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# Knowledge Levels and Attitudes of Medical Faculty Personnel on Traditional and Complementary Medicine

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## ABSTRACT

There is no any regular and standardised traditional and complementary medicine (T&CM) training intended for the public or personnel in medical faculties or other institutions and organisations related to health care in Turkey. In this study, knowledge level and attitudes of medical faculty personnel on T&CM were investigated. This study is a cross-sectional survey study. A survey that consists of 12 questions investigating the knowledge and attitudes on T&CM as well as six questions for socio-demographic data was applied to the non-academic personnel that work in Giresun University Medical Faculty between July–August 2019. A total of 260 university personnel was included in this study, and most of them are women (69.2%). Cupping application is the T&CM method with the highest knowledge level among the personnel (83.5%). T&CM applications were mostly learned by means of media (45.4%). About 46.2% of the personnel have positive perspective towards T&CM. The rate of the personnel who think that classical medicine and T&CM may complement each other is 71.2%. Positive news in media affect the perspective towards T&CM positively ( $p < 0.001$ ). Those whose body mass index (BMI) is  $>25.0 \text{ kg/m}^2$  ( $p = 0.01$ ) and smokers ( $p = 0.03$ ) were found to be more enthusiastic about having a profession in T&CM. The ones who do not consider these religious approaches as T&CM methods have more positive perspective towards T&CM ( $p < 0.01$ ). T&CM trainings may help the personnel or their relatives to provide the patients that are in despair in treatment process of some diseases with evidence-based information on the matter and give them support in their treatment by serving as a model.

**Keywords:** *Traditional medicine, Complementary medicine, Medical faculty*

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## INTRODUCTION

Traditional and complementary medicine (T&CM) applications have been employed in all civilisations for centuries,

but integration of T&CM into modern health care services has not taken place completely yet. Advertising value of T&CM applications has increased greatly in Turkey and in the world by means of media.

Official T&CM applications were identified in the regulation on T&CM applications that became effective on 27 September 2014 in Turkey, the centres and indications for their application were determined. According to this regulation, there are 15 methods that can be employed only by the certified physicians such as acupuncture, apitherapy, phytotherapy, hypnosis, homeopathy, chiropractic, cupping, larvae application, mesotherapy, musicotherapy, osteopathy, ozone therapy, prolotherapy, reflexology, and hirudotherapy (1). These applications cover a wide area; it is possible to make use of mechanical, psychological and biological mechanisms. A legal basis was established for these therapies through T&CM regulation and efforts were made to prevent charlatans and unlicensed applications.

There is a very significant increase in the number of scientific studies on T&CM applications between the years 2000–2010. It is stated that frequency of T&CM utilisation is 9.8%–76.0% in adults, and 11.8%–62.9% in children (2). A survey study was carried out in Europe in 2005 with the participation of 956 patients in total in 14 countries, and it was found that 35.0% of the patients utilised T&CM and its frequency of utilisation is 29.8% in Spain, 32.4% in Israel, 36.0% in Denmark, and 29.4% in the United Kingdom (3). It is indicated in the literature that individuals from every walk of life may apply to T&CM (2–3).

Under these circumstances, people, especially medical faculty personnel have the right to obtain the exact information from T&CM professionals. However, there is not any regular and standardised T&CM training intended for the public or personnel in medical faculties or other institutions and organisations related to health care in Turkey, and the personnel obtain right or wrong information incidentally by doing research on this matter by themselves. Thus, even in the medical school during the one-to-one conversations, incorrect information can be shared. In this study, it was aimed to

determine the knowledge and opinions on T&CM of medical faculty personnel and the patterns that affect them.

## METHODOLOGY

### Population and Setting

This study is a cross-sectional survey study. Giresun University Medical Faculty employs a total of 353 non-academic staff and all staff were asked if they would like to participate in the study. In the calculation, it was necessary to reach at least 231 people in line with the 5% margin of error and 99% confidence level. A total of 260 participants who accepted to participate in the study were included in the study.

### Inclusion and Exclusion Criteria

Volunteering and working in the faculty are the inclusion criteria. Academic personnel are excluded.

