

ORIGINAL RESEARCH

An Investigation of the Knowledge and Attitudes of Medical Faculty Students on Traditional and Complementary Medicine

Abdulkadir Kaya ^{1*}  Mehmet Goktug Gunel ²  Yashar Nurullazade ² 

¹ Department of Family Medicine, Faculty of Medicine, Duzce University, Duzce, Turkey

² Faculty of Medicine, Duzce University, Duzce, Turkey

*Corresponding Author: Abdulkadir Kaya e-mail: dra.kadir@hotmail.com

Received: 02.03.2021

Accepted: 09.04.2021

Abstract

Objective: Traditional and complementary medicine, which is being used more and more all over the world, has also become widespread in our country. However, the medical school could not find enough place in the curriculum. In this study, it was aimed to show the level of knowledge and awareness of medical faculty students about traditional and complementary medicine.

Material-Method: In the study, an e-questionnaire was delivered to the 1st and 6th grade students of the medical faculty with the help of "Google Forms". A 24-question survey consisting of TCM application methods and some descriptive questions was applied to the participants. Analyses were analyzed by SPSS.

Results: A total of 166 medical faculty students participated in the study. Most of the students were female students (% 62). Students from all classes participated in the study. The students stated that they knew the most about acupuncture and the least about prolotherapy. Nearly half of the students (46.4%) thought that TCM applications should be included in the medical school curriculum. It was observed that towards upper grades, students stated their TCM knowledge level more.

Conclusion: It was observed that medical faculty students were frequently interested in TCM applications, but they did not find their knowledge sufficient on this subject. In this sense, new education models and curriculum arrangements are needed.

Keywords: Traditional Medicine, Complementary Medicine, Medical Education

INTRODUCTION

Traditional and complementary medicine, which is being used more and more all over the world, has also become widespread in our country ¹. Complementary medicine covers applications that are used with modern medical practices in the treatment of diseases but are not known at the desired level ². On the other hand, traditional medicine was all of the knowledge, skills and practices used to prevent and diagnose mental and physical diseases, based on beliefs and experiences fed by different cultures for centuries ³⁻⁵. In this sense, the Traditional and Complementary Medicine (TCM) Practices Regulation was published by the Ministry of Health in 2014 in our country. Fifteen different

TCM methods are defined in this regulation. Those application area acupuncture, apitherapy, phytotherapy, hypnosis, leech therapy, homeopathy, chiropractic, cupping therapy, prolotherapy, maggot therapy, mesotherapy, osteopathy, ozone therapy, reflexology, music therapy. Many universities, hospitals and Educational Research is designated as the central unit. In addition, in this regulation, which aims to prevent inappropriate TCM methods and increase inspections, the indications/contraindications, personnel and materials that must be present in the application center are explained in detail ⁶. Although TCM methods are applied in many centers and units, they have not found enough

place in the medical school curricula ^{7,8}. Although researches with TCM methods have increased in recent years, it is still limited. In this study, it was aimed to show the level of knowledge and awareness of future physicians on this issue.

MATERIALS AND METHODS

Our study is a descriptive cross-sectional study. The study was applied to 1st-6th grade students studying at Duzce University Faculty of Medicine in the form of an e-questionnaire, via "Google Forms" in December and November 2020. Written permission was obtained from the students who wanted to participate in the study. A 24-question survey consisting of TCM application methods and some descriptive questions was applied to the participants.

Statistical analysis

While performing the statistics of the study, numerical data were given as mean and standard deviation in descriptive statistics, and category data as numbers and percentages. The distribution of numerical data was viewed with histogram graphics. While numerical data in two different groups were analyzed by student's t test, comparisons of categorical data were analyzed by chi-square test. In addition, one-way ANOVA test was used. P significance value was accepted as <0.05. SPSS 23.0 (SPSS, version 23X, IBM, Armonk, New York 10504, NY, USA) package program was used for analysis.

RESULTS

A total of 166 medical faculty students participated in the study. 62% (n = 103) of the participants were female and 38% (n = 63) were male. All students from the 1st to the 6th grade participated in the study, with a maximum of 24.7% (n = 41) 3rd grade students (Figure 1).

