

Knowledge, Practice, and Attitudes About Complementary and Alternative Medicine Among Physiotherapists in Turkey

Gökmen YAPALI¹  Serdar ARSLAN²  Cihan Caner AKSOY³ 

¹ Necmettin Erbakan University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Konya, Turkey, gyapali@gmail.com (Corresponding Author)

² Necmettin Erbakan University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Konya, Turkey, etsarlan@gmail.com

³ Kutahya Health Science University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Kütahya, Turkey, fztccaner@yahoo.com

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ABSTRACT

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Purpose: Complementary and alternative medicine (CAM) practices are steadily growing in popularity among healthcare professionals. In this study we planned to determine the perceived knowledge levels, rates of use, and beliefs and attitudes regarding CAM among physiotherapists in Turkey.

Method: Physiotherapists who were members of the Turkish Physiotherapy Association and willing to participate to this study were included. Data collection took place between October 2018 and March 2019. The participants' perceived knowledge levels, usage, and beliefs and attitudes regarding CAM were determined by an online questionnaire prepared for this study based on the relevant literature.

Results: Data from 262 participants who returned fully completed questionnaires were analyzed. In terms of knowledge level, 80.5% of the participants rated themselves as having a moderate to high level of knowledge on CAM, and 90.4% stated that physiotherapists' being knowledgeable in this area is of moderate to high importance. The highest rate of postgraduate education for a CAM method was for cupping (37%), whereas the highest proportion of respondents expressed wanting to learn osteopathy (48.1%). Osteopathy was also the CAM method most recommended to patients (56.5%), while the most used CAM method was massage (39.7%). Overall, 71.7% of the participants stated that they had a positive opinion about CAM practices.

Conclusion and Suggestions: The results of this study showed that physiotherapists have positive beliefs and attitudes towards CAM methods. Moreover, we determined that they received postgraduate education/training to learn CAM methods, particularly manipulative and body-based CAM practices, and that they included these methods in their treatments.

Türkiye'deki Fizyoterapistlerin Geleneksel ve Tamamlayıcı Tıp Hakkındaki Bilgi Düzeyleri, İnanç ve Tutumları

Makale Bilgileri

ÖZ

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Anahtar Kelimeler:
Tamamlayıcı ve Alternatif Tıp, Fizyoterapist, Bilgi Düzeyi, İnançlar, Tutumlar.

Amaç: Tamamlayıcı ve alternatif tıp (TAT) uygulamalarının popülerliği sağlık profesyonelleri arasında giderek artmaktadır. Bu araştırma, fizyoterapistlerin TAT bilgi düzeyleri, uygulama oranları ve bu uygulamalara yönelik inanç ve tutumlarını belirlemek amacıyla planlandı.

Yöntem: Türkiye Fizyoterapistler Derneğine üye fizyoterapistlerden, gönüllü olanlar çalışmaya dahil edildi. Verilerin toplanması Ekim 2018 ile Mart 2019 arasında yapıldı. Katılımcıların TAT hakkında bilgi düzeyleri, uygulama oranları ve bu uygulamalara yönelik inanç ve tutumları bu konudaki literatür temel alınarak hazırlanmış anket formu ile belirlendi.

Bulgular: Formu eksiksiz dolduran 262 katılımcının verileri analiz edildi. Katılımcıların %80.5'i TAT hakkında orta ve üstü düzeyde bilgi seviyesine sahip olduğunu, %90.4'ü fizyoterapistlerin bu alanda bilgi sahibi olmasının orta ve üstü seviyede önemli olduğunu bildirdi. Mezuniyet sonrası en çok eğitimi alınan TAT yönteminin kupa uygulaması (%37), en fazla eğitimi alınmak istenen ve hastalara önerilen TAT yönteminin osteopati (%48.1-%56.5) ve en fazla kullanılan TAT yönteminin masaj (%39.7) olduğu tespit edildi. TAT uygulamaları hakkında olumlu bir bakış açısına sahip olan katılımcıların oranı ise %71.7 olarak bulundu.

Sonuç ve Öneriler: Çalışma sonuçları fizyoterapistlerin TAT yöntemlerine karşı olumlu inanç ve tutumlara sahip olduğunu gösterdi. Dahası, mezuniyet sonrası TAT yöntemlerini öğrenmek için eğitim aldıkları, başta manüplatif ve bedene dayalı TAT uygulamaları olmak üzere tedavilerinde bu yöntemlere yer verdikleri belirlenmiştir.