### Research Instrument

A questionnaire that consists of 12 questions investigating the knowledge and attitudes (such as sources of information, experiences, etc.) on T&CM as well as six questions for socio-demographic data was applied to the non-academic personnel that work in the faculty between July–August 2019.

One of the questions related to T&CM was prepared in 2-point Likert scale, seven were prepared in 3-point Likert scale and three in 4-point Likert scale; 1 question consists of 15 options and more than one option could be marked simultaneously.

To investigate the effects of obesity and weakness on attitudes, body mass index (BMI) of the personnel were calculated based on the height and weight values requested in the socio-demographic data section, and  $<18.5 \text{ kg/m}^2$  was categorised as slim,  $18.5\text{--}25 \text{ kg/m}^2$  as normal, and  $>25 \text{ kg/m}^2$  as overweight based on the literature (4).

## Ethical Approval

Ethics committee approval was obtained from Giresun University Department of Clinical studies Ethics Committee with number of 90139838-000-E.61595.

## Data Analysis

Chi-squared test was used for comparison of percentages, average  $\pm$  standard deviation, and analytically expressed data in the descriptive statistics. Statistical analyses were evaluated by using IBM SPSS Statistics software v20.0 (IBM Corp., Armonk, NY, USA) and significance level was considered as 0.05 (*p*-value).

## RESULTS

A total of 260 university personnel was included in this study, and most of them are women (69.2%, *n* = 180). Average age of the participants was  $27.38 \pm 8.71$  years, and their average height was  $168.55 \pm 8.51$  cm, and average weight was  $67.43 \pm 15.10$  kg; 59.2% of them (*n* = 154) were in normal BMI category. Smoking was found to be 25.0% (*n* = 65). Demographical data are shown in Table 1.

Cupping application was the highest known T&CM method among the personnel (83.5%), chiropractic (3.8%) stands out as the least known T&CM method (Table 2).

It was found that T&CM applications were mostly learned from media (45.4%, *n* = 118). The rate of the personnel that wanted to have a profession related to the complementary medicine was 32.7% (*n* = 85). While 46.2% of the personnel had positive perspective towards T&CM (*n* = 67), 18.1% of them had negative perspective (*n* = 47). About 35.8% of them was neutral (*n* = 93). The rate of the personnel who thought that classical medicine and T&CM might complement each other was 71.2% (*n* = 185). The rate of the personnel who used T&CM application in their family was 39.6%

**Table 1:** Demographic datas

Parameter	Frequency (n)	Percentage (%)
Gender		
Woman	180	69.2
Man	80	30.8
BMI		
<18.5	22	8.5
18.5–25	154	59.2
>25	84	32.3
Chronic disease		
Present	26	10.0
Absent	234	90.0
Smoking		
Woman	42	23.3
Man	23	28.7

