Attitudes and Approaches of Nutrition and Dietetics Department Students Toward Complementary and Alternative Medical Treatment Methods: A Cross-Sectional Study

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ABSTRACT

Objective: To evaluate the attitudes and approaches of nutrition and dietetics department students about complementary and alternative medical treatment (CAM) methods.

Material and Methods: This study was carried out on 194 volunteer students studying in the Department of Nutrition and Dietetics at the Faculty of Health Sciences of Ondokuz Mayıs University. The data were analyzed using the SPSS 22.0 statistical software package and the categorical data was given as percentage.

Results: Of the 194 students participating in the study 83% were women. The percentage of students who knew about CAM methods were 67.5%. It was determined that sources recommending CAM were mainly nurse-midwife (37.6%), neighbors, and relatives (28.4%), and the most common reasons for using CAM were for general health (46.9%). Among methods, most commonly used were exercise (72.7%), praying (68.6%), plants/herbal medicine use (55.7%), daydreaming (48.5%), vitamin/diet supplement (42.8%) and music therapy (33.5%). The percentage of students who preferred CAM over traditional treatment was 27.3%.

Conclusion: The majority of students have knowledge about CAM methods, their level of knowledge is not very high, they mostly do not learn this information in undergraduate education. Often, students use these methods to improve their overall health. In addition, it is thought-provoking that students tend to CAM rather than modern medicine despite receiving health education. Considering that some CAM methods can affect nutrition and health, it is thought that it will be important to raise awareness of students studying in this field.

Keywords: Alternative Complementary Medicine, Education, Knowledge Level, Nutrition and Dietetics.

Beslenme ve Diyetetik Bölümü Öğrencilerinin Tamamlayıcı ve Alternatif Tıbbi Tedavi Yöntemlerine Yönelik Tutum ve Yaklaşımları: Kesitsel Bir Çalışma

ÖZ

Amaç: Beslenme ve Diyetetik bölümü öğrencilerinin tamamlayıcı ve alternatif tıbbi tedavi (TAT) yöntemlerine ilişkin tutum ve yaklaşımlarını değerlendirmektir.

Gereç Yöntem: Bu çalışma Ondokuz Mayıs Üniversitesi Sağlık Bilimleri Fakültesi Beslenme ve Diyetetik Bölümü'nde öğrenim gören 194 gönüllü öğrenci üzerinde gerçekleştirilmiştir. Veriler SPSS 22.0 istatistiksel yazılım paketi kullanılarak analiz edilmiş ve kategorik veriler yüzde olarak verilmiştir.

Bulgular: Araştırmaya katılan 194 öğrenciden %83'ü kadındı. TAT yöntemlerini bilen öğrencilerin yüzdesi 67.5'tir. TAT'ı öneren kaynaklar arasında; hemşire ebe (%37.6), komşular ve akrabalar (%28.4) olduğu ve TAT kullanımının en yaygın nedeninin genel sağlık (%46.9) üzerine etkisi olduğu belirlenmiştir. En sık kullanılan yöntemler arasında egzersiz (%72.7), dua (%68.6), bitkiler/bitkisel ilaç kullanımı (%55.7), hayal kurma (%48.5), vitamin/diyet takviyesi (%42.8) ve müzik terapisi (%33.5) vardı. Geleneksel tedaviye göre TAT'ı tercih eden öğrencilerin yüzdesi 27.3 idi.

Sonuç: Öğrencilerin çoğunluğu TAT yöntemleri hakkında bilgi sahibidir, bilgi düzeyleri çok yüksek değildir ve çoğunlukla bu bilgileri lisans eğitiminde öğrenmemişlerdir. Genellikle, öğrenciler genel sağlıklarını iyileştirmek için bu yöntemleri kullanmaktadır. Buna ek olarak, öğrencilerin sağlık eğitimi almasına rağmen modern tıptan ziyade TAT''ye eğilimli oldukları düşünülmektedir. Bazı TAT yöntemlerinin beslenme ve sağlığı etkileyebileceği göz önüne alındığında, bu alanda öğrenim gören öğrencilerin farkındalığının artırılmasının önemli olacağı düşünülmektedir.

Anahtar kelimeler: Alternatif Tamamlayıcı Tıp, Eğitim, Bilgi Düzeyi, Beslenme ve Diyetetik.

