

Investigation of knowledge and attitudes of nurses continuing postgraduate education regarding traditional and complementary medicine practices*

Geleneksel ve tamamlayıcı tıp uygulamalarına ilişkin lisansüstü eğitime devam eden hemşirelerin bilgi ve tutumlarının incelenmesi

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ABSTRACT

Introduction and Aim: Today, there is an increasing trend towards the use of Traditional and Complementary Medicine practices worldwide. Nurses are increasingly likely to encounter individuals who use these practices. The aim of this study is to examine the knowledge and attitudes of postgraduate nursing students on traditional and complementary medicine practices. **Material and Method:** This descriptive study was conducted with 122 postgraduate nursing students in a university in Ankara. Data were collected electronically using the Socio-Demographic Information Form and Structured Questionnaire and the Attitude towards Holistic Complementary and Alternative Medicine Scale. **Results and Conclusion:** In this study 98.4% of the postgraduate nursing students were women, the majority of them were masters students (61.5%), and their mean age was 30.11 ± 6.3 years. It was determined that 95.1% of them believed that Traditional and Complementary Medicine practices were useful, and almost half (42.6%) used them either for themselves or for a relative. While 67.2% of the student thought that they were not competence to provide information about these practices, 91.8% of them wanted to take a course. It was also determined that the students had a positive attitude towards the practices of traditional and complementary medicine. In this study, it was determined that postgraduate nursing students had a positive attitude despite their lack of knowledge and practice about traditional and complementary practices. Although postgraduate nursing students are interested in Traditional and Complementary Medicine practices, it is recommended to plan courses for postgraduate education programs due to the lack of knowledge.

ÖZ

Giriş ve Amaç: Günümüzde tüm dünyada geleneksel ve tamamlayıcı tıp uygulamalarının kullanımına yönelik artan bir eğilim vardır. Hemşirelerin bu uygulamaları kullanan bireylerle karşılaşma olasılıkları giderek artmaktadır. Bu çalışmanın amacı, lisansüstü hemşirelik öğrencilerinin geleneksel ve tamamlayıcı tıp uygulamaları hakkındaki bilgi ve tutumlarını incelenmesidir. **Gereç ve Yöntem:** Tanımlayıcı nitelikteki bu çalışma, Ankara'da bir üniversitede öğrenim gören 122 lisansüstü hemşirelik öğrencisi ile gerçekleştirilmiştir. Veriler Sosyo-Demografik Bilgi Formu ve Yapılandırılmış Anket ile Bütüncül Tamamlayıcı ve Alternatif Tıbbi Yönelik Tutum Ölçeği kullanılarak elektronik ortamda toplanmıştır. **Bulgular ve Sonuç:** Bu çalışmada lisansüstü eğitim alan hemşirelik öğrencilerinin tamamına yakını kadındır (%98.4), büyük çoğunluğu yüksek lisans öğrencisidir (61.5%) ve yaş ortalamaları 30.11 ± 6.3'tür. Öğrencilerin tamamına yakınının (%95.1) Geleneksel ve Tamamlayıcı Tıp uygulamalarının yararlı olduğuna inandığı, yarısı yakınının (%42.6) kendisi veya bir yakını için kullandığı belirlendi. Öğrencilerin %67,2'si bu uygulamalar hakkında bilgi verebilecek donanıma sahip olmadığını düşünürken, %91,8'i eğitim almak istemiştir. Bu çalışmada, lisansüstü hemşirelik öğrencilerinin geleneksel ve tamamlayıcı uygulamalar hakkında bilgi ve uygulama eksikliklerine rağmen olumlu bir tutum sergiledikleri belirlenmiştir. Lisansüstü hemşirelik öğrencileri Geleneksel ve Tamamlayıcı Tıp uygulamalarına ilgi duymakla birlikte, bilgi eksikliği nedeniyle lisansüstü eğitim programlarına yönelik derslerin planlanması önerilmektedir.

Key Words:
Postgraduate Nursing Education;
Therapy, Complementary;
Knowledge; Attitude

Anahtar Kelimeler:
Lisansüstü Hemşirelik Eğitimi;
Tedavi, Tamamlayıcı; Bilgi; Tutum

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INTRODUCTION

Traditional and Complementary Medicine (T&CM) practices, which play an important role in providing the basic health needs of the population, are acknowledged by the World Health Organization (WHO) as an important part of the global health system (Biçer & Yalçın-Balçık, 2019). It is reported that individuals prefer T&CM practices due to historical and cultural effects, lifestyles, the idea that the natural is harmless, the desire to be healthy, low cost, easy access by the society, prolongation of life span, chronic diseases, increase in malignant and difficult-to-treat diseases, decreasing confidence in existing health systems, reduced hospital stays, cost savings, existing side effects of drugs, and the fact that T&CM practices provide less prescribed drug use (World Health Organization, 2013; Öztürk et al., 2020).