Note: BMI = kg/m<sup>2</sup>

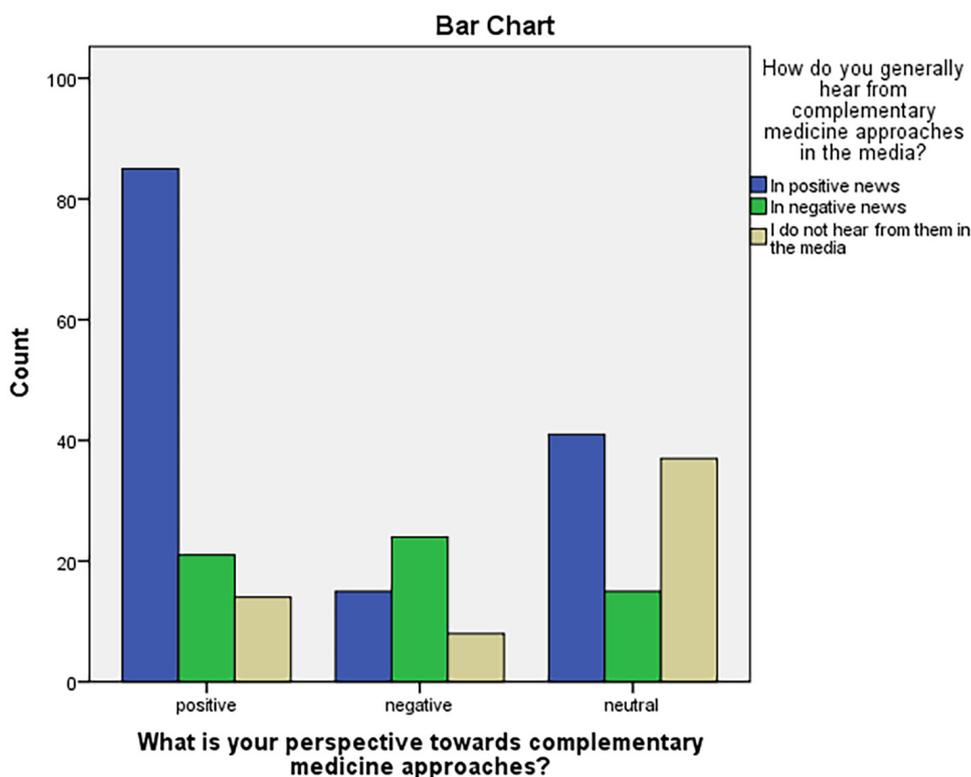
**Table 2:** Awareness on complementary medicine approaches

Which of them are complementary medicine approaches?	Frequency (n)	Percentage (%)
Cupping application	217	83.5
Acupuncture	177	68.1
Hypnosis	176	67.7
Musicotherapy	150	57.7
Ozone application	124	47.7
Phytotherapy	85	32.7
Larva application	73	28.1
Mesotherapy	63	24.2
Apitherapy	43	16.5
Homeopathy	41	15.8
Reflexology	39	15.0
Hirudotherapy	16	6.2
Osteopathy	14	5.4
Prolotherapy	13	5.0
Chiropractic	10	3.8

(n = 103). The rate of the personnel who thought that more T&CM centres were needed in Turkey was 39.2% (n = 102). It was thought that T&CM applications could be applied by mostly everyone who had received training for them (58.5%, n = 152). While the rate of the personnel who had heard of T&CM applications in positive news in the media was 54.2% (n = 141), the others had heard them in negative news or had not heard of them at all; positive news affect the perspective towards T&CM positively ( $p < 0.001$ ) (Figure 1).

The rate of the personnel who thought that T&CM could be used to be successful in their profession was 31.9% (n = 83). The rate of the personnel who thought that such religious approaches as amulet, prayer and magic are T&CM methods was 6.9% (n = 18), 17.3% of them was neutral (n = 45). Men were more enthusiastic about having a profession in T&CM than women ( $p < 0.01$ ), but the perspectives towards T&CM did not differ by gender

( $p = 0.07$ ). Those whose BMI was  $>25.0 \text{ kg/m}^2$  were found to be more enthusiastic about having a profession in T&CM ( $p = 0.01$ ); no difference was found among BMI categories in terms of the perspective towards T&CM ( $p = 0.09$ ). Those who smoke were found to be more enthusiastic about having a profession in T&CM ( $p = 0.03$ ); no difference was found between the smokers and non-smokers in terms of the perspective towards T&CM ( $p = 0.31$ ). No difference was found on the desire to have a profession in T&CM and the perspective towards T&CM depending on the existence of chronic disease ( $p = 0.97$ ,  $p = 0.18$ , respectively). Those whose family applied to T&CM were more enthusiastic about having a profession in T&CM, and their perspective towards T&CM was found to be more positive ( $p = 0.04$ ,  $p < 0.001$  respectively). No difference was found among the participants on the desire to have a profession in T&CM depending on the assumption that such religious approaches as amulet, prayer and magic are T&CM