INTRODUCTION

The complementary and alternative medicine (CAM) is defined as a medical category that includes various treatment approaches outside the field of traditional medicine. If a non-mainstream application is used with traditional medicine, it is considered complementary, and if used instead of traditional medicine, it is considered an alternative (NCCIH, 2018). The CAM is divided into 5 main categories as main alternative medical systems, mind/body interventions, body-based manipulation therapies, biological-based interventions (natural products), and energy/metaphysical therapies (Roush, 2016; Tindle et al., 2005). Although health outcomes such as life expectancy and quality have greatly improved with the help of traditional medicine today, expectations such as the prevalence of chronic or irreversible diseases or efforts to protect health open the way for people to support their health services with CAM. Individuals can choose the CAM for many reasons such as treating their illnesses (Arthur et al., 2013), reducing the negative effects of traditional medicine (Ernst, 2017), living a healthy life (Birdee et al., 2013; Cooke et al., 2012), or exceeding the materials of traditional medicine (Pagán & Pauly, 2005). Another important reason is the perception that CAM applications do not cause any harm to health (Alphonsus Udo, 2014). Although the frequency of CAM usage varies according to socioeconomic status, geography, and beliefs, it is estimated that it varies between 9.8-76% in the world (Harris et al., 2012; Posadzki et al., 2013). It has been reported that CAM applications have become very popular in our country and 60% of healthy individuals use these methods (Çetin, 2007).

In addition to the benefits of CAM applications, the fact that they can have many harmful effects requires healthcare professionals to have sufficient knowledge on this subject due to the increase in the number of people using these applications. Various studies have been conducted investigating existing false perceptions about the CAM and possible harmful effects (Abuelgasim et al., 2018; Asfaw Erku & Basazn Mekuria, 2016; Bahall, 2017; Bahall & Edwards, 2015; Okoronkwo et al., 2014; Teo et al., 2016). For example, cancer patients use more than one type of CAM without considering their side effects, mostly prefer herbal products, but these patients do not inform their doctors about this situation (Bahall, 2017). Similarly, the prevalence of CAM use among hypertensive patients also increases the risk of disabling the management of hypertension and adverse events (Asfaw Erku & Basazn Mekuria, 2016). Teo et al. (2016) reported that an average of 140 negative events related to the CAM developed per year, and 9% of them were related to hepatoxicity. Due to the unconscious use and misperceptions among patients, various studies have been conducted on the attitudes and knowledge of students and health professionals working in different health fields

towards these practices. It has been reported that the attitudes of nursing students towards the CAM applications are moderate or positive (Şahin et al., 2019; Aktaş, 2017) and those nursing students who take courses in this field gain knowledge, skills, and positive attitudes (Yıldırım & Akman, 2019). It has been determined that medical students have deficiencies in their knowledge level about then CAM applications and they want the course to be in their curricula integrated with modern medicine (Albadr et al., 2018; Işık Sönmez et al., 2018; Sadeghi et al., 2016; Samara et al., 2019). Complementary alternative medicine includes nutritional supplements such as probiotics, antioxidants, and fish oil, or the use of many herbs. In addition, the use of CAM applications is common among individuals with hypercholesterolemia, hypertension, diabetes, or obesity (Mbizo et al., 2018). Nutritionists are a profession group that is in direct contact with these individuals, in the protection of the health of both healthy individuals and at risk or sick individuals and in the treatment of their diseases. The widespread use of CAM applications requires dieticians to have appropriate attitudes and sufficient knowledge on the subject. However, there are no studies in the literature regarding the attitudes and knowledge of students or dietitians who are studying nutrition and dietetics against CAM applications. For this reason, it is planned to investigate the knowledge status of nutrition and dietetics departments students toward the CAM.

MATERIALS AND METHODS

Study type

This cross-sectional study was conducted on Nutrition and Dietetics department students studying at Ondokuz Mayıs University Faculty of Health Sciences in November 2017 during 2017-2018 academic year.

Sample size

The sample size was calculated by G-Power analysis and determined as at least 111 students with 0.3 effect size and 95% power. One hundred and ninety-four students who volunteered for the study and agreed to fill out the questionnaire participated in the study. The aim of the study was explained to the students participating in the study and informed consent was obtained.

Data collect

In the study, a questionnaire form with 17 questions created by the researchers was used as a data collection tool as a result of the literature review. The questionnaire was asked about the gender of the participant, the term at the university, the place of residence, the monthly income of the family, the status of smoking, health status, and the use of CAM. The questionnaire was filled in by the students and it took approximately 8-10 minutes to complete the form.

