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ORIGINAL RESEARCH

Views of Healthcare Professionals to Traditional and Complementary Medicine

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Abstract

Objective: Although its roots go back centuries, there is still a demand for traditional medicine practices and it is important to know the opinion of the society and healthcare professionals about the subject. Our study aims to determine the attitudes of healthcare professional and non-healthcare hospital staff about traditional medicine.

Material-Method: A two-stage questionnaire, a demographic information section, and the Complementary, Alternative, and Conventional Medicine Attitudes Scale (CACMAS) was used to collect the data. Descriptive statistics, Kolmogorov Smirnov, Mann-Whitney U, Kruskal Wallis and chi-square tests were used to analyze the data.

Results: A total of 681 staff of nine public and private hospitals participated in the study. 65.4% (n=439) of the participants were healthcare professionals, 34.6% (n=232) were non-healthcare professionals. The mean scores of the healthcare professional respondents were 92.6 (± 16.7), of the non-healthcare professional respondents were 126.1 (± 11.7).

Conclusion: In our study, it was found that healthcare professionals' attitudes towards traditional medicine practices were more negative than non-healthcare professionals. However, as according to the current legislation in many countries around the world, only physicians who receive standard training and other healthcare professionals under their supervision are authorized to perform traditional medicine practices in Turkey. As a result of our study, it was determined that the attitudes of healthcare professionals and other segments of the society should be observed about traditional medicine practices and that measures should be taken to bring together the supply and demand for traditional medicine on a legal basis.

Keywords: Traditional Medicine, Attitude, Health Personnel, Hospital Staff

INTRODUCTION

Traditional medicine emerged with human history and has been the only treatment alternative for humans for centuries. Although traditional treatment methods vary according to the culture, religious beliefs and traditions of societies, some of them have survived to this day. Although modern medicine has made relatively great progress until today, traditional treatment practices are carried out in daily life in order to maintain health and treat diseases because people want to try all possibilities to protect or restore their health. Therefore, interest in traditional and complementary medicine practices continues. The use of traditional medicine methods is widespread worldwide. Reasons for being preferred include being easy to access, culturally acceptable, reliable by many people and cost-effective. Regardless of the reasons for its

preference, it is seen that interest in traditional and complementary therapies is increasing worldwide and it is thought that it will continue to increase¹. Legal regulations on traditional and complementary medicine practices date back to ancient times in some countries, while in some countries it is seen that they have been made in recent years². What these legal regulations generally have in common is that traditional and complementary medicine is foreseen to be practiced by people who have been trained in the subject area. Turkey is one of the countries where legal regulations on traditional and complementary medicine practices have been made in recent years. According to the current legislation in Turkey, only health professionals who are certified by training are allowed to practice traditional and complementary medicine.

In this respect, it is very important to know the attitudes of health professionals about traditional and complementary medicine practices. However, the literature research has shown that there are few comprehensive studies on the attitudes of health professionals in Turkey regarding traditional and complementary medicine practices, perhaps because the legal regulations have just been made.

As it is known, health professionals such as physicians, nurses, etc. and non-health professionals such as cleaning staff, office employees, etc. work together in hospitals. In our study, it was aimed to determine the attitudes of health professionals and non-health professionals working in nine different hospitals, five being public and four being private, about traditional and complementary medicine practices. Thus, it was aimed to make future inferences by comparing the traditional and complementary medicine perspectives of non-health professionals with health professionals.

Traditional and complementary medicine in Turkey

There is no complete consensus on the naming and definition of traditional medicine and it is defined in many different ways³. For example, according to the National Center for Complementary and Alternative Medicine in the United States, traditional and complementary medicine is a group of medical and health systems, practices, and products which are considered as a part of the traditional medicine⁴. The Turkish Ministry of Health has adopted the definition made by the World Health Organization (WHO) in past years. Accordingly, traditional and complementary medicine is a whole of knowledge, skills and practices based on theories, beliefs and experiences indigenous to different cultures, that can be explained or not explained, that are used to prevent, diagnose, improve or treat physical and mental diseases, as well as to maintain health well⁵.