The students participating in the study were asked to score their own knowledge on TCM between 0-10. The answers given and the number of students are shown in Figure 2. Average knowledge level was calculated as 4.75 ± 2.52 .

The answers given by the participating students to some questions about TCM applications were evaluated. Most of the students (66.3%) stated that

they knew that they could obtain a certificate as a doctor and apply TCM applications in the future. 36.1% (n = 60) of the students stated that they have prejudices against TCM applications. Again, 21.1% (n = 35) of the students stated that they believed the benefits of TCM applications consisted of placebo. Most of the students stated that TCM applications should be included in the medical school curriculum with 46.4% (n = 77). Answers to other questions are shown in Table 1.

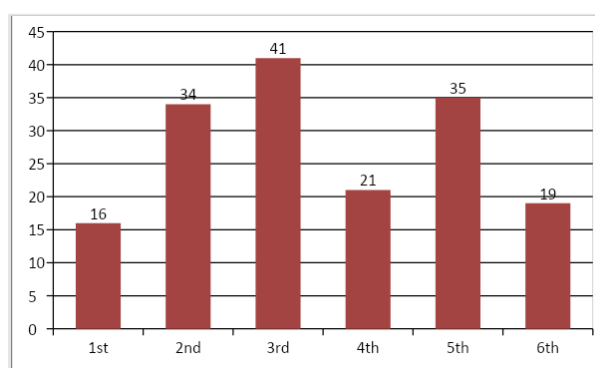


Figure 1. Classes and numbers of students participating in the study

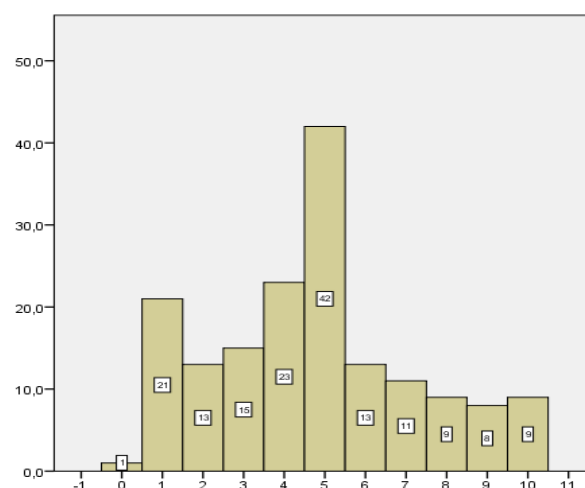


Figure 2. The level of knowledge score that students give to them about TCM

13.9% of students (N=23) said they would make an effort to eliminate information pollution about TCM. 67.5% (n = 112) of the students stated that they could be used in treatments as supportive of TCM applications. The students were asked who can apply TCM applications and the answers given can be seen in Figure 3.

Students were asked if they knew about which TCM app. 83.7% (139) expressed knowledge about acupuncture, while at least 6.0% (n=10) expressed knowledge about prolotherapy. 83.7%

(139) expressed knowledge about acupuncture, while at least 6.0% (n=10) expressed knowledge about prolotherapy. The answers regarding other TCM applications are shown in Table 2.