Statistical analysis

Statistical analysis of the data was done with the 22.0 version of the Statistical Package for Social Sciences (SPSS) program. Frequency analysis and percentage were used in descriptive statistics. Chi-square test was used to evaluate categorical data. $p < 0.05$ was considered statistically significant.

Ethic approval

Ethical approval for the research was obtained from Ondokuz Mayis University Ethics Committee (decision number B.30.2.ODM.0.20.08/289), all participants signed informed consent form and all procedures performed in studies involving human participants were in accordance with the Helsinki Declaration.

RESULTS

Of the 194 Nutrition and Dietetics department students who participated in the study, 83.0% (n=161) were female and 17.0% (n=33) were male. Of students 39.7% were studying in 1st grade, 28.3% in 2nd grade, 31.9% in 3rd grade. 26.3% of the students were living in the metropolitan area, 24.2% in the province, 44.3% in the district, and 5.2% in the village. The monthly income of 29.4% of students is 0-2000 TL, 46.4% of 2001-4000 TL, 17.0% of 4001-6000 TL, and 7.2% of 6000 TL and above. The percentage of students who do not smoke was 89.2. While 49.0% of the students define their health status as good, 48.4% define it as moderate and 2.6% bad. 89.9% of the students have no health problems. 67.5% of the students have knowledge about the CAM applications. The distribution of the descriptive information of the students is given in Table 1.

Table 1. Distribution of participants' descriptive information

	n	%
Gender		
Female	161	83.0
Male	33	17.0
Grade		
1	77	39.7
2	55	28.4
3	62	31.9
Living place		
Metropolitan	51	26.3
Province	47	24.2
District	86	44.3
Village	10	5.2
Montly income of family		
0-2000 tl	57	29.4
2001-4000 tl	90	46.4
4001-6000 tl	33	17.0
>6000 tl	14	7.2
Smoking status		
Yes	21	10.8
No	173	89.2
Health definition status		
Good	95	49.0
Moderate	94	48.4
Bad	5	2.6
Health problem status		
Yes	39	20.1
No	155	89.9
Knowledge of complementary alternative medicine methods		
Yes	131	67.5
No	63	32.5

The most commonly used the CAM methods among students were exercise (72.7%), prayer (68.6%), use of plants/herbal medicine (55.7%), imagination (48.5%), use of vitamin/dietary supplement (42.8%), music therapy (33.5%), massage (26.3%), naturopathy (20.6%). These applications were followed by imaginative imagery (18.6%), hydrotherapy (14.9%), homeopathy (11.3%), meditation/yoga/gigong (9.3%),

aromatherapy (5.2%), reflexology (4.1%), healing/therapeutic touch (3.6%), hypnotherapy, joining support groups, ayurveda (2.6%), reiki (2.1%), acupuncture and acupressure (1.5%). Complementary alternative medicine methods used by students are given in Table 2.

Table 2. Percentage of complementary alternative medicine methods applied by students *

	n	%
Biologically based treatment		
Plants/herbal medicine use	108	55.7
Use of vitamin/dietary supplementation	83	42.8
Body and mind treatments		
Music therapy	65	33.5
Hypnotherapy	5	2.6
Meditation/yoga/gigong	18	9.3
Dreaming	94	48.5
Praying	133	68.6
Joining support groups	5	2.6
Body therapies		
Massage	51	26.3
Exercise	141	72.7
Hydrotherapy	29	14.9
Reflexology	8	4.1
Acupuncture	3	1.5
Acupressure	1	1.5
Energy treatments		
Reiki	4	2.1
Healing/therapeutic touch	7	3.6
Creative imagination	36	18.6
Alternative and medical systems		
Aromatherapy	10	5.2
Ayurveda	5	2.6
Homeopathy	22	11.3
Naturopathic	40	20.6

* Multiple options are marked.

When the sources suggesting complementary alternative medicine methods were questioned, it was determined that 37.6% got the information from the nurses and midwives 28.3% from neighbors and relatives, 16.5% from doctors, 8.8% from alternative medicine practitioners, 4.6% from dieticians and 4.1% received suggestions from mass media. When the reason for using complementary alternative medicine methods was questioned, 46.9% used it for general health, 14.9% used it for worrying about the side effects of traditional treatment, 10.8% used to treat a non-medical condition, and a medical condition and to supplement to the traditional treatment. Students' opinions and practices regarding the CAM are given in Table 3.