The first legal regulation in Turkey is the "Regulation of Acupuncture Practices" published in 1991. However, the first comprehensive legal regulation is the "Regulation on Traditional and Complementary Medicine Practices" published in 2014. In this regulation, acupuncture, apitherapy, phytotherapy, hypnosis, leech therapy, homeopathy, chiropractic, cupping therapy, larval therapy, mesotherapy, prolotherapy, osteopathy, ozone therapy, reflexology and music therapy are

listed as traditional and complementary medicine practices. Those who want to perform these practices are required to participate in the trainings to be organized by the bodies authorized by the Turkish Ministry of Health, to successfully complete the training and obtain certificates. According to that regulation, traditional and complementary medicine is allowed to be practiced only by certified medical doctors or dentists. Healthcare professionals who have basic medicine training are allowed to participate in the practices under the supervision of certified medical doctors⁶.

MATERIALS AND METHODS

This study is a descriptive and cross-sectional research which has been conducted in Kırklareli, in June, 2021. Kırklareli is a city with around 360.000 habitants in northwestern Turkey.

Target population of our research consists of 2.277 hospital employees recruited in nine hospitals in Kırklareli, five hospitals being public and four being private. We have used stratified random sampling method. We have calculated the sampling size as 658 by using the Epi-info-7 StatCalc Program, with the values of 2.277 population, 95% confidence interval, 5% acceptable margin of error and 50% expected frequency and by taking the design effect as 2. Considering that all employees who received the survey may not respond, we aimed to reach out to 724 participants by increasing the sampling by 10%. Target population was considered to consist of nine strata, each hospital being one stratum. We categorized hospital employees based on occupational groups. We sent a survey to the participants randomly selected based on the occupational groups' frequency within the strata. Criteria for participating in the survey were being employed by a hospital in Kırklareli and filling out the survey form with free will. 671 survey forms meeting the mentioned criteria returned, thus the response rate is 92.7%.

A two-stage questionnaire, a demographic information section developed by the researchers, and the Complementary, Alternative, and Conventional Medicine Attitudes Scale (CACMAS) was used to collect the data. CACMAS was developed in 2010 by McFadden et al⁷. The adaptation study of the scale into Turkish was conducted by Köse et al. in 2016⁸. CACMAS consists of 27 items in total. Each item was measured with 7-point scale, 1 corresponding to "I strongly disagree" and 7 corresponding to "I

strongly agree". Therefore, it is possible for a participant to score at least 27 and at most 189 points on the scale. The scale consists of 22 positive and 5 negative (1, 4, 8, 9, 26.) items. During the analysis, items consisting of negative statements were scored in reverse (7-6-5-4-3-2-1). The CACMAS includes three subscales as philosophical congruence with complementary and alternative medicine (5, 7, 9, 18, 19, 21, 22, 24. items), dissatisfaction with conventional medicine (1, 4, 8, 11, 14, 16, 17, 20, 26, 27. items) and holistic balance (2, 3, 6, 10, 12, 13, 15, 23, 25. items). It is stated that the CACMAS does not have a specific cut-off point, and higher scores on the scale indicates the participant's attitude towards traditional medicine is more positive. SPSS 22 (Statistical Program for Social Sciences) software was used in analyzing the survey data. Descriptive statistics are presented in form of numeric value, percentage, standard deviation and average. Data distribution was verified by using Kolmogorov-Smirnov and Shapiro Wilk tests. Chi-square, Mann Whitney U and Kruskal Wallis tests were used in analyzing the data which were

not normally distributed. Findings were evaluated at 95% confidence interval and results with <0.05 p value were regarded as statistically significant.