It is observed that T&CM practices are increasingly used in the treatment of diseases and/or eliminating symptoms, protecting health, or being culturally preferred worldwide (Güngörmüş & Kıyak, 2012; Çevik, 2013; Özçelik & Toprak, 2015). This increasing trend makes it inevitable for nurses who provide health services at every level of the society to take part in practices, as well as increasing the possibility of encountering patients who use or want to use T&CM practices (Aktaş, 2017). The nursing care practice and the basic philosophy of T&CM practices are to approach the individual in a holistic manner, to have a supportive role in conventional treatments, to promote health and to focus on the active role of the patient.

Integrating T&CM practices into nursing care not only enables nurses to provide comprehensive and holistic care, but also improves the nurse-patient relationship and increases care satisfaction. It is important for nurses to guide individuals correctly and to prevent them from being harmed due to misuse. At the same time, nurses should have sufficient knowledge to be helpful concerning the safe and effective use of practices, which one can be preferred, their effects, usage patterns and risks. For this purpose, nursing researches should be carried out with well-structured study methods, and evidence-based practices should be taught practically to undergraduate and postgraduate nursing students. Accordingly, it is necessary to examine the knowledge and attitudes of nurses to determine their approaches to T&CM practices (Turan et al., 2010; Araz et al., 2012; Hajbaghery, 2018; Müslümanoğlu & Tayfun, 2019; Taşcı, 2018).

There are studies examining the knowledge and attitudes of nursing students and nurses regarding the use of T&CM practices in the literature (van Vliet et al., 2015;

Poreddi et al., 2016; Aktaş, 2017; Cırık et al., 2017; Gyasi et al., 2017; Koç & Baltacı, 2018; Şahin et al., 2019; Yayan & Suna-Dağ, 2019; Zeighami & Soltani-Nejad, 2020).

However, no detailed research has been found on postgraduate nursing students in this subject. The aim of this research is to examine the knowledge and attitudes of postgraduate nursing students on T&CM practices, since postgraduate nursing students include T&CM methods in their research or thesis and are an important group in terms of being trained to be educators in nursing schools in the future. It is evaluated that the results obtained will guide the determination of the areas of interest of the postgraduate nursing students and the preparation of course plans.

Study questions

1. Which of the T&CM practices determined by the National Center for Complementary and Integrative Health (NCCIH) do the postgraduate nursing students have knowledge, desire to use in their studies and to receive training?
2. Which of the T&CM practices included in the Regulation on Traditional and Complementary Medicine Practices in Turkey, do the postgraduate nursing students have knowledge, desire to receive course and desire use in their studies?
3. How are the attitudes of postgraduate nursing students towards T&CM tend towards?
4. What are the socio-demographic characteristics of postgraduate nursing students that affect their knowledge and attitudes towards T&CM practices?

MATERYAL AND METHOD

The type of this study is descriptive cross-sectional research. This research was conducted with postgraduate nursing students in an institute of health sciences of a university in Ankara city. The population of the research consisted of 174 nurses who were registered in the spring semester of the 2019-2020 academic year at the institute of health sciences and continuing their postgraduate education. There was no sample selection it was aimed to reach all postgraduate nursing students who agreed to participate in the study. The research was completed with 122 (70.1%) students who completed the data collection forms.

Data Collection Tools

In this study data were collected with the Socio-Demographic Information Form, Structured Questionnaire and the Attitude towards Holistic Complementary and Alternative Medicine Scale. The

socio-demographic data questionnaire developed by the researchers consists of six questions, and the structured form consists of 15 questions such as the knowledge level of postgraduate nursing student about traditional and complementary medicine practices, whether they use it, their desire to receive training and use it in their further studies. In the structured question form, the classification made by NCCIH as natural products, mind and body practices and other complementary health approaches (National Center for Complementary and Integrative Health Complementary, 2016) and fifteen T&CM practices including acupuncture, apitherapy, phytotherapy, hypnosis, leech application, homeopathy, chiropractic, cupping (dry cup and wet cup [bloodletting] application), larva application, mesotherapy, prolotherapy, osteopathy, ozone application, reflexology, music therapy which became official in 2014 pursuant to the Turkish Ministry of Health's Regulation on Traditional and Complementary Medicine Practices (T.R. Official newspaper, 2014).

Attitudes Towards Holistic Complementary and Alternative Medicine Scale was developed in 2003 by Hyland et al. The validity and reliability for our country was assured by Erci in 2007. The Cronbach Alpha value, which is the reliability coefficient of the scale, is 0.72. There are two sub-scales namely Complementary and Alternative Medicine and the relevant 2nd, 4th, 6th, 8th, 9th, 11th questions and Holistic Health and the relevant 1st, 3rd, 5th, 7th, 10th questions. The scale is a Likert-type scale consisting of 11 questions and is scored by giving six options, which include strongly agree (6), strongly disagree (1). A minimum of 11 and a maximum of 66 points can be obtained from the scale. As the score of the scale decreases, positive attitudes towards complementary and alternative medicine increase (Erci, 2007). The Cronbach Alpha value of Attitudes Towards Holistic Complementary and Alternative Medicine Scale in this study was 0.70.