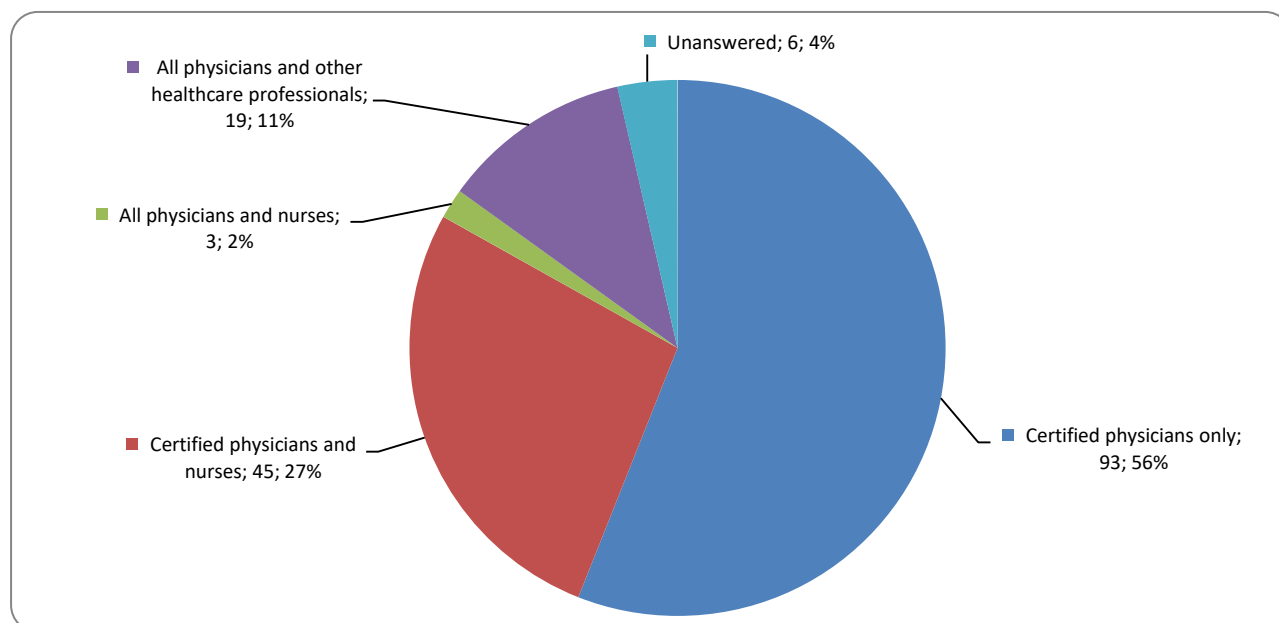


Figure 3. Answers of students about who can apply TCM applications

Table 1. The answers given by the students participating in the study to some questions about TCM applications

	Yes n /%	No n /%	I am indecisive n /%
Want to know more about TCM?	61/36.7	32/19.3	73/44.0
Do you know that you can get a certificate and apply TCM applications as a doctor in the future?	110/66.3	52/31.3	4/2.4
Would you like to get a certificate for TCM applications?	66/39.8	46/27.7	54/32.5
Does having information about TCM provide a more holistic approach to patients?	100/60.2	38/22.9	28/16.9
Do you have prejudices against TCM practices?	60/36.1	65/39.2	41/24.7
If you were sure that only certified physicians applied TCM applications, would you have prejudice?	32/19.3	96/57.8	38/22.9
Is it necessary for every physician to know the effects and side effects of traditional methods used by their patients?	145/87.3	8/4.8	13/7.8
Is TCM just a placebo?	35/21.1	81/48.8	49/29.5
Do you think that TCM applications will be as useful as modern medicine in the right indications?	42/25.3	81/48.8	43/25.9
Was it helpful for the Ministry of Health to allow 15 TCMs?	75/45.2	25/15.1	66/39.8
Have you ever used TCM methods?	39/23.5	122/73.5	5/3.0
Are there people around you who benefit from TCM methods?	68/41.0	71/42.8	27/16.3
Would you mind drinking linden or mint-lemon when you have flu?	8/4.8	156/94.0	2/1.2
Do you think TCM applications should be included in the medical school curriculum?	77/46.4	55/33.1	34/20.5
Would you direct your patients to specialist physicians in TCM centers in the future?	77/46.4	45/27.1	43/25.9

Table 2. The knowledge of the students participating in the study about TCM applications

TCM Applications	Yes (n /%)	No(n/%)
Larval treatment	77/46.4	89/53.6
Prolotherapy	10/6.0	156/94.0
Music therapy	105/63.3	61/36.7
Mesotherapy	47/28.3	119/71.7
Osteopathy	24/14.5	142/85.5
Chiropractic	35/14.5	131/85.5
Homeopathy	33/21.1	133/78.9
Ozone therapy	89/19.9	77/80.1
Reflexology	30/18.1	136/81.9
Cup treatment	126/77.9	40/24.1
Leech therapy	137/82.5	29/17.5
Phytotherapy	77/46.4	89/53.6
Apitherapy	61/36.7	105/63.3
Hypnotherapy	110/66.3	56/33.7
Acupuncture	139/83.7	27/16.3

