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Determining the use of traditional and complementary health practices by adults during the COVID-19 pandemic

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ABSTRACT

Aims: The research was conducted in a descriptive manner to determine the use of traditional and complementary health practices among adult individuals during the COVID-19 pandemic.

Methods: The sample group of the study consisted of 385 adult individuals aged between 20-65 registered at Mucur Primary Health Care Centers. Data were collected using a "Data Collection Form" prepared by the researchers based on relevant literature review. Number, percentage, and mean were used in the analysis of the data.

Results: The mean age of the participants was 42.03±13.51, with 54.3% being female and 45.7% male. 66.0% of the individuals believe in the effectiveness of traditional and complementary health practices in COVID-19 disease, and 40.3% stated that they use traditional and complementary health practices every day during the COVID-19 pandemic. The most commonly used phytotherapy method (herbal treatment) during the COVID-19 pandemic by individuals is vitamin, citrus fruits, and garlic. It was found that individuals mostly practice breathing exercises, movement therapies, and music therapy among body and mind practices. Other complementary health approaches practiced by individuals during the COVID-19 pandemic include reading prayers, performing prayers, and seeking amulet-based therapies.

Conclusion: It is recommended that healthcare professionals collect data on traditional and complementary health practices during the COVID-19 pandemic, and provide education and counseling services to the community on this issue.

Keywords: Traditional medicine, middle age, COVID-19 virus

INTRODUCTION

Since the first cluster of cases detected in Wuhan city of Hubei province, China, in December 2019, as of June 2022, more than 6 million people worldwide have died due to the pandemic (Yang et al., 2020). Pandemics have historically posed a serious threat to public health, resulting in numerous deaths and physical as well as mental health issues (Yang, et al., 2020; Lake, 2020; Marcel et al., 2020).

According to the World Health Organization (WHO), "Traditional Medicine" encompasses the sum total of knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, which can be explained or not explained, used to prevent, diagnose, improve, or treat physical and mental illnesses, and maintain health. "Complementary Medicine," on the other hand, refers to the additional meaning gained by the use of health practices believed to provide additional benefits when used in conjunction with conventional medicine. "Herbal medicine" includes medicinal herbs, herbal materials, herbal preparations, and finished herbal products containing parts of plants or other plant materials, or combinations thereof, as active ingredients (WHO, 2019). In recent years, the awareness of Traditional and Complementary Medicine Practices has been increasing both in our country and worldwide. The Regulation on Traditional and Complementary Medicine Practices, which has become increasingly recognized, was published in the Official Gazette with number 29158 on October 27, 2014, and entered into force, completing the process from the perspective of the Ministry of Health. The regulation clearly sets out the purpose, scope, and legal basis. Other traditional and complementary medicine practices besides acupuncture were defined for the first time in this regulation. These include Apitherapy, Phytotherapy, Hypnosis, Leech Therapy, Homeopathy, Chiropractic, Cupping Therapy, Larva Therapy, Mesotherapy, Prolotherapy, Osteopathy, Ozone Therapy, Reflexology, and Music Therapy (Doğru & Şahbaz, 2020).

Despite significant progress in vaccination against COVID-19, the lack of a specific antiviral treatment for COVID-19 increases concerns about health among people worldwide (Yılmaz, et al., 2021). Therefore, individuals exposed to risks and uncertainties seek self-care measures and focus more on preventive measures to boost immunity, prevent the spread of the disease, or alleviate the progression of infection, turning to more traditional and complementary health practices (Yılmaz et al., 2021; Marcel et al., 2020). Traditionally, traditional and complementary health practices have been more commonly used by those with chronic illnesses (Harris et al., 2012; Metcalfe et al., 2010). However, in the last decade, the use of traditional and complementary health practices has also increased in response to the threat of new emerging infectious diseases such as HIV/AIDS, SARS, H1N1, and COVID-19 (Ganjhu et al., 2015; Zhou et al., 2020). For example, during the SARS crisis in China, 40-60% of infected patients used traditional Chinese medicine (TCM) in addition to standard modern medical treatment at various stages of their treatment (Liu et al., 2012). A study showed that over 85% of COVID-19 patients in China used traditional Chinese medicine (TCM) as a type of traditional and complementary medicine (TCM) and that TCM enhanced the immune system and alleviated the course of the disease (Syed, et al., 2016). In Turkey, 39.3% of individuals have used traditional and complementary health practices during the pandemic (Karataş et al., 2021). It is important to increase immunity before COVID-19 infection, to reduce the expected side effects of modern medical treatments when encountered with the virus, and to increase the patient's compliance with treatment. At the same time, it is thought that it would be beneficial to use phytotherapy, traditional and complementary medicine in addition to conventional treatment in the treatment of COVID-19. Furthermore, in countries where traditional medicine practices are popular and widely used, investigating the characteristics of the use of traditional and complementary health practices, especially during pandemics, is considered particularly important. Therefore, this study aimed to determine the use of traditional and complementary health practices by adult individuals during the COVID-19 pandemic.