Table 3. Information, opinions and applications of students on complementary alternative medicine methods

The source suggesting complementary alternative medicine methods		
	n	**%**
Nurse-midwives	73	37.6
Neighbors and relatives	55	28.4
Doctor	32	16.5
Alternative medicine practitioners	17	8.8
Nutritionist	9	4.6
Mass media	8	4.1

Table 3 (continue). Information, opinions and applications of students on complementary alternative medicine methods

Reason for using complementary alternative medicine methods		
	n	**%**
Since I am concerned about the side effects of its traditional treatment	29	14.9
To treat a non-medical condition	21	10.8
In addition to traditional treatment to treat a medical condition	21	10.8
I do not use it	16	8.2
I do not like using drugs	6	3.2
Since I think alternative and complementary medicine treatment will be more effective than traditional methods	4	2.1
As alternative and complementary medicine treatment is available	4	2.1
Since traditional treatment is not effective	2	1.0
For general health	91	46.9

When the relationship between the complementary alternative medicine uses and the descriptive characteristics of the students was evaluated, a statistically significant relationship was found between the class they studied and the use of complementary alternative medicine. Students in the third year use more complementary alternative medicine than students in the first and second years.

No statistically significant relationship was found between the use of complementary alternative medicine and gender, place of residence, monthly income, smoking, and health problem status. Assessment of the relationship between students' use of complementary alternative medicine and their descriptive characteristics is given in Table 4.

Table 4. Evaluation of the relationship between students' complementary alternative medicine uses and descriptive features

	Complementary alternative medicine use		p value
	Yes (%)	**No (%)**	
Gender			
Female	67.7	32.3	0.908
Male	66.7	33.3	
Grade			
1	59.7	40.3	0.025
2	63.6	36.4	
3	80.6	19.4	
Living place			
Metropolitan	70.6	29.4	0.114
Province	66.0	34.0	
District	62.8	37.2	
Village	100.0	0.0	
Montly income of family			
0-2000 tl	63.2	36.8	0.718
2001-4000 tl	71.1	28.9	
4001-6000 tl	63.6	36.4	
>6000 tl	71.4	28.6	
Smoking status			
Yes	81.0	19.0	0.164
No	65.9	34.1	
Health problem status			
Yes	74.4	25.6	0.308
No	65.8	34.2	

More than a quarter (27.3%) of the students reported that they would prefer the CAM methods to traditional treatment when their preference for CAM.

treatments over traditional treatment was questioned. While 28.4% of students prefer traditional treatment, 36.1% are not sure. 8.2% of students do not use any the CAM method. Students' preference for the CAM methods over traditional treatment is given in Figure 1.
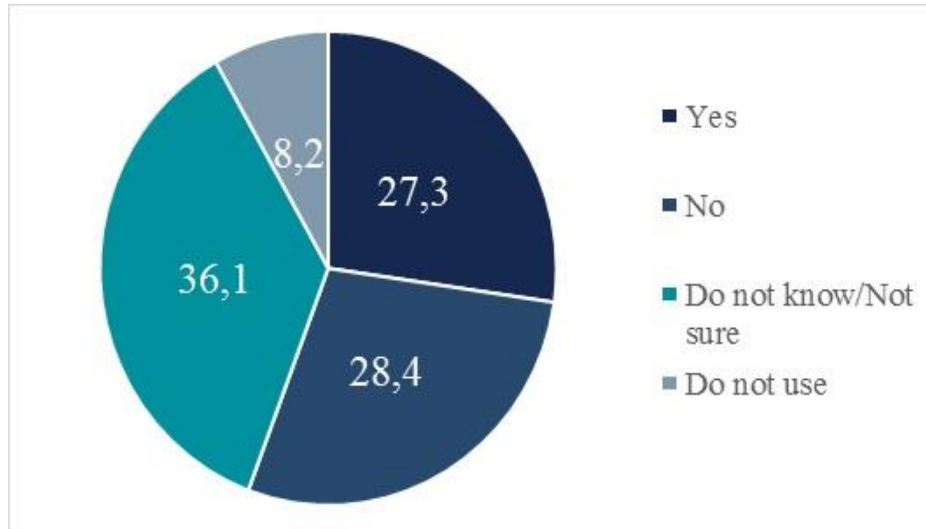
Figure 1. Students' preference for the CAM methods over traditional treatment

DISCUSSION

With the "Regulation on Traditional and Complementary Medicine Practices" published by the Ministry of Health in October 2014, the recent practices are increasingly used in our society as they are closely related to our cultural history (Official Gazette, 2014). Although physicians and healthcare professionals have an important role in the CAM applications both in the world and in our country, there is not enough data in terms of these application methods, their frequency, and the approach of healthcare professionals. For this reason, this study was carried out to determine the knowledge levels and attitudes of the students who are trained in the field of nutrition and dietetics department about the CAM applications, and to determine the factors affecting their knowledge level and attitudes.