**Figure 1:** The perspective towards T&CM according to the news in the media.

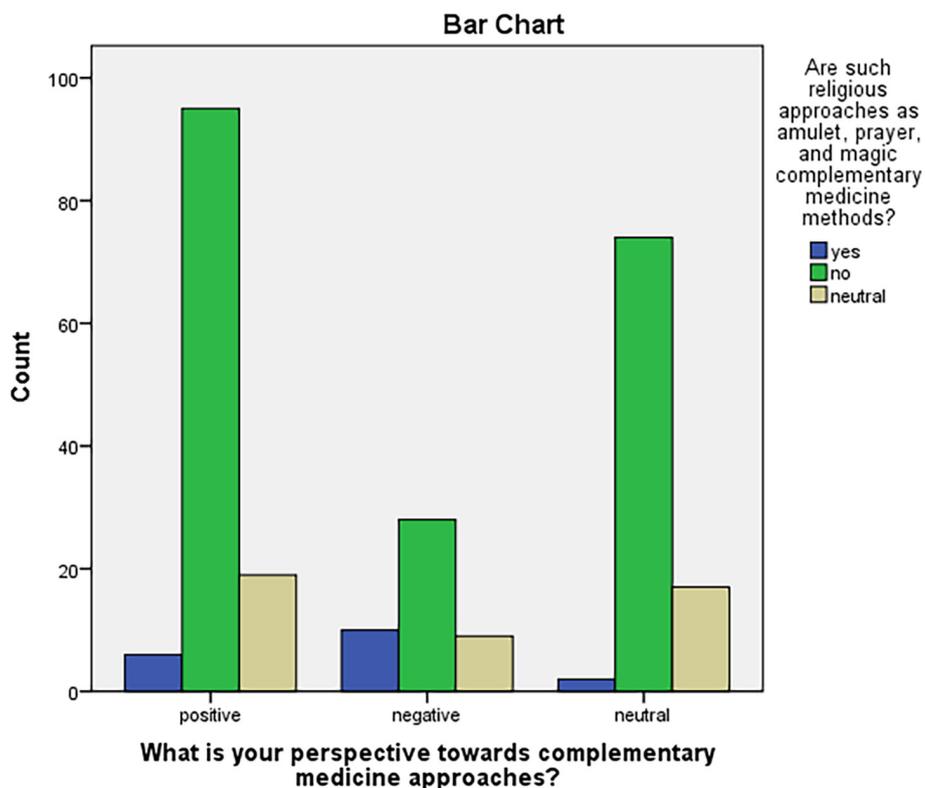
methods ( $p = 0.16$ ), but those who did not consider these religious approaches as T&CM methods had more positive perspective towards T&CM ( $p < 0.01$ ) (Figure 2).

## DISCUSSION

In the literature review, it was found that the studies in which T&CM knowledge and applicability are analysed were mainly made on the participant groups consisting of medical students, medical doctors and patients, and those studies increase in positive correlation with the popularity of T&CM (5–9). However, the number of the studies made on other occupational groups does not increase at the same speed. The reason for this may still be the reservations on integration of T&CM with social life. This study is one of a few studies that are made on the medical faculty personnel. Making similar studies may be of value in terms of knowledge and intensification of T&CM in the future. Application of T&CM

in the right place and by the right people may eliminate the hope mongering on T&CM and patient victimisation (4), it may help improving the medical condition and treatment of diseases.

When the general situation of T&CM was reviewed based on various studies, it was found that 119 of the member states of World Health Organization (WHO) have T&CM policy, 80% of these countries know acupuncture treatment utilisation (10). It was stated that 37% of the medical students, 50% of the nurses, and 27% of the doctors are interested in T&CM (11–12). In Turkey, the rate of utilisation of an alternative medicine method in the individuals aged 18 and older was found to be 70% (13). Metcalfe et al. stated in their study that 12.4% of the Canadians, especially those who have asthma and migraine utilised T&CM (14). According to the data of this study, almost half of the participants have positive perspective towards T&CM, and almost one third of them plan to build a career in this



**Figure 2:** The perspective towards T&CM depending on considering the religious approaches as methods.

profession when they get a chance. But this opportunity can be provided only if authorisation for this profession is granted also to those who are not a physician, and this is only possible by popularising T&CM and excess demand for it. According to the data of this study, the thought that classical medicine and T&CM may complement each other is frequently encountered. However, the lack of knowledge on who can practice T&CM stands out. Unfortunately, there are a few people who are aware of the obligation to be a certified physician. One of the reasons that they want to build a career in T&CM may be the lack of knowledge. Such basic knowledge can be obtained only through T&CM training.