Data collection

Postgraduate nursing students registered in the spring semester of the 2019-2020 academic year at the Institute of health sciences were asked to fill in the electronic questionnaire form by reaching the social media accounts of the nursing departments. Students who did not fill out the questionnaire at the first invitation were contacted individually, informed about the research, and asked to answer the questionnaire. This practice continued until it reached 70% of the population.

Statistical Analysis

The statistical analysis of this research was evaluated with the IBM SPSS Statistics for Windows 21 package

program. The conformity of the data to the normal distribution was analyzed with the "Kolmogorov-Smirnov" and "Shapiro-Wilk" tests, and the "Mann-Whitney U" test was applied to the variables consisting of two groups that did not show normal distribution, and the Kruskal Wallis test to the variables consisting of three or more groups. Statistically, $p < 0.05$ values were accepted as significant.

RESULTS

This research was carried out with 122 postgraduate nursing students. It was determined that almost all of the students were female (98.4%), 59% were single and the average age was 30.11 ± 6.3 . It has been determined that 52.5% of the students graduated five or more years ago from an undergraduate program, 61.5% of them continued their master's and 38.5% of them continued their doctoral program. It was also determined that the majority of the students (71.3%) worked as nurses. Nearly half of them (42.6%) used the T&CM practice either for themselves or for one of their relatives, almost all (95.1%) believed that T&CM practices were beneficial, 32.8% of them report that they think they were able to inform patient about at least one of the T&CM practices.

In addition, the vast majority (86.9%) of the postgraduate nursing students did not conduct any research on T&CM practices, but 86.9% reported that they were considering using these practices in their future studies. While most of the students (91.8%) stated that they wanted to receive training on T&CM practices, they mostly (46.7%) stated that they wanted general information about T&CM practices to meet the information needs of the patients (See Table 1).

Figure 1. shows T&CM practices used by postgraduate nursing students for themselves or their relatives. Accordingly, they mostly used cupping ($n=18$), herbs ($n=16$), massage ($n=10$), and acupuncture ($n=9$).

Although it is not stated in the tables, when the reasons for using T&CM practices were examined, it was determined that they most frequently used it to relieve pain ($n=26$), then relax ($n=6$), reduce anxiety ($n=2$), lose weight and control weight ($n=2$).

When the views of the postgraduate nursing students on T&CM practices determined by NCCIH are examined in Table 2, it was found that they have the most knowledge about acupuncture (86.9%), then massage (77.9%) and yoga (66.4%), they mostly considered to implement breathing exercise (45.9%), aromatherapy (42.6%), therapeutic touch (32.8%), and they mostly wanted to receive training on massage (51.6%), acupuncture (50.8%), and then aromatherapy (49.2%).

Table 1: Socio-Demographic and Descriptive Characteristics of The Postgraduate Nursing Students (n=122)

Socio-demographic characteristics	n	%
Age (X±SD)	30.11±6.3	
Gender		
Woman	120	98.4
Man	2	1.6
Marital Status		
Single	72	59.0
Married	50	41.0
Graduation Year		
0-4 years	58	47.5
5 years and more	64	52.5
Educational Status		
Master's student	75	61.5
Doctoral student	47	38.5
What is your position in the institution you work?		
Nurse	87	71.3
Teaching assistant	21	17.2
Research assistant	12	9.8
Civil servant	2	1.6
Have you ever used traditional and complementary medicine practices for yourself or for one of your relatives?		
Yes	52	42.6
No	70	57.4
Do you think that traditional and complementary medicine practices are useful?		
Yes	116	95.1
No	6	4.9
Do you think that you are adequately equipped concerning at least one of the traditional and complementary medicine practices to be able to inform individuals/patients/students?		
Yes	40	32.8
No	82	67.2
Have you ever conducted a study concerning one of the traditional and complementary medicine practices?		
Yes	16	13.1
No	106	86.9
Would you consider using traditional and complementary medicine practices for your future studies?		
Yes	106	86.9
No	16	13.1
Would you want to receive training about traditional and complementary medicine practices?		
Yes	112	91.8
No	10	8.2
What is your reason/justification for wanting to receive training about traditional and complementary medicine practices?		
Traditional and complementary medicine practices training/symptom management of the patient	12	9.8
Traditional and complementary medicine practices related general information /meeting the patients' information needs	57	46.7
Traditional and complementary medicine practices training/symptom management of the patient/T&CM practices general information/meeting the patients' information needs	43	35.2