Approximately two-thirds (67.5%) of the students participating in the study have knowledge about the CAM applications, and among them, "exercise", "prayer" and "herbal medication" were used the most while "acupressure and acupuncture", "reiki" and "ayurverda" was found to be used the least. When we look at the literature, the status of individuals to know and prefer these practices differs. In the study of Kavurmaci et al. (2018), the methods that nursing, midwifery, and dietetic students know the most were herbal treatments (30%) and acupunture (15.8%). In the study of Doganay et al. (2018), the methods that health sciences and medical students know the most were religious practice, massage, cupping, and hydrotherapy. In a study by Baltacı & Koç (2018) the methods that nursing and midwifery intern students know were Respiratory exercises (94.9%) and exercise (94.2%). In the study of Işık Sönmez et al. (2018) On medical school students, the most known methods were "acupuncture", "cup application", "phytotherapy", "hypnosis" and "hirudotherapy", respectively while the least known were prolotherapy, homeopathy, karyopractic, osteopathy. It was determined that the students preferred "phytotherapy" and "mug application" the most and "osteopathy", "mesotherapy", "cardiopratic and larval applications" the least. In studies conducted by Altan et al. (2014) on the pre-clinical students of the medical school, "massage" and "herbal treatment" were among the most known methods of CAM while karyopractic, biofibek and ayurveda were reported as the least known methods. In the studies of Çöl Araz et al. (2012) the most known non-medical alternative treatment method was herbal methods (80.8%) and the most widely used method was massage (51.2%). In the study of Ergin et al. (2011) in medical school students, the most known method was found to be "diet". It is seen that our study results are similar to other studies in the literature of nursing and medical students of nutrition and dietetics students. In addition, it is thought that expanding the curriculum on the CAM applications can increase the awareness and knowledge level.

One of the important results of the study was that the students received advice about these practices by the nurse-midwife, neighbor-relative, doctor, and dietician respectively. It is a striking result of the study that students apply to these practices with the advice of neighbors and relatives rather than physicians. Complementary alternative medicine applications should be performed by the physician if possible due to their medical side effects or by the recommendation of a physician. In the literature, the CAM applications are mostly learned through books/journals (Çamurdan & Gül, 2013), family relatives/friends (Çöl Araz et al., 2012; Gözüm et al., 2007; Kavurmaci et al., 2018; Lafçı & Kaşıkçı, 2014; Lanski et al., 2003), television/newspaper (Ameade et al., 2016; Selim et al., 2014; Lafçı & Kaşıkçı; Uzun & Tan, 2004) and the internet (Işık Sönmez et al., 2018).

Approximately half of the students stated that they used the CAM applications for general health and 27.3% of them stated that they prefer the CAM to traditional treatment. Similarly, it has been stated that CAM applications are preferred to prevent and treat diseases in studies conducted in various countries 33, (Astin et al., 1998; Çöl Araz et al., 2012; Sirois, 2008).

As this research was conducted for Samsun Ondokuz Mayıs University Department of Nutrition and Dietetics, it may differ from the country. Conducting the study in cross-section prevents the data from being generalizable. Therefore, more extensive research is needed to determine students' attitudes towards this subject in a general way. However, as far as we know, it is among the first studies that question the knowledge and attitudes of Nutrition and Dietetics department students about the CAM applications.

CONCLUSION

The results of the study revealed that nutrition and dietetics students did not have a high level of knowledge about the CAM applications and did not learn this information mostly in undergraduate education. However, it was determined that the attitudes of the students' complementary health approach methods were positive and moderate. It is thought that nutrition and dietetics department students' knowledge about complementary health approach methods will strengthen these qualities as they are team members involved in holistic patient care as future health professionals. For this reason, the curriculum arrangements to be made in the undergraduate education of nutrition and dietetics students and the CAM training for the society will fill this gap.

Conflict of interest
There is no conflict of interest in the research.
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