Ethical approval

Our study was conducted with the permission of Kırklareli Provincial Health Directorate Research Applications Examination and Evaluation Commission (dated April 14, 2020, and numbered 2020/26) and Kırklareli University Institute of Health Sciences Ethics Committee (dated April 06, 2020, and numbered 2020-04). In addition, permission was obtained from Köse for the use of the CACMAS Turkish form.

RESULTS

The sample of the study consists of 671 hospital workers at the age from 21 to 67 ($M = 36.6$, $SD = 9.4$) and 66.5% were female ($n=446$) and 33.5% were male ($n=225$). 83.0% ($n = 557$) of the participants stated that they work in shifts and 17.0% ($n = 114$) of them work only in the daytime. The distribution of the participants according to their institutions and job titles is shown in Table 1.

Table 1. The distribution of the participants according to their institutions and job titles.

Job Titles	Public Hospital		Private Hospital		Total	
	n	%	n	%	n	%
Physician	63	9.4	38	5.7	101	15.1
Health Personnel*	245	36.5	93	13.9	338	50.4
Health Professionals (Subtotal)	308	45.9	131	19.5	439	65.4
Office Staff**	56	8.3	29	4.3	85	12.7
Auxiliary Services Staff***	98	14.6	49	7.3	147	21.9
Other Health Workers (Subtotal)	154	23.0	78	11.6	232	34.6
Total	462	68.9	209	31.1	671	100.0

* Nurses, midwives, medical technicians

** Secretary, accountant, administrative manager, etc.

*** Cleaning staff, driver, security, technical staff, etc.

The mean CACMAS score of our study group was 104.2 (± 21.7). Mean scores of CACMAS subscales were calculated as 27.9 (± 9.4) for the Philosophical Congruence with Complementary and Alternative Medicine subscale, 30.0 (± 10.5) for Dissatisfaction with Conventional Medicine and 46.3 (± 4.1) for the Holistic Balance subscale. The comparison of the mean scores of the CACMAS with some sociodemographic characteristics of the respondents is shown in Table 2. There is no statistically significant difference in the total scores of general

practitioners or specialist physicians within the physician group ($U=939.000$, $z= -0.631$, $p=0.528$). However, there is a significant difference between the CACMAS scores of the participants healthcare and non-healthcare professionals ($U=2417.000$, $z= -20.326$, $p<0.001$). Similarly, it was found that there is a significant difference between physician and other healthcare professionals' CACMAS scores ($U=830.000$, $z= -14.548$, $p<0.001$). The distribution of CACMAS scores of the participants according to the subscales is shown in Table 3.

Table 2. The comparison of the mean scores of the CACMAS with some sociodemographic characteristics of the respondents.

Various Characteristics of The Respondents	n	%	Min	Max	Mean Rank	p
Gender*						
Female	446	66.5	42	144	333.6	0.657
Male	225	33.5	43	141	340.7	
Age**						
29 Years and Under	189	28.2	56	144	245.3	<0.001
30 - 39 Years	219	32.6	42	135	315.9	
40 - 49 Years	198	29.5	60	138	401.7	
50 Years and Over	65	9.7	59	142	467.4	
Marital Status*						
Married	340	50.7	42	142	365.1	<0.001
Not Married (Single, Widow, Divorced etc.)	331	49.3	57	144	306.1	
Job Titles**						
Physician	101	15.1	42	138	65.3	<0.001
Health Personnel***	338	50.4	61	144	273.4	
Office Staff	85	12.7	62	130	477.5	
Auxiliary Services Staff	147	21.9	65	142	584.2	
Institution Type*						
Public Hospital	462	68.9	42	144	337.6	0.753
Private Hospital	209	31.1	43	142	332.5	
Education Status*						
Vocational School and below	238	35.5	65	142	475.4	<0.001
University and Above	433	64.5	42	144	259.3	
Perceived Economic Status**						
Very Bad - Bad	206	30.7	65	144	402.5	<0.001
Middle	348	51.9	42	142	343.6	
Good - Very Good	117	17.4	43	138	196.2	

* Mann Whitney U test was used.