METHODS

Ethics

The study was carried out with the permission of Ethical Committe of Faculty of Medicine, Kırşehir Ahi Evran University (Date:06.04.2021, Decision No: 2021-07/76). All procedures were carried out in accordance with the ethical rules and the principles of the Declaration of Helsinki. Informed consent forms were read to/ad read to adult individuals before filling out the questionnaire forms, and their verbal consents were obtained.

Type and Location of the Study

The study was conducted at the Family Health Center (FHC) located in the district of Mucur, affiliated with the Kırşehir province in the Central Anatolia Region, using a descriptive study design.

Population and Sample of the Study

The population of the study consists of 11,984 adult individuals aged between 20 and 65 registered at the FHC. The sample size of the study was determined based on data from a similar study conducted previously in our country, where the rate of traditional/alternative medicine usage among individuals was found to be 65.8% (Oral et al., 2016). Considering this rate and with a 90% confidence level and a 0.04 margin of error, the required sample size was determined to be 385 according to the absolute percentage recommended by the WHO (Lemeshow et al., 1990). The sample of the study comprised 385 adult individuals selected through random sampling method. Among the individuals who applied to the FHC during the dates when the researcher collected data, the first 385 adult individuals were selected as the sample. The data for the study were collected between 07/04/2021 and 1/07/2021. Individuals who were between the ages of 20-64, did not have any communication barriers, could speak and understand Turkish, lived in the Mucur district of Kırşehir, and agreed to participate in the study were included in the study.

Data Collection Instruments

In the scope of the research, a questionnaire form developed based on the literature (1-85) was used to collect the necessary data. The questionnaire form used in the research consists of four sections: Socio-demographic characteristics (9 questions), characteristics related to the disease (6 questions), and evaluation of traditional and complementary health practices and usage characteristics (10 questions), totaling 25 questions. Before the research began, the questionnaire form was applied to 20 adult individuals in an FHC randomly selected in the provincial center by the researcher. It was determined in the pilot application that the questions were understandable and provided sufficient coverage for the data to be obtained in the study, and no changes were made to the questionnaire. The data was collected by the researcher at the designated Mucur ASM, following the mask and physical distance (1.5 meters) rules that must be followed during the COVID-19 pandemic process. Research data were collected with adult individuals in a separate room at the FHC with the windows open or by face-to-face interview technique outside the FHC.

Statistic Analysis

The SPSS 22.0 package program was utilized for the analysis of the data obtained in the research. Number, percentage, mean, and standard deviation values were used in the analysis. Additionally, traditional and complementary medicine practices and preventive measures were categorized.

DISCUSSION

The ages of the individuals participating in the study range from 20 to 64, with a mean age of 42.03±13.51. 54.3% of the individuals are female, and 45.7% are male. 75.1% of the individuals participating in the study are married, 59.7% have completed high school education or above, 57.7% are unemployed, 47.3% perceive their income level as medium, 89.4% have social security coverage, and 71.4% have a nuclear family structure (Table 1).