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INTRODUCTION

The use of complementary and alternative medicine (CAM) has increased over the last decade both in Europe and the US (Bjerså et al., 2012). CAM is defined as treatment methods used in addition to or instead of conventional medical practices (Barnes et al., 2008; Barnes et al., 2004). The National Center for Complementary and Alternative Medicine in the US has classified CAM practices into 5 groups: alternative medical systems (acupuncture, Ayurveda, homeopathic approaches, etc.), biologically based therapies (diet and nutritional therapies), manipulative and body-based therapies (chiropractic, osteopathy, massage, hydrotherapy, acupressure, etc.), mind–body therapies (meditation, hypnosis, yoga, etc.), and energy healing therapies (Barnes et al., 2008). CAM approaches are most commonly used to treat neurological diseases (Wells et al., 2017), obesity (Sharpe et al., 2007), respiratory diseases (Mark & Chung, 2015), urinary tract diseases (Solberg et al., 2016), and musculoskeletal diseases (Ernst, 2004).

Studies on the knowledge levels, attitudes, and beliefs of various healthcare professionals regarding CAM methods have shown that despite insufficient knowledge about CAM methods, healthcare professionals have a positive approach to the use of these methods (Bjerså et al., 2012; Akan et al., 2012; Çamurdan & Gül, 2013; Göker et al., 2015; Balouchi et al., 2018; Nejatian et al., 2018). However, there are few studies in the literature investigating the knowledge, attitudes, and awareness of CAM among physiotherapists, who are among the health professionals that use these methods most frequently (Bjerså et al., 2012; Somer & Vatanoglu, 2016, Hughes et al., 2011). Therefore, our study was designed to determine the levels of knowledge, practices, and attitudes related to CAM among physiotherapists in Turkey.

METHOD

Research Design

This was a cross-sectional study that done between October 2018 and March 2019 The population consisted of physiotherapists who were members of the Turkish Physiotherapy Association and volunteered to participate.

Research Sample

At the time of data collection, number of physiotherapists in Turkey was estimated as 8.000 (Karagozoglu et al., 2018) and sample size calculation with 0.05 confidence level and confidence interval as 5-6 revealed that minimum physiotherapists number to be recruited for the study was 258-367. Self-administered questionnaires were used to collect data. Of 264 participants who responded to the questionnaire, 2 were excluded due to missing data, and the study was completed with 262 participants. With this number of participants, confidence interval was 5.93.

Research Instruments and Processes

The questionnaire used in this study was developed based on a questionnaire on knowledge about CAM among surgical care personnel living in Sweden (Bjerså et al., 2012), a questionnaire on the knowledge and attitudes about CAM among dermatologists living in Turkey (Göker et al., 2015), a questionnaire for the assessment of attitudes about CAM among oncology professionals in Norway (Risberg et al., 2004), the Integrative Medicine Attitude Questionnaire (Schneider et al., 2003), and the Complementary and Alternative Medicine Health Belief Questionnaire (Lie & Boker, 2004). The questionnaire was developed by a committee including 1 social scientist and 3 healthcare professionals. The initial questionnaire was used in a pilot study conducted with 10 people to assess the validity of the questions. The questionnaire was revised by the committee based on the results of the pilot study. The questionnaire was created to evaluate the participants' level of knowledge, beliefs,

and attitudes about CAM.

The questionnaire consisted of 4 sections. The first section collects descriptive information about the participants, while the other sections include perceived knowledge level (4 items), education, training and use (4 items), and beliefs and attitudes (11 items).

The questionnaire was hosted digitally on Google Forms. The study was announced to the members of the Turkish Physiotherapy Association via a common e-mail address and the link to the questionnaire was sent to the participants via e-mail.

Data Analysis

The data were analyzed by statistics package software SPSS (Statistical Package for Social Sciences, version: 21, IBM corporation, Armonk, NY). Descriptive tests were used to show CAM-related knowledge, training/education, use, and beliefs and attitudes.

Ethics

This study was approved by the Necmettin Erbakan University, Faculty of Medicine, Pharmaceuticals and Non-Medical Devices Research Ethics Committee (decision number 2016/763; meeting number 42, dated 16.12.2016). Informed consent was obtained from all participants, and the study was performed in accordance with the Declaration of Helsinki. Moreover, permission was obtained from the administration of the Turkish Physiotherapy Association to recruit members of the association for participation in the study.