X: Median SD: Standard Deviation

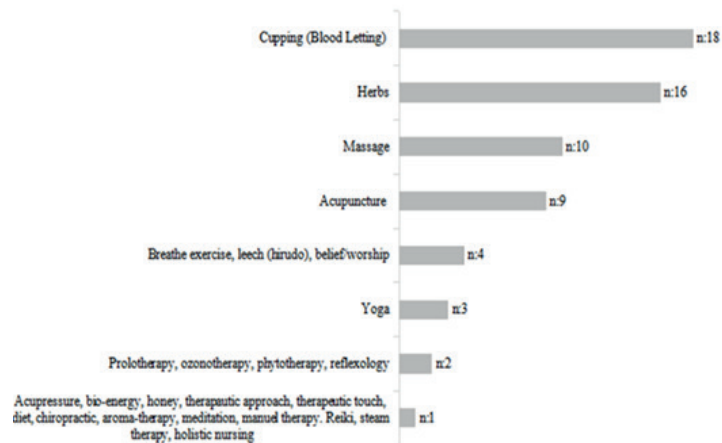


Figure 1. Traditional and Complementary Medicine Practices Used by Nurses Continuing Postgraduate Education for Themselves or for a Relative

Table 2. The Views of Postgraduate Nursing Students on T&CM Practices Determined by NCCIH (n=122)

	State of Knowledge		Considering implementation of T & CM practices during studies		Desire to receive training	
	n	%	n	%	n	%
Traditional and complementary medicine practices determined by NCCIH						
Biofeedback	18	14.8	10	8.2	28	23.0
NLP (Neuro Linguistic Programming)	20	16.4	13	10.7	31	25.4
Relaxation	52	42.6	38	31.1	43	35.2
Spirituality	50	41.0	23	18.9	26	21.3
Yoga	81	66.4	33	27.4	57	46.2
Tai-Chi Chuan	8	6.6	3	2.5	12	9.8
Holistic nursing	62	50.8	32	26.2	41	33.6
Belief/worship	69	56.6	23	18.9	15	12.3
Ayurvedic medicine	9	7.4	1	0.8	5	4.1
Traditional Chinese medicine	22	18.0	3	2.5	0	0
Naturopathy	4	3.3	1	0.8	9	7.4
Herbs	67	55.0	35	28.7	49	47.5
Special diet therapies	26	21.3	9	7.4	18	14.8
Arome-therapy	73	60.0	52	42.6	60	49.2
Chiropractor	0	0	0	0	0	0
Massage	95	77.9	56	45.9	63	51.6
Reiki	34	27.0	2	1.6	0	0
Hydro-therapy	42	34.4	17	13.9	23	18.9
Therapeutic touch	64	52.5	40	32.8	40	32.8
Acupuncture	106	86.9	36	29.5	62	50.8
Acupressure	31	25.4	14	11.5	19	15.6
Bio-energy	32	26.2	9	7.4	19	15.6
Breath exercise	75	61.5	56	45.9	58	47.5
Chakra therapy	38	31.1	12	9.8	27	22.1
Reiki	34	27.9	0	0	27	22.1
Shiatsu	3	2.5	2	1.6	7	5.7
Magnets	12	9.8	3	2.5	6	10.7
Variable or direct current domains	6	4.9	1	0.8	5	4.1

Table 3, includes the views of postgraduate nursing students on T&CM practices in the Regulation on Traditional and Complementary Medicine Practices in Turkey. It was determined that the students have knowledge regarding acupuncture (86.9%), leech practices (76.2%) and music therapy (74.6%), the practices they mostly consider to use in their studies are music therapy (60.7%), reflexology (34.4%) and acupuncture (29.5%), and it was determined that the courses they want to take most are music therapy (60.0%), acupuncture (50.8%) and afterwards reflexology (47.5%).

In this study, it was determined that the mean score of the Complementary and Alternative Medicine subscale is 18.47±5.08, the mean score of the Holistic Health subscale is 8.17±3.82, and the total mean score of Attitudes Towards Holistic Complementary and

Alternative Medicine Scale is 26.64±6.88 (See Table 4).

When the impact of socio-demographic characteristics of postgraduate nursing students on their Attitudes Towards Holistic Complementary and Alternative Medicine Scale score was examined (See Table 5), it was determined that married students (p=0.008) and those who have graduated five years or more from their undergraduate education (p=0.018), those who continue their doctoral program (p=0.015), who work as a lecturer (p=0.038) and those who do not plan to use T&CM practices in their future studies (p=0.014) have statistically got significantly higher scores (p<0.05).

DISCUSSION

Worldwide developments in the health area bring some changes in the roles and responsibilities of health professionals. With the frequent use of T&CM practices,

Table 3. The Views of Postgraduate Nursing Students on Traditional and Complementary Medicine Practices in Turkey (n=122)

