches have been shown to be useful in fighting infectious diseases [10,11]. In a study from Saudi Arabia, 22.1% of individuals were found to use supplements during the COVID-19 pandemic [19]. In the study by Kargin et al. [1], 27.7% of individuals thought that CAM would not be more useful than the drugs taken for COVID-19, but 19.79% reported that they believed CAM would be useful together with routine drugs [1]. In a study from Hong Kong, 44% of individuals expressed that they used CAM during the COVID-19 pandemic [20]. In the same study, about 88% of individuals used these practices to boost their immunity. In their study, Kristoffersen et al. [21] elucidated that two-thirds (67%) of individuals used CAM methods in the first three months of the COVID-19 pandemic, and these methods were useful. The results of this research are similar to the results of other studies and support the literature. To reduce the risk of COVID-19 infection, it is extremely important to enhance the immunity of individuals in addition to personal protection methods, and in case of infection, to reduce the expected side effects of modern medical treatments and increase compliance of individuals with treatment. It is thought that this situation leads to the use of CAM methods for preventing the disease and the extensive use of these methods. Furthermore, the fact that the drugs used against the disease have many side

effects has directed individuals towards using CAM.

In the study, individuals were found to be more likely to use biological-based therapies involving plants, vitamins, and food supplements during the pandemic. In the literature, the potential benefits of vitamins and herbal medicines in the treatment of COVID-19 have been evaluated [22]. It is recommended to use supplements such as vitamins, minerals, and omega-3 to prevent diseases and boost immunity [23–25]. In their study, Uçar et al. [6] observed that plants used in traditional Chinese medicine prevented viruses from holding on to and entering the cell and induced stimulation in the immune system. Likewise, meta-analyses have shown the effectiveness of Chinese herbal medicine in improving the treatment outcomes and reducing the symptoms of COVID-19 patients, such as fever and fatigue [26–28]. In the study by Lam et al. [20], vitamins or other nutritional supplements (25.3%) and Chinese herbal medicines (19.3%) were found to be used during the pandemic. Similarly, another study conducted during the pandemic revealed that food and drug supplements containing mostly vitamins and minerals (57%) were taken [21]. In a study carried out during this period, 84% of individuals used at least one CAM method, and the most common CAM practice involved dietary supplements (61.3%) and herbal medicines (48.8%) [29]. It is highlighted that vitamins or other nutritional supplements are used to boost the immune system during the pandemic [20]. These results support the findings of the study. This indicates that individuals resort to methods that boost the immune system to protect themselves from the disease, especially during the pandemic. Moreover, it can be stated that the fact that these methods are easy, inexpensive, and accessible contributes to the increase in their use.

In the study, 55.2% of individuals were found to use religious and spiritual healing methods during the pandemic. The COVID-19 pandemic has created an important effect on people's religious feelings, thoughts, and behaviors. Most people have sought refuge in God and participated in rituals (performing the Salah, praying, reading the Quran, etc.) more often to cope with this pandemic, which has caused fear, stress and anxiety, and to protect their psychological health. This is because praying or fulfilling religious duties to be close to God in case of disasters, such as the pandemic, is an effective way to cope with difficulties [30]. In a study, 85% of individuals reported that they prayed, 62.3% tried to fulfill religious duties, and 52.93% read the Quran during the pandemic [31]. Likewise, another study revealed that more than half (57.9%) of individuals prayed during the COVID-19 pandemic [29]. An increase has been observed in people's orientation towards religion and performing religious rituals during the pandemic [32]. In times of crisis, such as the COVID-19 pandemic, people turn to religion to overcome mental problems such as fear, panic, stress, and anxiety caused by the crisis, and to perform more religious rituals (praying, fulfilling the religious duties, reading the Quran, etc.). The fact that a significant part of the people in our country are Muslim indicates that they give importance to praying and spirituality, and praying ensures psychological relaxation, particularly in stressful situations, such as the pandemic.

During the pandemic, 6.6% of the individuals were found to use massage, which is one of the manipulative and body-based CAM practices. With the outbreak of the pandemic, COVID-19 has affected individuals not only physically but also mentally. In the literature, massage has been shown to eliminate psychological problems such as anxiety, insomnia, depression, aggression, disappointment, and hysteria [33]. In a study conducted during the pandemic, 11.6% of individuals were found to massage, especially to prevent COVID-19 infection and reduce anxiety [29]. In their study involving nursing students, İşik et al. [34] found that 23.4% of the students massaged during the COVID-19 period. In the study, 10.1% of individuals applied aromatherapy during the pandemic. Anti-inflammatory, immunomodulatory, and bronchodilatory properties of essential oils have been known for a long time [35]. In the literature, it is reported that they are effective against the COVID-19 virus and reduce anxiety during this period [36,37]. Literature information and study results support the findings. We can state

that massage and aromatherapy practices relaxed individuals psychologically during the pandemic, which may increase the immune response of the body and resistance to the disease.