RESULTS

The participant group comprised 49.2% men and 50.8% women. Nearly half (49.7%) of the participants had over 10 years of professional experience. Nearly one-third of the participants worked in universities and 40.5% held postgraduate degrees. The participants' descriptive data are presented in Table 1.

Table 1. *Participants' Demographic Characteristics*

Variable	n	%	
Age, years	20-29	88	33.6
	30-39	124	47.3
	40-49	38	14.5
	50-59	11	4.2
	60 and over	1	0.4
Professional experience, years	0-4	69	26.3
	5-9	63	24.0
	10-14	60	22.9
	15-19	30	11.5
	20 and over	40	15.3
Employing institution	University	76	29.0
	State Hospital	28	10.7
	Private Hospital or Medical Center	44	16.8
	Private Education Center	58	22.1
	Fitness Center	16	6.1
	Sports Club	7	2.7
	Other	17	6.5
Unemployed	16	6.1	

In terms of perceived knowledge level, 80.5% of the participants rated themselves as having a moderate to high level of knowledge about CAM, and 90.4% stated that being informed in this area is of moderate to high importance. When asked about the legal regulation of CAM, 58.4% of the participants reported that they had moderate to high level of knowledge about these regulations, while 85.11% stated that the current legal regulations are inadequate. Data pertaining to the participants' knowledge levels are shown in Table 2.

Table 2. CAM Knowledge Level and Importance

	n	%
How would you rate your knowledge of CAM on a scale of 1 to 5?		
1: None	7	2.7
2: Low	44	16.8
3: Medium	110	41.9
4: High	72	27.5
5: Very High	29	11.1
In your opinion, how important is it for physiotherapists to be knowledge about CAM?		
1: Not at all	9	3.4
2: Somewhat	16	6.1
3: Moderately	55	21.0
4: Very	100	38.2
5: Critical	82	31.3
<i>Level of Knowledge and Opinion Regarding Legal Regulations about CAM</i>		
How would you rate your level of knowledge about the legal regulation of CAM practices by the Ministry of Health?		
1: None	24	9.2
2: Low	85	32.4
3: Moderate	67	25.6
4: High	56	21.4
5: Very High	30	11.4
How would you rate the adequacy and feasibility of the legal regulation of CAM by the Ministry of Healthy?		
	n	%
1: None	115	43.9
2: Low	108	41.2
3: Moderate	32	12.2
4: High	3	1.2
5: Very High	4	1.5

Regarding education and training in CAM, 83.6% of the participants stated that they wanted more information about CAM to be included in the undergraduate curriculum, and 85.5% stated that they wanted to learn at least one CAM treatment method. Reported sources of information about CAM were postgraduate courses (68.3%), the internet (66.7%), scientific journals (37.4%), books (36.6%), videos (28.6%), and other resources (2.2%). Another 1.14% stated that they had not felt the need for information in this area.

The highest rate of postgraduate education for a CAM method was for cupping therapy (37.0%), whereas the highest proportion of respondents wanted to learn osteopathy (48.1%). Osteopathy was also the CAM method that mostly recommended to patients (39.7%), while the most used CAM method was massage (56.5%). Data on the participants' education/training and use of CAM are given in Table 3.

Table 3. CAM Education/Training and Usage

	A		B		C		D	
	n	%	n	%	n	%	n	%
Acupuncture	88	33.6	97	37.0	84	32.1	123	46.9
Acupressure	32	12.2	29	11.1	34	13.0	23	8.8
Apitherapy	2	0.8	11	4.2	2	0.8	3	1.1
Phytotherapy	6	2.3	68	25.9	8	3.0	37	14.1
Hypnosis	12	4.6	59	22.5	8	3.0	25	9.5
Leeching	69	26.3	15	5.7	28	10.7	52	19.8
Homeopathy	5	1.9	55	21.0	7	2.8	29	11.1
Chiropractic	36	13.7	122	46.6	30	11.4	61	23.3
Cupping (Hacamat)	97	37.0	40	15.3	78	29.8	97	37.0
Larval therapy	2	0.8	4	1.5	1	0.4	2	0.8
Mesotherapy	1	0.4	20	7.6	1	0.4	6	2.3
Prolotherapy	4	1.5	26	9.9	4	1.5	24	9.2
Osteopathy	67	25.6	126	48.1	62	23.7	148	56.5
Reflexology	81	30.9	67	25.6	65	24.8	77	29.4
Music therapy	11	4.2	45	17.2	5	1.9	19	7.2
Meditation/Yoga/Stretching	33	12.6	73	27.9	27	10.3	81	30.9
T'ai Chi/Qi Gong	18	6.9	61	23.3	5	1.9	21	8.0
Spirituality/Worship/Prayer	18	6.9	13	5.0	20	7.6	31	11.8
Therapeutic Touch/Reiki	24	9.2	41	15.6	15	5.7	19	7.2
Ayurveda	3	1.1	19	7.2	3	1.1	5	1.9
Massage	71	27.1	0	0	104	39.7	105	40.1
Food and nutritional supplement	41	15.6	69	26.3	30	11.4	87	33.2
Other	16	6.1	2	0.8	11	4.2	2	0.8
None	55	21.0	22	8.4	58	22.1	25	9.5