Before the COVID-19 pandemic, individuals' highest usage was determined as garlic (24.4%), citrus fruits (22.6%), pickles (13.8%), vitamin (9.6%), turmeric (4.4%), ginger (4.4%), green tea (4.2%), probiotics (4.2%), linden (3.9%), turnip juice (3.4%), and minerals (2.1%) among traditional and complementary health practices. When the distribution of the

Table 1. Distribution of individuals according to socio-demographic characteristics

Variables	Number (n)	Percentage (%)
Age	(Min-Max) (20-64)	Mean±SD 42.03±13.51
20-39 (Young adulthood)	173	44.9
40-64 (Middle adulthood)	212	55.1
Gender		
Male	176	45.7
Female	209	54.3
Marital status		
Married	289	75.1
Single	96	24.9
Education level		
Illiterate	21	5.5
Primary school	101	26.2
Secondary school	33	8.6
High school	123	31.9
University and above	107	27.8
Employment status		
Employed	163	42.3
Unemployed	222	57.7
Income level		
Low	61	15.8
Medium	182	47.3
High	142	36.9
Social security status		
Yes	344	89.4
No	41	10.6
Family structure		
Elementary family	288	74.8
Extended family	97	25.2
Total	385	100.00

frequency of use of phytotherapy method (herbal treatment) from traditional and complementary health practices is examined during the COVID-19 pandemic, it is observed that the frequency of use of all phytotherapy methods (herbal treatments) has increased. The top ten in order are vitamin (49.9%), citrus fruits (35.3%), garlic (32.5%), pickles (26.5%), vinegar (22.3%), turmeric (20.3%), ginger (19.0%), minerals (17.9%), sumac (15.8%), and turnip juice (14.5%) (Table 2).

It has been observed that individuals mostly practiced breathing exercises (0.5%), movement therapies (0.5%), and music therapy (0.5%) before the COVID-19 pandemic. During the COVID-19 pandemic. the practice of movement therapies (0.5%) remained the same, while the usage of breathing exercises (4.7%) and music therapy (1.6%) increased. Before the COVID-19 pandemic, individuals were found to engage in other complementary health approaches such as reading prayers (4.7%), praying (1.6%), getting lead casting (0.3%), carrying amulets (0.3%), acupuncture (0.3%), and apitherapy (0.3%). However, during the COVID-19 pandemic, the usage of other complementary health approaches increased, with percentages for reading prayers (17.7%), praying (3.4%), getting lead casting (0.3%), carrying amulets (1.6%), acupuncture (0.8%), and apitherapy (0.3%).

66.0% of individuals believe in the effectiveness of traditional and complementary health practices during COVID-19 disease. The majority of individuals (61.8%) have stated that they used traditional and complementary health practices within the last ≤1 month during the COVID-19 pandemic, 40.3% of individuals use traditional and complementary health practices every day during the COVID-19 pandemic, and 61.3% are aware of traditional and complementary health practices through sources such as the internet, radio, television, magazines, newspapers, etc. Additionally, 35.6% of individuals reported an increase in the budget allocated for traditional and complementary health practices during the pandemic, and 52.5% stated that they would recommend traditional and complementary health practices to others.

COVID-19, a highly pathogenic viral infection, encompasses a wide clinical spectrum ranging from asymptomatic infection and mild upper respiratory tract illness to severe viral pneumonia-induced respiratory failure and even death. According to the World Health Organization's COVID-19 report from China, the case fatality rate was reported to be 3.8% (Çelik. & Köse. 2020). Traditional and complementary medicine practices can be used by individuals for reasons such as disease prevention. reducing the side effects of medications, strengthening the immune system, and managing the disease (Solmaz & Altay, 2019; Aktaş, 2017). Given the physiological and psychological effects of the globally spreading COVID-19 on individuals, and considering the lack of adequate and effective pharmacotherapeutic approaches in the initial stages of the disease, traditional and complementary treatments have attracted significant attention among the public during this global pandemic. In the study, it was determined that before the COVID-19 pandemic, the top ten phytotherapy methods (herbal treatment) most commonly used by individuals were garlic, citrus fruits, pickles, vitamins, turmeric, ginger, green tea, probiotics, linden tea, and turnip juice. However, during the COVID-19 pandemic. when looking at the distribution, it can be seen that the frequency of use of all phytotherapy methods has increased, with vitamins, citrus fruits garlic, pickles, vinegar, turmeric, ginger, minerals, sumac, and turnip juice ranking in the top ten. While individuals mostly practiced breathing exercises, movement therapies, and music therapy before the COVID-19 pandemic, during the pandemic, the practice of movement therapies remained the same while the usage of breathing exercises and music therapy increased. Before and during the COVID-19 pandemic, the top three complementary health approaches used by individuals were reading prayers, praying, and getting lead casting (Table 2).