Traditional and complementary medicine practices determined by Traditional and Complementary Medicine Practices Regulation in X	State of Knowledge		Considering implementation of T & CM practices during studies		Desire to receive training	
	n	%	n	%	n	%
Acupuncture	106	86.9	36	29.5	62	50.8
Apitherapy	8	6.6	1	0.8	8	6.6
Phytotherapy	47	38.5	19	15.6	25	20.5
Hypnosis	64	52.5	21	17.2	22	18.0
Leech implementation	93	76.2	20	16.4	22	18.0
Homeopathy	13	10.7	6	4.9	0	0.1
Chiropractic	9	7.4	4	3.3	8	6.6
Cupping (dry cup or wet cup (blodd letting) implementation)	82	67.2	23	18.9	25	20.5
Larval implementation	36	29.5	5	4.1	7	5.7
Mesotherapy	41	33.6	8	6.6	19	15.6
Prolotherapy	14	11.5	5	4.1	7	5.7
Osteotherapy	7	5.7	0	0	4	3.3
Ozone implementation	59	48.4	15	12.3	28	23.0
Reflexology	64	52.5	42	34.4	58	47.5
Music therapy	91	74.6	74	60.7	73	60.0

Table 4. Attitudes Towards Holistic Complementary and Alternative Medicine Scale and Subscale Mean Scores (n=122)

	Number of scale items	Min-max scores which can be achieved from the scale	X±SS	Min- Max
Complementary and alternative Medicine Subscale	6	6-36	18.47±5.08	6-35
Holistic Health Subscale	5	5-30	8.17±3.82	5-30
Attitudes Towards Holistic Complementary and Alternative Medicine Scale	11	11-66	26.64±6.88	11-56

Table 5. The Impact of Postgraduate Nursing Students Socio-Demographic and Descriptive Characteristics on The Attitudes Towards Holistic Complementary and Alternative Medicine Scale (n=122)

Socio-Demographic Characteristics	Holistic Complementary and Alternative Medicine Scale	Complementary and Alternative Medicine Subscale	Holistic Health Subscale
	Median (25%-75%)	Median (25%-75%)	Median (25%-75%)
Gender			
Woman	26.00(21.50-31.00)	18.00(15.00-22.00)	7.00(5.00-9.50)
Man	-	18.00(15.00-21.00)	8.00(5.00-11.00)
p ^a	0.912	0.850	0.975
Marital Status			
Single	25.00(21.00-30.50)	16.00(15.00-21.00)	7.00(5.00-9.50)
Married	28.00(25.00-31.00)	20.50(17.00-24.00)	7.50(5.00-10.00)
p ^a	0.008	0.001	0.961
Graduation Year			
0-4 years	24.50(20.00-30.00)	16.00(14.00-20.00)	7.00(5.00-10.00)
5 years and more	27.00(25.00-31.00)	20.00(16.50-23.00)	7.00(5.00-9.50)
p ^a	0.018	0.001	0.551
Educational Status			
Master's student	25.00(21.00-30.00)	17.00(15.00-21.00)	7.00(5.00-10.00)
Doctoral student	28.00(25.50-31.00)	21.00(16.00-23.50)	7.00(5.00-9.00)
p ^a	0.015	0.027	1.000
What is your position in the institution you work?			
Nurse	25.00(21.00-29.50)	17.00(15.00-21.00)	7.00(5.00-9.00)
Teaching assistant	29.00(27.00-33.00)	21.00(19.00-24.00)	9.00(7.00-11.00)
Research assistant	28.50(22.00-34.00)	19.50(15.00-24.00)	9.00(6.00-10.50)
Civil servant	26.00(22.00-30.00)	21.00(17.00-25.00)	-
p ^b	0.038	0.030	0.181
Have you ever used traditional and complementary medicine practices for yourself or for one of your relatives?			
Yes	26.50(24.00-30.00)	19.00(15.00-21.50)	7.00(5.00-9.00)
No	26.00(21.00-32.00)	17.00(15.00-22.00)	7.00(5.00-10.00)
p ^a	0.762	0.987	0.997
Do you think that traditional and complementary medicine practices are useful?			
Yes	26.00(21.50-30.00)	18.00(15.00-22.00)	7.00(5.00-9.00)
No	31.00(27.00-36.00)	24.00(17.00-25.00)	8.50(7.00-11.00)
p ^a	0.252	0.101	0.840
Do you think that you are adequately equipped concerning at least one of the traditional and complementary medicine practices to be able to inform individuals/patients/students?			
Yes	27.00(23.50-31.00)	19.00(15.00-22.00)	7.00(5.00-10.50)
No	26.00(21.00-30.00)	18.00(15.00-22.00)	7.00(5.00-9.00)
p ^a	0.524	0.999	0.926
Have you ever conducted a study concerning one of the traditional and complementary medicine practices?			
Yes	26.00(23.00-28.00)	18.00(16.00-20.50)	7.00(5.00-9.00)
No	26.50(21.00-31.00)	18.00(15.00-22.00)	7.00(5.00-10.00)
p ^a	0.735	0.843	0.508
Would you consider using traditional and complementary medicine practices for your future studies?			
Yes	26.00(21.00-30.00)	17.00(15.00-21.00)	7.00(5.00-10.00)
No	31.00(27.00-34.50)	22.50(20.00-25.50)	8.50(6.00-9.50)
p ^a	0.014	0.003	0.969
Would you want to receive training about traditional and complementary medicine practices?			
Yes	26.00(21.00-30.00)	17.00(15.00-22.00)	7.00(5.00-10.00)
No	30.50(25.00-31.00)	21.00(18.00-24.00)	7.00(5.00-9.00)
p ^a	0.359	0.345	0.958
What is your reason/justification for wanting to receive training about traditional and complementary medicine practices?			
Traditional and complementary medicine practices training/symptom management of the patient	25.50(21.50-30.50)	17.00(15.00-21.00)	8.00(5.50-9.50)
..Traditional and complementary medicine practices related general information /meeting the patients' information needs	26.00(24.00-31.00)	19.00(15.00-22.00)	8.00(5.00-10.00)
Traditional and complementary medicine practices training/symptom management of the patient/T&CM practices general information/meeting the patients' information needs	26.00(20.50-30.00)	17.00(15.00-22.00)	7.00(5.00-9.00)
p ^b	0.421	0.243	0.352