A: I have received education/training, B: I would like to receive education/training, C: I do use or have used it in the past, D: I recommend or have recommended it to my patients

Regarding the attitudes and beliefs about CAM, 71.7% of the participants stated that they had a positive opinion about CAM practices. 65.3% believed that physical and mental health is preserved by a vital force or energy; 70.2% agreed that health and disease are a reflection of the balance between positive, life-giving forces and negative, destructive forces. 70.2% believed that the body heals itself and the role of a health professional is to facilitate the healing process; 75.7% stated that a patient's symptoms should be regarded as a sign of an overall imbalance or dysfunction affecting the whole body; 84.4% believed that the patient's expectations, health beliefs, and values should be integrated into the care process; 79.4% claimed that CAM practices are not a threat to public health; 43.9% stated that treatments not tested using scientifically accepted methods should be discouraged; 17.1% believed that the benefits of CAM practices are usually due to the placebo effect; 81.7% agreed that CAM practices include ideas and methods that could benefit modern medicine; and 69.0% believed that most CAM methods activate the body's natural therapeutic powers. The participants' beliefs and attitudes about CAM practices are presented in Table 4.

Table 4. Participants' Beliefs and Attitudes Towards CAM Practices.

	Strongly disagree		Disagree		Not sure		Agree		Strongly agree	
	n	%	n	%	n	%	n	%	n	%
I have a positive opinion of CAM practices and their effectiveness.	10	3.8	15	5.7	49	18.7	95	36.2	93	35.5
Physical and mental health is sustained by a vital force or energy.	10	3.8	21	8.0	60	22.9	88	33.6	83	31.7
Health and illness are a reflection of the balance between positive, life-giving forces and negative, destructive forces.	11	4.2	10	3.8	57	21.7	83	31.7	101	38.5
The body heals itself, and the role of a health professional is to facilitate the healing process.	10	3.8	25	9.5	43	16.4	85	32.4	99	37.8

A patient's symptoms should be regarded as a sign of a general imbalance or dysfunction affecting the whole body.	6	2.3	10	3.8	45	17.2	93	35.5	108	41.2
The patient's expectations, health beliefs, and values should be integrated into the care process.	3	1.1	5	1.9	33	12.6	83	31.7	138	52.7
CAM practices are a threat to public health.	153	58.4	55	21.0	31	11.8	14	5.3	9	3.4
Treatments that have not been tested with scientifically accepted methods should be discouraged.	45	17.2	39	14.9	63	24.0	40	15.3	75	28.6
The benefits of CAM practices are usually due to the placebo effect.	80	30.5	76	29.0	61	23.3	30	11.4	15	5.7
CAM practices include ideas and methods that could benefit modern medicine.	4	1.5	8	3.0	36	13.7	87	33.2	127	48.5
Most CAM methods stimulate the body's natural therapeutic powers.	6	2.3	26	9.9	49	18.7	86	32.8	95	36.2

DISCUSSION

This study was conducted to determine Turkish physiotherapists' knowledge, practice, and attitudes related to CAM practices. Our results showed that physiotherapists in Turkey need postgraduate education to learn more about CAM practices and incorporated these practices into their treatment. Moreover, we found that manipulative and body-based CAM practices were relatively more popular among the physiotherapists. Our result indicated that the majority of Turkish physiotherapists have positive beliefs and attitudes toward CAM methods.

There are a few studies in the literature about physiotherapists' knowledge of CAM practices. In a study performed in Sweden in 2012, nearly all of the physiotherapists working in surgical care stated that it is important to have knowledge about CAM, despite having low levels of knowledge themselves (Bjerså et al., 2012). A large proportion of the physiotherapists in the present study also stated that it is important to have knowledge regarding CAM practices. The difference in perceived knowledge of CAM practices between physiotherapists in Sweden and in Turkey may be related to differences in the education systems and culture (Kearney et al., 2007).