In a study conducted by Işık and Can (2021) with nursing students, the traditional and complementary medicine practices applied against COVID-19 were reported as biological practices, massage with oils, and listening to relaxing music, respectively. In the same study, it was found that students particularly increased their consumption of artichokes, garlic, onions, hot peppers, lemon juice, and vinegar, as well as red cabbage and pomegranate consumption, and increased their consumption of dairy products, especially kefir and yogurt (Işık. & Rana. 2021). Previous studies in Turkey have reported a prevalence of traditional and complementary health practice usage ranging from 7.1% to 38.8% (104-106). In a study conducted by Karataş et al. (2021) in Adana province, they found that a significant

Table 2. Distribution of the frequency of traditional and complementary health practices usage among individuals before and during the COVID-19 pandemic period

Traditional and complementary health practices	Before the COVID-19 pandemic period		During the COVID-19 pandemic period	
	I used number (%)	I didn't used number (%)	I used number (%)	I didn't used number (%)
Phytotherapy method (Herbal treatment)				
Vitamin	37 (9.6)	348 (90.4)	192 (49.9)	193 (50.1)
Mineral	8 (2.1)	377 (97.9)	69 (17.9)	316 (82.1)
Probiotic	16 (4.2)	369 (95.8)	37 (9.6)	348 (90.4)
Garlic	94 (24.4)	291 (75.6)	125 (32.5)	260 (67.5)
Turmeric	17 (4.4)	368 (95.6)	78 (20.3)	307 (79.7)
Ginger	17 (4.4)	368 (95.6)	73 (19.0)	312 (81.0)
Sumac	7 (1.8)	378 (98.2)	61 (15.8)	324 (84.2)
Citrus fruits	87 (22.6)	298 (77.4)	136 (35.3)	249 (64.7)
Vinegar	28 (7.3)	357 (92.7)	86 (22.3)	299 (77.7)
Pickles	53 (13.8)	332 (86.2)	102 (26.5)	283 (73.5)
Turnip juice	13 (3.4)	372 (96.6)	56 (14.5)	329 (85.5)
Coriander	1 (0.3)	384 (99.7)	13 (3.4)	372 (96.6)
Cinnamon	5 (1.3)	380 (98.7)	19 (4.9)	366 (95.1)
Linden	15 (3.9)	370 (96.1)	38 (9.9)	347 (90.1)
Green tea	16 (4.2)	369 (95.8)	27 (7.0)	358 (93.0)
Echinacea	2 (0.5)	383 (99.5)	13 (3.4)	372 (96.6)
Sage	6 (1.6)	379 (98.4)	32 (8.3)	353 (91.7)
Hibiscus	1 (0.3)	384 (99.7)	10 (2.6)	375 (97.4)
Licorice	1 (0.3)	384 (99.7)	6 (1.6)	379 (98.4)
Clove	1 (0.3)	384 (99.7)	13 (3.4)	372 (96.6)
Pomegranate peel	-	385 (100.0)	9 (2.3)	376 (97.7)
Black seed	2 (0.5)	383 (99.5)	2 (0.5)	383 (99.5)
Rosehip	-	385 (100.0)	5 (1.3)	380 (98.7)
Olive oil	3 (0.8)	382 (99.2)	3 (0.8)	382 (99.2)
Mind and body practices				
Chinese medicine	-	385 (100.0)	1 (0.3)	384 (99.7)
Tai chi	-	385 (100.0)	-	385 (100.0)
Breathing exercises	2 (0.5)	383 (99.5)	18 (4.7)	367 (95.3)
Hypnotherapy	-	385 (100.0)	-	385 (100.0)
Meditation	1 (0.3)	384 (99.7)	7 (1.8)	378 (98.2)
Yoga	-	385 (100.0)	6 (1.6)	379 (98.4)
Movement therapies	2 (0.5)	383 (99.5)	2 (0.5)	383 (99.5)
Reflexology	-	385 (100.0)	-	385 (100.0)
Music therapy	2 (0.5)	383 (99.5)	6 (1.6)	379 (98.4)
Therapeutic touch	1 (0.3)	384 (99.7)	1 (0.3)	384 (99.7)
Other complementary health approaches				
Reading prayers	18 (4.7)	367 (95.3)	68 (17.7)	317 (82.3)
Getting lead casting	1 (0.3)	384 (99.7)	1 (0.3)	384 (99.7)
Visiting a healer	-	385 (100.0)	-	385 (100.0)
Visiting entombed saint	-	385 (100.0)	2 (0.5)	383 (99.5)
Praying	6 (1.6)	379 (98.4)	13 (3.4)	372 (96.6)
Carrying amulets	1 (0.3)	384 (99.7)	6 (1.6)	379 (98.4)
Acupuncture	1 (0.3)	384 (99.7)	3 (0.8)	382 (99.2)
Apitherapy	1 (0.3)	384 (99.7)	1 (0.3)	384 (99.7)
Leech therapy	-	385 (100.0)	1 (0.3)	384 (99.7)
Prolotherapy	-	385 (100.0)	-	385 (100.0)
Cupping therapy	-	385 (100.0)	2 (0.5)	383 (99.5)