** Kruskal Wallis test was used.

*** Nurses, midwives, medical technicians

Table 3. The distribution of CACMAS scores of the participants according to the subscales.

Job Titles	Subscales	n	Min.	Max.	Mean $\pm$ SD
Physician	Subscale 1	101	8	43	12.51 $\pm$ 5.03
	Subscale 2		10	37	14.80 $\pm$ 4.19
	Subscale 3		17	62	40.29 $\pm$ 5.05
	CACMAS		42	138	67.60 $\pm$ 11.57
Health Personnel*	Subscale 1	338	10	41	26.40 $\pm$ 3.96
	Subscale 2		11	53	27.26 $\pm$ 4.989
	Subscale 3		39	51	46.37 $\pm$ 2.47
	CACMAS		61	144	100.03 $\pm$ 7.54
Office Staff	Subscale 1	85	10	43	33.59 $\pm$ 6.75
	Subscale 2		11	42	35.94 $\pm$ 5.27
	Subscale 3		41	55	47.74 $\pm$ 3.36
	CACMAS		62	130	117.27 $\pm$ 10.52
Auxiliary Services Staff	Subscale 1	147	10	44	38.38 $\pm$ 4.92
	Subscale 2		11	54	43.33 $\pm$ 6.71
	Subscale 3		44	54	49.44 $\pm$ 1.97
	CACMAS		65	142	131.16 $\pm$ 9.09

Subscale 1: Philosophical Congruence with Complementary and Alternative Medicine

Subscale 2: Dissatisfaction with Conventional Medicine

Subscale 3: Holistic Balance

CACMAS: Complementary, Alternative, and Conventional Medicine Attitudes Scale

* Nurses, midwives, medical technicians

As seen in Table 3, 59.6% of physicians' CACMAS score averages originate from the holistic balance subscale. This rate is 46.4%, 40.7% and 37.7% in health staff (nurses, midwives, and medical technicians), office staff and auxiliary services staff, respectively. The Cronbach's alpha reliability coefficient of the CACMAS was calculated as 0.928 in our study.

DISCUSSION

Traditional medicine is as old as human history, but discussions about traditional medicine are just as old. The number of healthcare professionals around the world who describe traditional medicine methods as "quackery" is too much to underestimate⁹⁻¹². For this reason, it is important to know the attitudes of those who receive or provide traditional medicine services. Among the participants of our study, there were both healthcare professionals and non-healthcare professionals who worked in a hospital. In this respect, it was possible to evaluate and compare both groups simultaneously in our study.

Although our study was conducted in two different types of hospitals, public and private, no statistically significant difference was found between the participants' CACMAS scores in terms of the institution type. In this respect, it can be said that different hospital staff that consist our study group have similar attitudes about traditional medicine practices.

For the CACMAS, the researchers who developed the scale stated that it had three subscales⁷. In a study conducted in 2014 using CACMAS, it was stated that it could have four subscales¹³. When the CACMAS was adapted to Turkish in 2016, it was found that it had three subscales⁸. In another study conducted in Turkey in 2019, it has been reported that the items of the scale could be collected in two subscales¹⁴. In our study, the data were analyzed in three subscales, adhering to the original version of the CACMAS and its Turkish version.

It has been observed that healthcare professional and non-healthcare participants got similar scores in the "Holistic Balance" subscale. There is a more significant difference mainly between responses of medical doctors and social workers to the statements about "Philosophical Congruence with Complementary and Alternative Medicine" and "Dissatisfaction with Modern Medicine" subscales.

A study on the sociodemographic determinants of the use of traditional and complementary medicine throughout Europe reports that in general women use

it more than men¹⁵. According to the same study, people with higher education and higher income use traditional and complementary medicine more frequently. As to our study, a statistically significant difference in terms of CACMAS total scores based on gender has not been observed. Nevertheless, it is observed that as our participants' level of education and economic conditions increase, their CACMAS score decreases. In addition, the positive view of our healthcare professional participants on traditional and alternative medical practices is significantly lower than the one of non-healthcare participants. These findings suggest that the attitude of healthcare professionals towards traditional and alternative medical practices is more negative compared to the general public. Some of the studies conducted at different places of the world support that suggestion whereas some others report that healthcare professionals have a positive view on traditional and alternative medical practices¹⁶⁻¹⁹.