In many studies and media, especially internet was found to be the most utilised source about T&CM (8, 11, 15). Similarly, media was found to be the most utilised source of information in this study. Besides, it is observed that positive news on T&CM exposed to the media affect the perspective of the participants towards T&CM positively.

Sönmez et al. found that medical students use phytotherapy and cupping applications most among T&CM methods (9). Altan et al. found in their study that massage and herbal medicine are the most known in T&CM methods (8). Cupping application comes to the forefront as the most known method among the participants of this study. The reason for this may be the experiences of such world-famous icons as Victoria Beckham, Jennifer Aniston via media (16). In many studies, chiropractic was found to be the least known in T&CM method. In this study, awareness of chiropractic in the last rank and this result is consistent with the literature (6, 8–9, 11, 15). This result can be attributed to its popularity in the media.

Erci found the attitude of men towards T&CM significantly negative compared to women (17). Also, Featherstone et al. found that attitudes of women are more positive compared to men (18). In this study, the

perspective towards T&CM does not differ by gender, but men are more enthusiastic about having a profession in T&CM. While the fact that it is very hard to analyse this difference between genders is a limitation to this study, occupational concern and personal satisfaction are probable causes that comes to mind first.

Those who think that such religious approaches as amulet, prayer, and magic are not T&CM have more positive perspective towards T&CM. As the people are made aware of the fact that such approaches are not T&CM, they are not included in evidence-based medicine, they are only applied by charlatans, and religious feelings are exploited through these methods, utilisation of T&CM may increase.

Medical faculty personnel are under a lot of pressure due to heavy workload, the sadness, stress and contagious disease risks caused by frequent contact with patients (19). About one third of the participants believe that T&CM may help them in their business life. Considering that such applications as phytotherapy and musicotherapy can be used for students in order to boost academic success (20–21), it can be hypothesised that business success can be boosted by utilising ozone therapy for muscle pains and apitherapy for lack of energy (22–23).

T&CM may help people with chronic diseases in many ways, and such people are known to apply to T&CM (24). This is because people with chronic disease may encounter such problems as complex treatments in self-management of their disease, failure to attain self-sufficiency and failure to provide medicine (25). Herbal products are the main applications among T&CM that are most-frequently preferred by the people with chronic disease (26). Herbal products are also frequently preferred in Turkey (27). In the literature, it is stated that T&CM methods are commonly used in order to relieve the symptoms especially in the people with cancer, diabetes, and cardiovascular diseases (28, 29). However, no knowledge and

attitude difference were found between the existence of a chronic disease and T&CM.

But overweight and obesity might not be perceived as chronic disease due to the probable lack of health literacy in the participant group. Such that, the overweight people are more enthusiastic about having a profession in T&CM according to the findings of this study. This fact can be an expression of the question, “can T&CM become a new weapon against obesity?” in the mind. As is known, body weight has become a factor that may drive people into depression today and those who want to lose or gain weight look for various methods (30–31). At this point, more studies to analyse the relationship between T&CM and obesity are needed. There is a multi-directional fight against smoking, but the fact that low success rates of conventional treatments in helping people to give up smoking for a long time caused the smokers to embark on a quest for various treatments (32). Therefore, such people can be expected to be more interested in T&CM. In the study, it was found that like the overweight people, the smokers are more enthusiastic about having a profession in T&CM. This case proves the fact that T&CM comes to mind more in fighting against tough situations.

## CONCLUSION

There is a substantial interest of medical faculty personnel on T&CM, but it is evident that they lack in obtaining the right information. Media, family and other stakeholders might be informed on T&CM insufficiently. T&CM trainings that are intended for medical faculty personnel may help the personnel or their relatives to provide the patients that are in despair in treatment process of some diseases with evidence-based information on the matter and give them support in their treatment by serving as a model; apart from that, it may lead to important outcomes such as decreasing the abuse of T&CM applications.

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