a: Mann-Whitney U, b: Kruskal Wallis

new responsibilities are imposed on nurses, on issues such as meeting the education and information needs of individuals. In order for nurses to fulfill this duty, their needs should be determined and their competencies should be ensured. Therefore, it is necessary to determine their knowledge and attitudes towards T&CM practices, first.

In this study, it was determined that 42.6% of postgraduate nursing students used T&CM practices for themselves or their relatives (See Table 1). Comparing this finding to other studies in the literature, the percentage of nurses and nursing students using T&CM practices varies between 30.3% and 92.4% (Avino, 2011; Araz et al., 2012; Zoe et al., 2014; Jong et al., 2015; Orkaby & Greenberger, 2015; Ott et al., 2015; Kim et al., 2016; Cırık et al., 2017; Aktaş, 2017; Gyasi et al., 2017; Pirincci et al., 2018; Şahin et al., 2019; Yayan & Suna-Dağ, 2019; Görücü & Sayılan, 2020). Postgraduate nursing students participating in this study reported that they mostly used cupping, herbs, massage and acupuncture for themselves or a relative (See Figure 1). Studies have shown that nurses frequently use massage, herbal therapy, spirituality and prayer activities (Orkaby & Greenberger, 2015; Jong et al., 2015; Geisler et al., 2015; Cırık et al., 2017; Gyasi et al., 2017; Yayan & Suna-Dağ, 2019; Görücü & Sayılan, 2020; Kahraman & Kırkan, 2020; Zeighami & Soltani-Nejad, 2020). It has been reported in the literature that nursing students prefer T&CM practices such as massage, herbal products, exercise, spirituality/prayer activity, music therapy, dietary support, yoga, and meditation (Araz et al., 2012; Pirincci et al., 2018; Şahin et al., 2019). The research findings suggest that the most preferred methods by nurses are similar in terms of massage, herbal products, spirituality/prayer activity use. Interestingly, it was also determined that bloodletting cupping is used by postgraduate nursing students who participated in this research, unlike the literature review. The use of cupping therapy, which is also called wet cupping, is one of the oldest and has a wide range of usage indications (Çiftci, 2019). The use of various T&CM practices in the maintenance of health may show similarities and differences depending on the reasons such as the health status of individuals, belief, experience, traditions and customs, social and economic situation.

In this study, it was determined that the reasons for using T&CM practices among participants were mainly to relieve pain. However, it has been reported in the literature that nurses use T&CM practices in order to relieve pain and relax the patients (Yayan & Suna-Dağ, 2019), in order to provide physical and psychical relief (Cırık et al., 2017). In the literature, there are studies reporting that nursing students mostly use their practices

for reducing stress or pain, eliminating health problems, resting, losing weight and sleeping comfortably (Araz et al., 2012; Koç & Baltacı, 2018; Pirincci et al., 2018; Şahin et al., 2019; Oğlakçı-İlhan et al., 2019). In this research and other studies examined, it was evaluated that nurses use T&CM practices to relieve pain, provide relief, and reduce anxiety and stress.