portion of the population (39.3%) used traditional and complementary medicine practices for COVID-19 during the April 2020 quarantine period (Karataş et al., 2021). In the study by Erişen and Yılmaz (2020), it was found that approximately half of the participants (42.8%) consumed herbal products such as garlic and sumac (Erişen. & Yılmaz. 2020).

In the study by Özenoğlu et al. (2021), they found that the most commonly used dietary supplements during the pandemic were vitamin C, vitamin D, and multivitamin complex (Özenoğlu et al. 2021). In another study. approximately one-third of individuals (36.1%) reported starting to use dietary supplements, especially vitamin D (56.9%), Vitamin C (50.4%), and zinc (27.6%). during the pandemic (Macit, 2020). In a cross-sectional study conducted by Kamarlı Altun et al. (2022), it was determined that 57.0% of individuals used herbal supplements and 46.1% used dietary supplements during the pandemic. In the same study, it was found that the most preferred dietary supplements were vitamin C, multivitamins, Vitamin D, and zinc, and individuals consumed fresh herbs such as garlic, ginger, turmeric, green tea, and other herbal teas (linden, chamomile, sage) during the pandemic, although they had not previously used them (Kamarlı Altun et al., 2022). In a study conducted in South Korea, it was found that 76.1% of participants used one or more traditional and complementary medicine practices during the MERS epidemic. with easily accessible methods such as multivitamins and food products being the most popular (Hwang et al., 2020). In a study conducted in Saudi Arabia, approximately 22.1% of participants reported using herbal products or dietary supplements during the pandemic, with vitamin C being the most commonly used food supplement reported to boost immunity and reduce the risk of COVID-19 (Alyami et al., 2020). Due to the antioxidant and anti-inflammatory effects of vitamins such as A, C, D, and minerals such as zinc and selenium. They are known to be protective against viral infections. Additionally, these vitamins and nutrients may play a protective role against the increased intrapulmonary oxidative stress in viral infections (Özenoğlu & Gülbahar, 2020). Although there are not many high-quality studies, the role of dietary supplements in combating COVID-19. the positive effects of supplements such as vitamins A. C. D. Zinc, and selenium on immune response, and their protective effects against viral infections are known (Rao et al., 2020; Shah, Saxena & Mavalankar, 2021).