In the study, the mean total score of the HCAMS was 28.29 ± 4.99 , the mean score of the CAM subscale was 19.08 ± 3.61 , and the mean score of the HH subscale was 9.2 ± 3.12 . In this case, individuals can be said to exhibit positive and moderate attitudes towards CAM practices during the COVID-19 pandemic. In a study conducted with healthy individuals before the pandemic, the mean total score of the HCAMS was 58.0 ± 4.01 , the mean score of the CAM subscale was 30.6 ± 2.7 , the mean score of the HH subscale was 27.3 ± 2.0 , and individuals exhibited negative attitudes towards CAM [15]. In a study conducted with patients with gynecological cancer before the pandemic, Öztürk et al. [38] found the mean total score of the HCAMS as 29.61 ± 4.85 , the mean score of the CAM subscale as 20.83 ± 4.69 , and the mean score of the HH subscale as 8.48 ± 2.52 . The findings of this study are similar to those obtained by Öztürk et al. [38] and differ from those obtained by Erci [15]. This indicates that healthy individuals' attitudes towards the use of CAM were negative before the pandemic, but they had more positive attitudes, hoping to enhance body resistance and recover in case of a disease. Due to the increase in the number of cases and deaths during the pandemic, the fear of catching the disease can be said to encourage individuals to use CAM methods, and these methods are used to boost the immune system. The results obtained from this study are similar to those of other studies and the literature.

In the study, the mean total score of the perceived COVID-19 risk and the mean scores of the subscales were found to be high. Similar results were obtained in the studies conducted [39]. The highly contagious nature of COVID-19, uncertainty about the end of the pandemic, increasing disease and death cases are expected to increase the COVID-19 risk perceived by individuals. In the literature, it is emphasized that perceived risk and fear are associated with preventive behaviors against COVID-19 [40]. In the study by Lam et al. [20] the high risk perception during the pandemic was found to result in higher use of CAM. Another study elucidated that most individuals (50-66%) used CAM to prevent the transmission of COVID-19 or reduce the anxiety caused by the pandemic [29]. These findings support that CAM practices during the pandemic can reduce stress and anxiety and have a positive effect on physical and mental resilience [20]. In our study, a positive and statistically significant correlation was observed between the complementary and alternative medicine subscale and the perceived emotional risk subscale. This result was different from other study findings [7,20,29,40]. CAM methods are affected by many factors, such as the region where individuals live, cultural differences, and health/disease-related beliefs. Emotional risk relates to the anxiety and fear individuals experience about a potential threat. The fact that individuals or any of their relatives have experienced COVID-19 disease shows that they are emotionally ready for this situation. Furthermore, this result may have been affected by the fact that the number of cases in our country decreased relatively compared to the beginning on the dates when the study was conducted, more than a year has passed since the pandemic, and individuals have become used to the current situation. In other words, the increase in the perceived emotional risk against COVID-19 during this period did not create a positive attitude towards individuals' use of CAM applications.

4.1. Limitations of the study

Since the research was conducted online, individuals whose use of technology was limited, who had no access to social networks, and who were illiterate could not be reached, could not get access which constitutes a limitation of this study. Another limitation of the study is that there was only the 'I agree to participate' in the research button on the online survey link. Therefore, only participants who agreed to participate in the study filled out the online questionnaire. We were unable to determine how many people were sent the online survey link and how

many people refused to participate in the research. Since convenience and snowball sampling were used in this study, the data may not be representative of the population distribution in Turkey in terms of age, sex, and place of residence. Hence, a disproportionately large number of study participants were female and had tertiary education. In addition, research results are limited to the data collection tools used and participants' self-reports. This study was not a longitudinal one, so future studies that examine the trend of CAM usage for following years will be helpful.

5. Conclusion

In the study, individuals were found to exhibit positive and moderate attitudes towards CAM practices during the COVID-19 pandemic. A positive and statistically significant correlation was identified between the complementary and alternative medicine subscale and the emotional risk subscale. Of the individuals, 54.2% used CAM during the pandemic, and 44.9% used CAM to boost their immune systems. During the pandemic, individuals mostly drank herbal tea (chamomile, Hypericum perforatum, sumac, clove-cinnamon, rosemary, sage, echinacea, ginger, turmeric, mint, thyme, green tea), resorted to religious and spiritual healing management, massage and applied aromatherapy.

In line with these results, it can be said that CAM methods were widely used during the pandemic in our country and individuals took various measures with traditional and complementary methods to protect themselves. At the same time, it was determined that the perceived risk for COVID-19 was high. The lack of a definitive treatment for the COVID-19 infection and its uncertainty around the world has increased the orientation towards complementary therapy methods alongside medical therapy to combat the disease. More research is needed to determine the factors affecting individuals' CAM use during epidemic periods. In addition, after the pandemic is over, more extensive and comprehensive studies on the subject should be carried out by evaluating the method, approach and results of this research.

Ethics and consent

We further confirm that any aspect of the work covered in this manuscript that has involved human has been conducted with the ethical approval of all relevant bodies and that such approvals are acknowledged within the manuscript.

Authors contribution

ZKÖ, TK, İÖ, HÜ and RLT were responsible for the conception and design of the study. ZKÖ, TK and İÖ were responsible for acquisition and analysis of data; furthermore, ZKÖ, TK were in charge of statistical analysis. ZKÖ, TK, İÖ, HÜ and RLT drafted the manuscript and approved the final version. All authors read and approved the final manuscript.

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Declaration of Competing Interest

The authors have no conflict of interest to declare.

Data availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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