Some other parameters were compared with the states of students applying TCM methods. It was observed that students who wanted TCM applications to be added to the medical school curriculum used TCM applications significantly more ($p = 0.001$). Students who thought that TCM applications were placebo applied significantly less than TCM applications ($p < 0.001$). It was observed that students who had bias towards TCM applications applied significantly less than TCM applications ($p = 0.007$). No significant relationship was found between the number of applications to TCM applications with gender and grade ($p > 0.05$) (Table 3).

Table 3. Comparison of students' application to TCM methods and some other parameters

		Have you ever used TCM methods?				
		Yes	No	I am indecisive	p	
Do you think TCM applications should be included in the medical school curriculum?	Yes	29	45	3	0.001	
	No	6	47	2		
	I am indecisive	4	30	0		
Is TCM just a placebo?	Yes	1	34	0	<0.001	
	No	32	48	1		
	I am indecisive	6	39	4		
Want to know more about TCM??	Yes	26	35	0	<0.001	
	No	3	27	2		
	I am indecisive	10	60	3		
Do you have prejudices against TCM practices?	Yes	9	51	0	0.007	
	No	21	43	1		
	I am indecisive	9	28	4		
Gender	Woman	19	81	3	0.140	
	Man	20	41	2		
Class	1	2	14	0	0.107	
	2	8	23	3		
	3	8	33	0		
	4	4	15	2		
	5	9	26	0		
	6	8	11	0		

The level of knowledge score given by the students about TCM was evaluated according to gender and classes. There was no significant difference in scores according to gender ($p = 0.534$). It was observed that there were significantly higher scores in the upper classes compared to the lower classes ($p = 0.002$) (Table 4).

Table 4. Assessment of students by gender and class with the knowledge level score they give them

	n	Average	standard deviation	p
Woman	103	4.65	2.30	0.534
Man	62	4.90	2.85	
1st Class	16	4.44	2.80	0.002
2nd Class	33	4.64	2.65	
3rd Class	41	4.27	2.47	
4th Class	21	3.38	1.53	
5th Class	35	5.63	2.61	
6th Class	19	6.11	1.85	

DISCUSSION

TCM practices are more important to physicians in our country, especially after the Ministry of Health issued regulations are practiced by many physicians. In this sense, it is extremely important to work with medical faculty students, who will be the doctors of the future.

Participants from each class appear to have participated in the study. This situation is also seen in other studies^{7,8}. In our study, it was observed that the students did not find themselves adequate in terms of TCM knowledge. This situation overlaps with similar results in other studies⁹⁻¹¹. It is obvious that there is a need for curriculum changes in medical faculties, especially when we consider the curiosity of students in these subjects. It has been stated in studies that the rate of using an alternative medicine method in individuals aged 18 and over in Turkey is 70 %¹². Therefore, the training to be given about TCM means that medical faculty students will be able to perform these practices more as physicians in the future. Thus, more patients will not be victims by those who perform these applications, except for health institutions.

Although most of the students said that they knew that they could obtain a certificate and apply TCM applications in the future, it was observed that many students also had prejudices about TCM. This situation has been expressed similarly in other studies⁸. In the study, the students mostly knew who could apply TCM applications. This situation can be explained by the fact that the Ministry of Health TCM regulation is frequently the subject of meetings and symposiums⁶. In addition, the increase of faculty members who are

interested in TCM applications in medical faculties is an important factor in this regard. In our study, it was observed that the students stated that they had the most knowledge about acupuncture and at least about prolotherapy. In similar studies, both physicians and students stated the most commonly used method as acupuncture^{3,13}. This can be explained by the fact that acupuncture is the most widely used TCM method worldwide and krotherapy is relatively uncommon compared to other applications. It was observed that students who thought that TCM applications consisted of placebo and had prejudices about these applications applied less to TCM applications. This situation confirms the need for additions to the curriculum in order to introduce TCM applications to medical students. In our study, it was observed that students had higher scores in upper grades while expressing their own knowledge of TCM. This suggests that as their time on the faculty increases, they learn more about it and consider themselves more adequate.