According to this study, almost all of the postgraduate nursing students (95.1%) stated that they believed that T&CM practices were beneficial, while most of them (67.2%) stated that they did not have the competence to inform patients or students about T&CM practices (See Table 1). This result is in agreement with the literature findings, which suggest that lack of knowledge and experience, insufficient scientific evidence, unavailability of certified practitioners, inadequate equipment, lack of support and time resources, lack of knowledge about legal regulations as well as requirement for doctor's approval to apply the methods are among the primary obstacles to widespread use of T&CM by nurses (Smith & Wu, 2012; van Vliet et al., 2015; Jong et al., 2015; Kim et al., 2016; Poreddi et al., 2016; Gok-Metin et al., 2018; Zeighami & Soltani-Nejad, 2020). In this study, it was also determined that almost all of the postgraduate nursing students (91.8%) wanted to receive course on T&CM practices, and the reasons were mostly to have general information about the practices and to meet the information needs of the patients (See Table 1). To address these issues effectively, incorporating teaching on T&CM into undergraduate and postgraduate curricula could help ensure more comprehensive learning opportunities for healthcare professionals across all educational levels. This finding was consistent with other studies reporting that the majority of nurses and students want to receive further education on T&CM due to their limited knowledge or educational background. In the studies carried out, the methods such as the inclusion of T&CM education in the undergraduate and master's education curriculum, the organization of pre and postgraduate education, course and certification programs, and in-service training, etc. have been reported to be requested to increase the knowledge (Turker et al., 2011; Avino, 2011; Smith & Wu, 2012; Zoe et al., 2014; Topuz et al., 2015; Cinar et al., 2016; Poreddi et al., 2016; Cırık et al., 2017; Koç & Baltacı, 2018; Gok-Metin et al., 2018; Pirincci et al., 2018; Şahin et al., 2019; Yayan & Suna-Dağ, 2019; Brewer et al., 2019; Altınbaş & İster, 2019; Kinchen & Loerzel, 2019; Kahraman & Kırkan, 2020;). Booth-LaForce et al. (2010) indicate that after the four-week theoretical and practical T&CM program was incorporated into an existing nursing faculty curriculum it resulted in an improvement concerning students' level of knowledge, and interest as well as attitudes toward these specific practices among

all undergraduate and postgraduate students. (Booth-LaForce et al., 2010). Another study conducted in a nursing faculty indicates that undergraduate nursing students who took the Complementary and Alternative Therapies course have a more positive attitude towards T&CM than those who did not (Yıldırım & Akman, 2019). In the literature, there are some studies reported that nurses and nursing students mostly obtain their current knowledge about T&CM practices from unreliable sources such as the internet and the media (Yıldırım et al., 2010; Turker et al., 2011; Avino, 2011; Araz et al., 2012; Topuz et al., 2015; Cırık et al., 2017; Koç & Baltacı, 2018; Gok-Metin et al., 2018; Pirincci et al., 2018; Brewer et al., 2019; Şahin et al., 2019; Görücü & Sayılan, 2020; Zeighami & Soltani-Nejad, 2020). With the increasing interest in T&CM practices, naturally, nurses as well as patients seek information. However, information obtained from unreliable sources may result in harm instead of benefiting individuals.

In this study, the majority of the postgraduate nursing students did not have any research on T&CM practices, but they intend to use them in their future research (See Table 1). In the literature, nurses (Trail-Mahan et al., 2013; Zoe et al., 2014; Geisler et al., 2015; Brewer et al., 2019; Görücü & Sayılan, 2020), undergraduate and postgraduate nursing students (Avino, 2011) revealed the scientific evidence for T&CM practices and they stated that it is an absolute necessity, but there is a lack of evidence-based information in the relevant literature. With the theoretical and practical courses on T&CM, which are included in the education curricula of undergraduate and postgraduate students, students can be directed to conduct research involving T&CM practices by increasing their awareness level of students. The results of this research are expected to be effective in eliminating the lack of evidence-based nursing practices, increasing evidence-based nursing practices, and therefore forming standards for practice. Moreover, scientific research by nurses will be essential in determining the benefits/harms associated with T&CM practices and informing society.

In this study, it was determined that postgraduate nursing students were most knowledgeable about acupuncture, massage and yoga (See Table 2) among NCCIH practices, and acupuncture, leech practices and music therapy (see Table 3) among the practices in the Traditional and Complementary Medicine Practices Regulation in Turkey. Acupuncture in both groups is one of the T&CM practice that is used widely in the world and in Turkey. However, nurses in Turkey do not have the authority to use the invasive acupuncture technique. In the literature studies indicate that nurses use and have knowledge about traditional Chinese

medicine, acupuncture, acupressure, aromatherapy, mind-body practices and meditation, yoga, Tai chi, Qi Gong, homeopathy, prayer/spirituality, massage, dietary supplements, probiotics and herbal products, music therapy and relaxation techniques, non-herbal supplements, exercise, reflexology (Trail-Mahan et al., 2013; Geisler et al., 2015; Ott et al., 2015; Jong et al., 2015; Kim et al., 2016; Cırık et al., 2017; Gyasi et al., 2017; Gok-Metin et al., 2018; Brewer et al., 2019; Yayan & Suna-Dağ, 2019; Kahraman & Kırkan, 2020; Zeighami & Soltani-Nejad, 2020). The diversity of practices known and heard from nurses in different countries can be explained by a variety of factors, including cultural differences, ease of use and access, media and internet influence, recommendations and the popularity of some practices.