In our study group, the most positive attitude towards traditional medicine was found in auxiliary services personnel and the most negative attitude was found in physicians. In a study conducted with healthcare professionals working in two different public hospitals in Istanbul using a different scale in 2019, no significant difference was found between gender, education status and whether they were physicians or not in terms of the attitudes of the participants towards traditional medicine²⁰. Although our findings are not compatible with this study, there are also studies with similar results to ours. For example, in a study conducted in Mexico, it was reported that physicians' attitudes towards traditional medicine practices were more negative than other healthcare professionals²¹. In a systematic review examining the attitudes of healthcare professionals about traditional medicine practices in cancer treatment, it was found that doctors displayed more negative attitudes than other professionals²². However, according to current legislation in Turkey and many countries around the world, traditional medicine practices can be performed only by certified physicians or dentists or by other healthcare professionals with basic medical training under the supervision of certified physicians or dentists⁸. When our findings are evaluated in the light of this information, it is understood that if traditional medicine practices are to be widespread, studies that will positively change the attitude of healthcare professionals are required. Otherwise, the demand against traditional medicine practices in the

society may be abused by malicious persons who are uneducated, prioritizing their own benefit instead of the patient's health¹⁰. Another risk is that patients who notice the negative attitude towards traditional medicine of healthcare professionals who treated them, resort to traditional medical practices that may have cross-interactions with their treatments and hesitate to inform their physicians about this. Thus, in a study conducted in 2018, it was reported that the majority of the participants applied for traditional medicine methods without a physician's recommendation and did not inform their physicians after the practices²³.

In order to determine their attitudes towards traditional medicine of pediatrics nurses, in a study conducted in Turkey in 2019 using CACMAS like ours, average of total scores was reported as 112.01 ± 20.07^{24} . In our study group, average of total scores in the healthcare personnel group, including nurses, midwives, medical technicians was $100.03 (\pm 7.54)$. This result suggested that the increase in the number of similar studies is important in determining the general tendency about traditional medicine.

Köse et al., who made the Turkish adaptation of the CACMAS we used in the study, reported the Cronbach's alpha reliability coefficient of the Turkish form as 0.808⁸. In our study group, Cronbach's alpha reliability coefficient was calculated as 0.928. This finding has once again confirmed that the Turkish form of CACMAS is valid and reliable.

Our study also has some limitations. Firstly, the entire population could not be reached. Another limitation is that our study group consists of only the staff working in hospitals, so it does not reflect the general opinion of healthcare professionals about traditional medicine.

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CONCLUSION

In our study, the attitudes of healthcare and non-healthcare professional personnel working in nine different hospitals about traditional medicine practices were evaluated. The most negative attitude towards traditional medicine practices was determined in physicians. In terms of negative attitude, healthcare personnel such as nurses, midwives, medical technicians, etc. come second. In other words, the attitude of healthcare professionals towards traditional medicine practices was more negative than non-healthcare hospital staff. However, similar to many countries, according to the legislation in force in Turkey and many countries in the world, traditional medicine practices should be performed by only healthcare professionals. It is understood that this contradiction should be eliminated if it is aimed to meet the demand from the society about traditional medicine practices in accordance with legal regulations. As a result of our study, it was determined that the attitudes of healthcare professionals and other segments of the society should be observed about traditional medicine practices and that measures should be taken to bring the supply and demand for traditional medicine together on a legal basis. If traditional and complementary medical services are required to be delivered by healthcare professionals, studies which help them to adopt a more positive view of the matter are needed. For this purpose, complementary and traditional medicine practices should be provided with scientific evidence and practices without scientific basis should not be allowed.

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