In the study, it was determined that 61.3% of individuals were aware of traditional and complementary health practices through sources such as the internet, radio, television, magazines, newspapers, etc. (Table 3). Kocabaş et al. found in their study that family and friend recommendations were effective in the use of traditional and complementary medicine (TAT) (Kocabaş, Erdal & Demir. 2019). Hwang et al. (2020) found in their study that the majority of TAT users relied on mass media (52.4%) and the internet (27.4%) to acquire information about TAT. Nural and Çakmak (2018) found in their study that the primary sources of information about TAT methods for patients were television first, followed by relatives, family, and friends. Ak and Baran Aksakal (2020) reported in their study that 58.5% of those who preferred traditional and complementary medicine for the treatment of a health problem did so because they were recommended by friends/neighbors/relatives. In another study, participants were found to acquire information about dietary supplements mostly from mass media (Demir, Kılıçkalkan & Takak. 2021).

Table 3. Characteristics of traditional and complementary health practices usage by ındividuals

Characteristics	Number (n)	Percentage (%)
Belief in the effectiveness of traditional and complementary health practices in COVID-19 disease		
Yes	254	66.0
No	131	34.0
Last time of using traditional and complementary health practices during the COVID-19 pandemic (n=281)*		
≤1 month	238	61.8
2 months	15	3.9
3 months	12	3.1
4 months	12	3.1
5 months	2	.5
6 months	1	.3
7 months	1	.3
Frequency of using traditional and complementary health practices during the COVID-19 pandemic (n=281) *		
Throughout the illness	47	12.2
Every day	155	40.3
Three to four times a week	54	14.0
Rarely	25	6.5
Awareness of traditional and complementary health practices (n=281)*		
Internet. radio. television. magazine. newspaper. etc.	236	61.3
Friends. family. neighbors	36	9.4
Herbalist/Traditional healer	9	2.3
Increase in budget allocated for traditional and complementary health practices during the pandemic (n=281)*		
Yes	137	35.6
No	144	37.4
Recommendation of traditional and complementary health practices to others (n=281)*		
Yes	202	52.5
No	79	20.5

The literature and the study results indicate that individuals' awareness of traditional and complementary health practices comes from sources such as the internet, radio, television, magazines, newspapers, etc. as well as from family, Friends, and neighbors. In line with these results, it is evident that technology has become an important source of information in people's lives, particularly in the field of health. Due to its ability to provide access to information and development most quickly, technology emerges as the most important tool for preserving, enhancing. and strengthening health. However, it is also important for this technology to be used consciously and correctly in all areas, especially in healthcare. The effectiveness of family and friend recommendations in the use of traditional and complementary medicine can be attributed to the importance given to recommendations from close circles, as is the case with many other aspects of our culture, even in the field of health.

In the study it was found that 35.6% of individuals reported an increase in the budget allocated for traditional and complementary health practices during the pandemic. In a study conducted by Erişen and Yılmaz (2020) it was found that during the COVID-19 pandemic, households spent an average of 436.1 TL for health purposes. 1011.9 TL for other purposes, and a total of 1163.3 TL on average. Regarding

health-related expenses in the same study, 207 individuals spent an average of 219.2 TL for foods that were claimed to boost immunity, 99 individuals spent an average of 239.1 TL for dietary supplements (vitamin pills. fish oil. etc.), and 72 individuals spent an average of 314.5 TL for various other health-related expenses (Erişen. & Yılmaz. 2020). These findings suggest that individuals are affected both health-wise and economically during pandemics.

In the study, 52.5% of individuals stated that they would recommend traditional and complementary health practices to others (Table 3). As an interesting finding, in a study by Yılmaz et al. (2018) involving 129 independent pharmacists and 113 primary care physicians. 68% of pharmacists and 42.5% of doctors reported recommending herbal products to patients. But 70.2% of participants stated that they could not provide adequate counseling services (Yılmaz et al., 2018).

CONCLUSION

It is believed that individuals recommend these methods to others because they perceive them as auxiliary to medical treatment and as natural products. It is recommended that healthcare professionals collect data on traditional and complementary health practices during the COVID-19 pandemic and provide education and counseling services to the community on this matter.

ETHICAL DECLARATIONS

Ethics Committee Approval

The study was carried out with the permission of Ethical Committe of Faculty of Medicine, Kırşehir Ahi Evran University (Date:06.04.2021, Decision No: 2021-07/76).

Informed Consent

All patients signed and free and informed consent form.

Refree Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Financial Disclosure

The authors declared that this study has received no financial support.

Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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