In this study the participants want to receive training most often concerning massage, breath exercise, then aromatherapy, therapeutic touch (See Table 2) among NCCIH practices, and music therapy, reflexology and acupuncture (See Table 3) among T&CM practices in Turkey. In the literature, there are studies indicating that both nursing students with undergraduate/postgraduate education frequently desire to use massage therapies as well as music therapies during their clinical practice or research (Avino, 2011; Jong et al., 2015; van Vliet et al., 2015; Zeighami & Soltani-Nejad, 2020). Massage and breathing exercises, which are not defined in the Traditional and Complementary Medicine Practices Regulation in Turkey, are among the initiatives carried out by nurses independently to relieve anxiety and pain in patient care, to prevent diseases and to facilitate healing (Arslan-Özkan & Bilgin, 2016). Aromatherapy and all of the other defined practices included in music therapy and phytotherapy in the regulation are carried out under the responsibility of certified physicians. In Turkey, where the interest in postgraduate nursing theses and researches on T&CM has increased, there is a need for more comprehensive legal regulations, course and certificate programs necessary for the independent implementation of the practices by nurses (Kaya et al., 2020). It can be interpreted that supporting nurses with various regulations for the use of T&CM practices and increasing their competencies will be beneficial in conducting scientific research based on firm evidence in terms of quality and quantity.

According to this study, when the practices that postgraduate nursing students want to be further trained and educated about are examined, the most common T&CM practices determined by NCCIH are massage, acupuncture, then aromatherapy (See Table 2). It has been determined that among the practices in the Regulation on Traditional and Complementary

Medicine Practices in Turkey, they mostly want to receive training on music therapy, then acupuncture, then reflexology (See Table 3). Some of the T&CM practices are included in the basic nursing applications, but some of them may require special training before the implementation stage. While trainings for T&CM, which is thought to be effective in improving the quality of life of individuals, are organized, it is thought that taking part in the training programs in line with the preferences of those who want to practice will increase the interest and attitude towards T&CM in a positive way.

In studies examining the attitudes of nursing students in the literature, it has been determined that students have positive attitudes towards T&CM practices (Cinar et al.,2016; Aktaş, 2017; Koç & Baltacı, 2018; Şahin et al., 2019). Furthermore, T&CM has been conducted in various studies using data collection tools such as qualitative, quantitative or qualitative/quantitative in Turkey as well as in countries such as America, Australia, Germany, Germany-Switzerland-Austria, Ghana, Netherlands, Iran, Israel, Sweden, Cyprus. It has been reported that nurses have a positive attitude towards their practice (Zoe et al., 2014; Jong et al., 2015; Orkaby & Greenberger, 2015; Ott et al., 2015; van Vliet et al., 2015; Cırık et al., 2017; Gyasi et al., 2017; Brewer et al., 2019; Zeighami & Soltani-Nejad, 2020; Görücü & Sayılan, 2020; Kahraman & Kırkan, 2020). In this study, it was determined that postgraduate nursing students also had positive attitudes towards T&CM practices, similar to the literature findings (See Table 4).

When the socio-demographic characteristics affecting the knowledge and attitudes of postgraduate nursing students regarding T&CM practices are examined (See Table 5), it was determined that the Attitudes Towards Holistic Complementary and Alternative Medicine Scale and Complementary and Alternative Medicine subscale scores were higher in married students than in single students. Demirbağ et al. (2015) determined in their study with midwives that married people have a more positive attitude towards T&CM practices (Demirbağ et al., 2015). In this study, it was determined that postgraduate nursing students who have graduated five years or more from their undergraduate education, continue their doctoral program and work as a lecturer have higher Attitudes Towards Holistic Complementary and Alternative Medicine Scale total and subscale scores. van Vliet et al. (2015) reported that while the working hours and education level of nurses increased, Cinar et al. (2016) in the study conducted with nursing students reported that as the grade levels increased, they had more positive attitudes towards T&CM practices (van Vliet et al., 2015; Cinar et al.,2016). These results suggest that as the level of education and experience increases, positive

attitudes towards T&CM practices increase. In this study, it was determined that postgraduate nursing students who are considering using T&CM practices in their future research have lower Attitudes Towards Holistic Complementary and Alternative Medicine Scale total and subscale scores. It is considered that the reason for this may be related to the fact that the rate of doctoral students (38.5%) and teaching staff (17.2%) is lower among the participants and that most of them (67.2%) think that they are not competent for T&CM practices.

Limitations

This research is limited to nurses who received postgraduate education in a nursing faculty in province Turkey. The findings of the research are implicitly based on the statements of the participants.

CONCLUSION

In this study, it was determined that postgraduate nursing student had a positive attitude towards T&CM practices and some of them used them for themselves or for their relatives due to various health problems. Although most of the postgraduate nursing students had inadequate knowledge and competency it was determined that they thought the T&CM practices were useful, the majority of them had not yet conducted any research on this subject but they considered using them in their future research.

At the same time, it was determined that postgraduate nursing students want to receive T&CM practice training courses to meet the general information needs of the patients, to have the knowledge, and to think about using it in their further studies.

The methods of the training courses they wish to receive are mainly related with massage and music therapy. With the implementation of T&CM practice training courses in undergraduate and postgraduate education curricula, the knowledge requirement of nurses can be met. It is considered that the results obtained from this study will guide the educators who are willing to develop the training program related to T&CM and the experts working on health policies. In future studies, it can be ensured that more specialized trainings can be planned by examining which patient group and complementary practices they use and want to use in symptom management.

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