Most of the physiotherapists in our study stated that legal regulations regarding CAM practices were inadequate. Somer and Vatanoğlu (2016) also reported that the relevant regulation had shortcomings. This suggests that measures should be taken to eliminate these deficiencies in the future, which may lead to improvements in the quality and quantity of CAM services.

The majority of respondents in our study expressed a desire for more information about CAM to be included in the undergraduate curriculum. In the literature, it has been reported that the growing popularity of CAM practices among the public may give rise to an obligation for health professionals to specialize in this field (Kelner et al., 2004). We believe that including these methods in the undergraduate curriculum will help standardize physiotherapists' knowledge of CAM practices and contribute to their professionalization, thereby increase the effectiveness of CAM methods. Our findings indicate that the majority of the participants wanted to learn CAM practices and they mostly used courses and information found on the internet. However, the validity of such sources is unknown. Therefore, we think that the inclusion of CAM courses in undergraduate and graduate curricula may increase the standardization and effectiveness of these methods in practice.

Most of the participants in our study had received training on at least one CAM method after graduation. The most commonly studied methods were acupuncture, leeching, cupping, osteopathy, reflexology, and massage, while the most commonly used methods were acupuncture, cupping, and massage. In addition, the respondents reported that they wanted to learn at least one CAM method and that they used or recommended these methods in practice. Our study revealed that the physiotherapists were more interested in manipulative and body-based CAM methods, they received or wanted to

receive training on these methods, and recommended these more to their patients. We believe this finding was affected by the inclusion of practices like manual treatment methods and massage in the physiotherapy and rehabilitation undergraduate curriculum in Turkey. In this regard, the review of the literature showed that acupuncture and massage were reported to be the most common CAM methods used by physiotherapists to treat lumbar pain (Hughes et al., 2011). Approximately one-third of the participants in our study had received acupuncture training and were using it in their practice. This can likely be attributed to the evidence-based effectiveness of acupuncture in conditions such as osteoarthritis (Manyanga et al., 2014), fibromyalgia (Zhang et al., 2019), and lumbar pain (Liu et al., 2015), which physiotherapists frequently encounter in the clinic.

Our results indicate that the majority of physiotherapists in our study had positive attitudes and behaviors about CAM methods. These results are consistent with studies that investigated the beliefs

and attitudes about CAM methods among health professionals working in rehabilitation services (Hughes et al., 2011, Sewitch et al., 2008, Ko & Berbrayer, 2000). One of these studies examined physiotherapists' use and attitudes toward CAM practices in the management of lumbar pain. They confirmed that acupuncture, massage, osteopathy, chiropractic, and yoga can lead to favorable outcomes in patients with lumbar pain and they had a positive opinion about these methods (Hughes et al., 2011). Similarly, a study on the beliefs and attitudes about CAM methods among physiatrists showed that nearly all had positive beliefs and attitudes on CAM methods (Ko & Berbrayer, 2000).

Patients are increasingly seeking treatment with CAM methods (Clarke et al., 2015). Health professionals play a key role in determining the most appropriate CAM methods and applying them correctly. It is critical that physiotherapists, who use a substantial number of these methods in their practices, choose the most appropriate and evidence-based CAM practices and apply them correctly to suitable patients. This suggests that, CAM methods, with the necessary legal regulations, should be included in the physiotherapy undergraduate curriculum.

In addition, according to our study sample, most physiotherapists working in Turkey believe that the effectiveness of CAM practices cannot be explained by placebo effect and that modern medicine could benefit from CAM practices

CONCLUSION AND SUGGESTIONS

The results of this study demonstrated that physiotherapists are interested in CAM methods. For this reason, it has become imperative that we approach CAM practices in the physiotherapy profession with a new perspective and integrate those practices that are supported by high-level evidence into the field of physiotherapy and rehabilitation.

LIMITATIONS

The study has some limitations: As this study conducted on only physiotherapists, it could not possible the results comparable with other healthcare professionals and as there is no enough research about this topic on physiotherapists in Turkey we could not discuss and compare effectively about the results of our study.

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Conflict of Interest

No conflict of interest.

Author Contributions

Design: G.Y., S.A., Data collection or processing: G.Y., S.A., Analysis or interpretation: G.Y., S.A., C.C.A., Literature search: G.Y., S.A., C.C.A., Writing: A.U., S.A., C.C.A.

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