CONCLUSION

As a result, we believe that TCM practices are methods that are often used by people, but are often used by people who are not qualified, and doctors should receive more training in this regard. For this purpose, only post-graduate certified training programs and TCM applications, which are only accessible to a limited number of physicians, should be delivered to medical school students before graduation with a curriculum. Thus, the awareness and application status of TCM applications among physicians will increase.

REFERENCES

1. Ünal M, Dağdeviren HN. Geleneksel ve tamamlayıcı tıp yöntemleri. *Eurasian Journal of Family Medicine*. 2019;8(1):1-9.
2. Taştan K. Ülkemizde Geleneksel ve Tamamlayıcı Tıbbın Kilometre Taşları. *Ankara Medical Journal*. 2018;18(3):458-9.
3. Samanci R, Samanci VM, Günel MG, Yıldız SN, Ataoğlu S. Investigation of the Knowledge and Attitude of Physicians About Traditional and Complementary Medicine. *International Journal of Traditional and Complementary Medicine Research*. 2020;1(3):118-24.
4. Organization WH. WHO global report on traditional and complementary medicine 2019: *World Health Organization*; 2019.
5. Siti Z, Tahir A, Farah AI, Fazlin SA, Sondi S, Azman A, Maimunahb A, Hanizab M, Siti Haslindab M, Zulkarnainb

- A, Zakiha I, WanZalehab W. Use of traditional and complementary medicine in Malaysia: a baseline study. *Complementary therapies in medicine*. 2009;17(5-6):292-9.
6. Resmi Gazete. Geleneksel ve tamamlayıcı tıp uygulamaları yönetmeliği. <http://www.resmigazete.gov.tr/eskiler/2014/10/20141027-3.htm/adresinden> 15.02.2021 tarihinde erişilmiştir.
 7. Sönmez CI, Başer DA, Küçükdağ HN, Kayar O, İdris A, Güner PD. Tıp fakültesi öğrencilerinin geleneksel ve tamamlayıcı tıp ile ilgili bilgi durumlarının ve davranışlarının değerlendirilmesi. *Konuralp Tıp Dergisi*. 2018;10(3):276-81.
 8. Ayraler A, Yavuz E, Oruç MA, Öztürk O. Tıp Fakültesi Öğrencilerinin Geleneksel ve Tamamlayıcı Tıp Hakkındaki Bilgi Düzeyleri ve Görüşleri. *Türkiye Aile Hekimliği Dergisi*. 2020;24(4):196-202.
 9. Ergin A, Hatipoğlu C, Bozkurt Aİ, Mirza E, Kunak D, Karan C, Özçelik G, Teğin C, Pazir Y, Pirti İ. Uzmanlık ve tıp öğrencilerinin tamamlayıcı-alternatif tıp hakkındaki bilgi düzeyleri ve tutumları. *Pamukkale Tıp Dergisi*. 2011(3):136-43.
 10. Yeo AS, Yeo JC, Yeo C, Lee CH, Lim LF, Lee TL. Perceptions of complementary and alternative medicine amongst medical students in Singapore—a survey. *Acupuncture in Medicine*. 2005;23(1):19-26.
 11. Doğanay S, Guzel D, Öztürk D, Tanyeli A. Complementary and alternative medicine: understanding, attitude and usage among Turkish health sciences and medical students. *J Contemp Med*. 2018;8(1):48-54.
 12. Tan M, Uzun O, Akçay F. Trends in complementary and alternative medicine in Eastern Turkey. *Journal of Alternative & Complementary Medicine*. 2004;10(5):861-5.
 13. Ozcakir A, Sadikoglu G, Bayram N, Mazicioglu MM, Bilgel N, Beyhan I. Turkish general practitioners and complementary/alternative medicine. *The Journal of Alternative and Complementary Medicine*. 2007;13(9):1007-10.